

The 2019 High School Transcript Study

User's Guide and Technical Report

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The 2019 High School Transcript Study User's Guide and Technical Report

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CONTENTS

<u>Chapter</u>		<u>Page</u>
1.	INTRODUCTION	1
	A. Overview of the High School Transcript Study	1
	B. Relationship Between HSTS 2019 and NAEP 2019	3
	C. Contextual Background Data Provided for HSTS 2019	3
	1. NAEP 2019 Questionnaires.....	4
	2. Transcripts.....	4
	3. School Forms, Catalogs, or Course Lists	5
	D. Participation and Confidentiality of Data	5
	E. Secondary Course Coding Systems	6
	F. Comparing HSTS 2019 Results to Other Transcript Studies.....	8
2.	SAMPLE DESIGN FOR THE NAEP 2019 GRADE 12 ASSESSMENTS....	9
	A. Overview of the NAEP 2019 Grade 12 Sample Design	9
	B. School Sampling Frame.....	10
	C. Stratification	11
	D. Selection of Schools.....	12
	E. Selection of Substitute Schools.....	12
	F. New School Frame.....	13
	G. Selection of Students and Assignment of Subject	14
	H. Students Not Included in the Assessment.....	15
3.	SAMPLING OF SCHOOLS AND GRADUATES FOR THE NAEP HSTS 2019.....	16
	A. Overview of Sample Design for NAEP HSTS 2019 Sample	16
	B. Sampling of Schools	16
	C. Sampling of Students	16
	D. HSTS School and Student Participation Results	17
4.	DATA COLLECTION PROCEDURES	23
	A. Timeline for HSTS 2019 Activities	23
	B. Phase 1	25
	1. Initial Contacts With States, Districts, and Schools	25
	2. Online Data Collection.....	25
	a. Overview Materials	26
	b. Course Catalog Submission.....	26
	c. School Information Form (SIF).....	27

CONTENTS—CONTINUED

<u>Chapter</u>		<u>Page</u>
	3. Training NAEP 2019 Field Supervisors as Data Collectors	28
	4. HSTS Data Collection During NAEP 2019 Assessments...	29
C.	Phase 2	29
	1. Obtaining Transcripts	29
5.	DATA PROCESSING PROCEDURES	32
A.	NAEP 2019 Questionnaires	32
B.	Processing Procedures for Other Data Collected for HSTS 2019	32
	1. Receipt Control	33
	2. School Information Form (SIF) Data	34
	3. Catalog Coding	34
	4. Transcript Processing	35
	a. Student Information	35
	b. Course Entry	36
	5. Title Matching	36
C.	Quality Control Procedures	37
	1. Hiring and Training of HSTS Staff	38
	a. Transcript Data Entry Staff	38
	b. Catalog Coders	38
	2. Rekeying for Verification	39
	3. Catalog Coding Quality Control Review	40
	4. How Staff Identified and Solved Problems	40
6.	WEIGHTING	41
A.	Overview of Weighting in HSTS 2019	41
B.	HSTS Unlinked Weights	42
	1. Student Base Weight	42
	2. School Trimming Adjustment	43
	3. School Nonresponse Adjustment	44
	4. Student Nonresponse Adjustment	45
	5. Student Trimming Adjustment	46
	6. Student Raking Adjustment	47
	7. Final Unlinked HSTS Sample Weight	49

CONTENTS—CONTINUED

<u>Chapter</u>	<u>Page</u>
C. HSTS Linked Weights	50
1. Student Base Weights	51
2. School Trimming Adjustment	51
3. School Nonresponse Adjustment	51
4. Student Nonresponse Adjustment	52
5. Student Weight Trimming	53
6. Student Raking Adjustment	54
7. Final Linked HSTS Weights	56
D. Replicate Weights	56
1. Jackknife (JK2) Replication Method	57
2. Calculating Replicate Weights	58
7. VARIANCE ESTIMATION	61
A. Introduction	62
B. Procedures Used by NAEP to Estimate Sampling Variability (Jackknife)	63
1. Degrees of Freedom of the Jackknife Variance Estimate ...	65
C. Procedures Used by NAEP to Handle Imprecision of Individual Measurement	66
D. An Introduction to Linking Error, and the Procedures Used by NAEP for 2019 Grade 12 Mathematics and Science	69
1. Procedures for Estimating Error Variance for Group Scale Score Statistics From the Combined PBA/DBA Sample—Internal Linking	69
a. Estimating Error Variance for Group Scale Score Statistics on Subscale: Combined Sample and Internal Linking	70
b. Estimating Error Variance for Group Scale Score Statistics on Composite Scale: Combined Sample and Internal Linking	73
c. Degrees of Freedom for Variance Estimation of Group Scale Score Statistics: Combined Sample and Internal Linking	75
E. Additional Sources of Error	75
F. A Note Concerning Multiple Comparisons	76

CONTENTS—CONTINUED

<u>Chapter</u>		<u>Page</u>
8.	GUIDE TO THE DATA FILES AND CODEBOOKS	77
	A. Public-Use and Restricted-Use Data.....	77
	1. Public-Use Data—NAEP Data Explorer for HSTS	77
	2. Restricted-Use Data.....	78
	B. Content and Organization of the Restricted-Use Files.....	79
	1. Catalog File	80
	2. NAEP Mathematics and Science Files	81
	3. School File	82
	4. Student File	82
	5. Test File.....	83
	6. Transcript File	83
	C. Additional Information for Researchers Wishing to Use Restricted- Use Files	84
	1. Selecting the Proper Weights	84
	2. Statistical Software for Use with HSTS 2019	85
	3. Use of NAEP Scores for Individuals.....	86
	D. HSTS Analysis Reports	87
9.	HSTS 2019 NONRESPONSE BIAS ANALYSIS	89
	A. HSTS Nonresponse Bias Analysis	89
	B. School Nonresponse Bias Analysis.....	89
	REFERENCES	94

Appendix

A.	2019 High School Transcript Study Disclosure Notice	A-1
B.	2019 High School Transcript Study State, District, and School Information Forms	B-1
C.	2019 High School Transcript Study Student List	C-1
D.	2019 High School Transcript Study Course Catalog Survey.....	D-1
E.	2019 High School Transcript Study Sample Introductory Letter to Principals	E-1

CONTENTS—CONTINUED

<u>Appendix</u>	<u>Page</u>
F. 2019 High School Transcript Study NAEP in Your School—HSTS Brochure.....	F-1
G. 2019 High School Transcript Study Summary Information Worksheet.....	G-1
H. 2019 High School Transcript Study Guidelines for Electronic Transcripts	H-1
I. 2019 High School Transcript Study Codebook for Catalog File	I-1
J. 2019 High School Transcript Study Codebook for NAEP Mathematics File.....	J-1
K. 2019 High School Transcript Study Codebook for NAEP Science File.....	K-1
L. 2019 High School Transcript Study Codebook for School File	L-1
M. 2019 High School Transcript Study Codebook for Student File	M-1
N. 2019 High School Transcript Study Codebook for Test File.....	N-1
O. 2019 High School Transcript Study Codebook for Transcript File	O-1
P. 2019 High School Transcript Study Glossary.....	P-1
Q. HSTS NAEP Score Analyses and Linking Error.....	Q-1
R. 2019 High School Transcript Study Nonresponse Bias Analysis School Tables.....	R-1
 <u>Table</u>	
1. NCES high school transcript studies: Selected years, 1982–2019.....	2
2. Student sample size within schools and subject percentage distribution of NAEP grade 12 assessments, by assessment mode: 2019	14
3. HSTS school sample counts by school type and response status and weighted HSTS school response rates, by school type decomposed by NAEP participation status: 2019.....	18
4. Unweighted and weighted HSTS (unlinked) student counts and weighted HSTS student response rates, by school type: 2019	20
5. Unweighted and weighted HSTS (linked) student counts and weighted HSTS student response rates, by school type for mathematics: 2019.....	21

CONTENTS—CONTINUED

<u>Table</u>	<u>Page</u>
6. Unweighted and weighted HSTS (linked) student counts and weighted HSTS student response rates, by school type for science: 2019	22
7. HSTS and NAEP record identifier naming conventions: 2019.....	81
8. School characteristics with significant nonresponse bias, based on nonresponse bias analysis of public schools: 2019.....	91
9. School characteristics with significant nonresponse bias, based on nonresponse bias analysis of private schools: 2019.....	91
R-1. 2019 HSTS original sample—weighted percentages of full sample and responding schools, by various subgroups—all public schools (sample size = 1,774).....	R-1
R-2. 2019 HSTS original sample—weighted mean values of various characteristics for full sample and responding schools—all public schools (sample size = 1,774)	R-1
R-3. 2019 HSTS sample with substitutes—weighted percentages of full sample and responding schools, by various subgroups—all public schools (sample size = 1,774).....	R-2
R-4. 2019 HSTS sample with substitutes—weighted mean values of various characteristics for full sample and responding schools—all public schools (sample size = 1,774).....	R-2
R-5. 2019 HSTS nonresponse-adjusted sample—weighted percentages of full sample and responding schools, by various subgroups—all public schools (sample size = 1,774)	R-3
R-6. 2019 HSTS nonresponse-adjusted sample—weighted mean values of various characteristics for full sample and responding schools—all public schools (sample size = 1,774)	R-3
R-7. 2019 HSTS original sample—weighted percentages of full sample and responding schools, by various subgroups—all private schools (sample size = 326).....	R-4
R-8. 2019 HSTS original sample—weighted mean values of various characteristics for full sample and responding schools—all private schools (sample size = 326).....	R-4
R-9. 2019 HSTS sample with substitutes—weighted percentages of full sample and responding schools, by various subgroups—all private schools (sample size = 326).....	R-5

CONTENTS—CONTINUED

<u>Table</u>	<u>Page</u>
R-10. 2019 HSTS sample with substitutes—weighted mean values of various characteristics for full sample and responding schools—all private schools (sample size = 326).....	R-5
R-11. 2019 HSTS nonresponse-adjusted sample—weighted percentages of full sample and responding schools, by various subgroups—all private schools (sample size = 326).....	R-6
R-12. 2019 HSTS nonresponse-adjusted sample—weighted mean values of various characteristics for full sample and responding schools—all private schools (sample size = 326).....	R-6

<u>Figure</u>		
1. High School Transcript Study 2019 data collection timeline		24
2. Data flow for the High School Transcript Study 2019		33
C-1. Example student list file (Tab 1 of Excel file)		C-1
C-2. Example legend (Tab 2 of Excel file)		C-2
F-1. HSTS brochure		F-1
G-1. HSTS Summary Information Worksheet.....		G-1
H-1. HSTS Guidelines for Submitting Electronic Transcripts.....		H-1

1. INTRODUCTION

This user’s guide documents the procedures used to collect, process, and summarize data from the 2019 High School Transcript Study (HSTS 2019). Chapters detail the sampling of schools and graduates (chapters 2 and 3), data collection procedures (chapter 4), data processing procedures (chapter 5), weighting procedures (chapter 6), and measurement and sampling variance estimation procedures (chapter 7). Chapter 8 describes the HSTS 2019 data files and codebooks, while chapter 9 details the HSTS 2019 nonresponse bias analysis. Appendices A through H contain the HSTS 2019 data collection and documentation forms. The codebooks for all of the HSTS 2019 restricted-use data files are in appendices I through O, and a glossary of terms is in appendix P. Appendix Q discusses why linking errors are needed to calculate HSTS data analyses involving NAEP Grade 12 mathematics and science assessment scores and explains how to calculate the correct standard errors using the linking errors. Appendix R contains data tables from the HSTS 2019 nonresponse bias analyses.

This chapter provides an introduction to HSTS 2019. Initial results are detailed in the companion web report [2019 NAEP High School Transcript Study \(HSTS\) Results](#) (NCES 2022), in which selected topics are discussed in greater detail.

A. Overview of the High School Transcript Study

Over the years, various reform efforts have sought to improve the quality of education across the United States. In the early 1980s, the focus was on statewide curricula in core courses, a response to the watershed report, *A Nation at Risk: The Imperative for Educational Reform* (National Commission on Excellence in Education 1983). Since then, national efforts have addressed several issues concerning quality education, such as analyzing the content of courses in specific subject areas (e.g., mathematics and science), the number of courses completed, and when courses are completed.

The National Assessment of Educational Progress (NAEP) HSTS is a periodic study that provides educational professionals, such as administrators, policymakers, and researchers, with information regarding high school graduates’ coursetaking patterns and grade point averages (GPAs). It can also be used to provide information on the relationship between graduate coursetaking patterns and achievement as measured by NAEP, which is a recurring assessment of educational achievement of students in the United States.

The transcript studies serve as a barometer for changes in high school graduates' coursetaking patterns. The first national transcript study was conducted by the National Center for Education Statistics (NCES) in 1982 and captured baseline information on high school students' coursetaking patterns prior to the publication of *A Nation at Risk* and the resulting changes in curricula and educational reform.

For HSTS 2019, complete transcripts were collected from August 2019 through December 2020 for 47,300 students who graduated in 2019 from a nationally representative sample of U.S. public and private high schools. HSTS 2019 was conducted in conjunction with NAEP 2019 grade 12 mathematics and science assessments. A description and results of this study can be found in the NAEP HSTS web report [2019 NAEP High School Transcript Study \(HSTS\) Results](#).

Since similar studies were conducted on the coursetaking patterns of graduates over the years, changes in these patterns can be studied and compared. Table 1 lists the 13 NCES studies that have been conducted since 1982 involving the collection of high school transcripts.

Table 1. NCES high school transcript studies: Selected years, 1982–2019

Study	Approximate number of transcripts ¹
1982 High School and Beyond	12,700
1987 NAEP High School Transcript Study	34,100
1990 NAEP High School Transcript Study	21,500
National Education Longitudinal Study of 1988 Second Follow-Up (1992)	17,300
1994 NAEP High School Transcript Study	25,500
1998 NAEP High School Transcript Study	25,000
2000 NAEP High School Transcript Study	21,000
Education Longitudinal Study of 2002 First Follow-Up (2004)	16,400
2005 NAEP High School Transcript Study	27,200
2009 NAEP High School Transcript Study	37,600
High School Longitudinal Study of 2009, High School Transcripts (2013–2014)	21,900
2019 NAEP High School Transcript Study	47,300

¹Includes transcripts that were not included in the final reports because they were out of scope. Out-of-scope transcripts include transcripts from students who did not graduate in the year of the study, nonstandard transcripts that could not be incorporated or standardized with the other transcripts, and transcripts with less than 3 years of data. Each of the studies listed had transcripts that were out of scope.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School and Beyond Longitudinal Study of 1980 Sophomores, "High School Transcript Study" (HS&B-So:80/82), 1982; National Education Longitudinal Study of 1988 (NELS:88/92), "Second Follow-Up, Transcript Survey," 1992; Education Longitudinal Study of 2002 (ELS:2002/04), "First Follow-Up," 2004; High School Longitudinal Study of 2009 (HSL:09), "High School Transcripts," 2013–2014; National Assessment of Educational Progress (NAEP) High School Transcript Study (HSTS), selected years, 1987–2019.

B. Relationship Between HSTS 2019 and NAEP 2019

HSTS 2019 was conducted in conjunction with NAEP 2019 grade 12 mathematics and science assessments (NAEP 2019). HSTS 2019 was designed to allow an analysis of the coursetaking patterns of graduates from U.S. public and private high schools in 2019. It was further designed so that data on graduates' coursetaking patterns could be linked to the NAEP 2019 assessment results. Results from the NAEP assessments cover subject-matter achievement, instructional experiences, and school environment, not only for populations of students (e.g., twelfth-graders) but also selected subgroups of those populations (e.g., female students). Changes in the relationship of HSTS coursetaking to NAEP performance can also be examined by looking at similar studies in 1994, 1998, 2000, 2005, and 2009 (Legum et al., 1997; Nord et al., 2011; Roey et al., 2001; Roey et al., 2005; Shettle et al., 2007). For HSTS 2019, the NAEP 2019 scale scores for mathematics and science were provided.

In 2019, only those schools that participated in grade 12 NAEP were eligible to participate in the HSTS. Of the approximately 2,160 eligible schools in the original NAEP sample, 1,410 schools participated in the HSTS 2019 study. Prior to 2009, selected schools that did not participate in NAEP were eligible to participate in the HSTS.

A total of approximately 48,000 twelfth-grade students were selected from the HSTS 2019 participating schools. Because sampling was performed in most schools prior to graduation, not all sampled students were, in fact, graduates. However, only graduates were eligible for inclusion in the transcript study. Of the students in the original sample, it was determined that approximately 47,300 students graduated in the 2018–2019 school year.

C. Contextual Background Data Provided for HSTS 2019

Contextual background data for HSTS 2019, which included school-level characteristics such as graduation policies and minority enrollment, as well as student-level characteristics such as gender and race/ethnicity, were obtained from the NAEP 2019 questionnaires,¹ the high school transcripts, and various school-level forms completed by a school coordinator or counselor.

¹ For additional information about NAEP survey questionnaires, see https://nces.ed.gov/nationsreportcard/experience/survey_questionnaires.aspx.

1. NAEP 2019 Questionnaires

The following NAEP 2019 questionnaires were used to obtain information about the sampled schools and students for HSTS 2019:

- The *School Questionnaire* contains information about the school, its teachers, and its student body.
- The *Student Questionnaire* is completed by each student and contains information about the student's background, demographic characteristics, and educational experiences.

2. Transcripts

The transcripts provided graduates' information that was coded and entered into the data system by trained personnel. These data included the following:

- date enrolled in high school;
- date graduated;
- rank in class (if available);
- size of class (if available);
- GPA;
- days absent each year (if available);
- standardized test scores, such as college admissions test scores (if available);
- list of courses taken in high school, with such details as the course titles, grades received, number of credits earned for each course, and grade level in which the course was taken; and
- total number of credits received and, in many cases, total number of credits attempted.

Section B.4 in chapter 5 contains a complete listing of information that may be available on transcripts.

3. School Forms, Catalogs, or Course Lists

The following are the types of forms and materials used to obtain graduate transcripts, general school information, and information about a school's course offerings:

- *School Information Form (SIF)*—The completed SIF contains general information about the school, such as information recorded on their student transcripts, credit standards, graduation requirements, and grading practices. Schools generally provided this information, although it may come from the school's district or state (see appendix B).
- *Catalogs or Course Lists*—The school administrator generally provides these materials, which contain the information needed to code courses using the School Courses for the Exchange of Data (SCED). School district or state catalogs or course lists may have been used if a school did not have this material available. Catalogs provide both course titles and descriptions, while course lists usually provide course titles only.²

D. Participation and Confidentiality of Data

For public schools, transcripts for students selected for the NAEP 2019 grade 12 mathematics and science assessments were collected in one of two ways. Schools, school districts, and states submitted the transcripts electronically, or field workers collected the transcripts from the schools in person. For private schools, field workers visited the schools to collect the student transcripts for the students selected for the NAEP 2019 mathematics and science assessments. Unlike NAEP, parental consent is not needed for HSTS; the schools are provided with information about the Family Educational Rights and Privacy Act (FERPA) that authorizes collection of transcript data without parental consent. Generally, schools do not require parental or student notification or consent for the HSTS because there is no burden placed on the graduate.

The personal information obtained from the transcript study is kept strictly confidential. Student names and any other identifiable information were masked on the copies of the transcripts before these materials were uploaded or left the schools. Furthermore, while each student in the NAEP assessments received a NAEP ID that was also used for the HSTS, the list that linked the student's name with that NAEP ID remained in the school. HSTS staff did not have access to that list and could not recreate it if it were lost.

² See chapter 4, section B.2, for additional information on the process of obtaining course information.

The HSTS 2019 data files do not contain the graduates' names or other variables that directly identify the sampled graduates. Data files do contain the graduates' NAEP IDs, which enable researchers to link the transcript data to the NAEP data. The HSTS follows NCES's strict procedures regarding the confidentiality of data files.

E. Secondary Course Coding Systems

To compare transcripts from different schools, it was necessary to code each of the courses entered from the transcripts using a common course coding system. The coding system employed for this purpose was the School Courses for the Exchange of Data (SCED), introduced in 2007 for the purpose of comparing secondary and prior-to-secondary course information. The SCED is a four-part coding system that includes a course content identifier, level of course rigor, number of credits earned, and course sequence. The course content identifier is a five-digit system, with the first two digits representing the subject area categories into which the courses are classified. The final three digits represent specific courses, which are often grouped into subcategories within the broader subject area category. HSTS 2019 used Version 7.0 of the SCED codes. More information about the SCED coding system, including a complete list of codes, can be found at <https://nces.ed.gov/forum/sced.asp>.

Prior to 2019, the HSTS used the Classification of Second School Courses (CSSC) course coding system. As noted in *A Classification of Secondary School Courses* (Ludwig et al., 1982), the CSSC was initially used to code the transcripts for the High School and Beyond longitudinal study. In 1994, the CSSC coding system was revised for the HSTS using the guidelines established in the Secondary School Taxonomy (SST). The revision added separate designations for special education courses, and added more codes for career/technical education and other nonacademic courses. To maintain comparability among the transcript studies, the HSTS 1987 and 1990 studies, along with the High School and Beyond (HS&B) 1982 First Follow-Up Study, were recoded using the revised system. Unlike the SCED, CSSC does not include components that define the course level, credits earned, and course sequence. NCES now requires the SCED to be used in coding secondary school courses, and the 2019 HSTS was the first iteration to use this new system.

Both the CSSC and SCED map their courses to course subject areas (i.e., English, mathematics, fine arts, etc.). The SCED utilizes more specific vocational course subject areas than the CSSC does, but the academic and other nonvocational course areas categories are generally similar. The majority of courses contained in both coding systems are categorized in the same course subject areas. However, a comparison of the CSSC and SCED coding systems found about 15 percent of courses belong

to different course subject categories in the two systems. As the HSTS reports major coursetaking statistics by course subjects, changes in how courses are classified into course subjects affect how HSTS coursetaking trends are reported for those course subjects.

For the purpose of trend reporting, previous NAEP HSTS transcripts were recoded from CSSC to SCED using a crosswalk created by the SCED Working Group.³ This recoding allows the HSTS 2019 coursetaking data to be compared to the previous years, continuing the study's reporting of coursetaking trends. A number of HSTS coursetaking trends focus on course subjects. Starting with HSTS 2019, analyses of high school courses by course subject used the subject areas defined by the first two digits of the SCED code. Such subject areas include English language and literature, social science and history, mathematics, and life and physical sciences. Additional coursetaking measures were calculated for subgroups within some of these subject areas, such as biology, chemistry, and physics within the subject area of life and physical sciences.

The switch from CSSC to SCED also affects the inclusion criteria used for HSTS analyses, which determines which transcripts are used for HSTS analyses. The inclusion criteria require a nonzero number of credits earned in English courses. CSSC and SCED have different lists of courses that fall within the English subject area. For example, the CSSC codes used by HSTS defines journalism courses as English courses, but SCED defines them as career and technical education courses. English as a Second Language courses, however, are defined as English courses by SCED, but CSSC defines them as foreign language courses.

Since the inclusion criteria involves English courses, recoding the previous HSTS years' transcripts from CSSC to SCED meant that the transcripts eligible for analysis in previous studies would change. Consider, for example, a transcript that contained at least one English course as defined by CSSC, but no English courses as defined by SCED. That transcript would not meet the inclusion criteria for analysis using the SCED system, even though it did meet the criteria using the CSSC system. Similarly, a transcript that had no English courses as defined by CSSC, but at least one English course as defined by SCED, would be included for analysis using the SCED system, despite not being included for analysis using the CSSC system. The number of transcripts that would change analysis eligibility between the two coding systems was small; for 1990, 2000, 2005, and 2009, comparisons of the samples found that at least 99.6 percent of the high school graduates in the SCED-based sample was also in the CSSC-based sample (Perkins, 2020).

³ The restricted-use data files for previous HSTS years will be updated to include new catalog, student, and transcript files to reflect the SCED recoding. See chapter 8, section A.2 to learn how to apply for a license to the NAEP HSTS restricted-use data files.

Instead of resetting the previous HSTS years' analysis samples, the established analysis samples for HSTS 2009 and the previous high school transcript studies were kept. For HSTS 2019 and all future high school transcript studies that utilize the SCED coding system, the SCED-based English courses will be used in the inclusion criteria for the analysis samples.

F. Comparing HSTS 2019 Results to Other Transcript Studies

Between 1982 and 2019, NCES conducted 13 high school transcript studies: the HS&B study in 1982; the Second Follow-Up to the National Education Longitudinal Study of 1988 (NELS:88/92) in 1992; First Follow-Up to the Education Longitudinal Study of 2002 (ELS:2002/04) in 2004; High School Transcripts update to the High School Longitudinal Study of 2009 (HSL:09/13-14) in 2013–14; and NAEP HSTS in 1987, 1990, 1994, 1998, 2000, 2005, 2009, and 2019. One research objective of NAEP HSTS 2019 was to study changes in the coursetaking patterns among high school graduates over time, comparing its results with the other NCES-conducted high school transcript studies. While results are reported for trends over time, it should be noted that some differences exist among the high school transcript studies, and therefore, users should exercise caution when making comparisons. For the NAEP HSTS, only the NAEP-based transcript studies that are linked to NAEP assessment scores are used for reporting trend results. These studies are the 1990, 1994, 1998, 2000, 2005, 2009, and 2019 iterations of the NAEP HSTS.

For more information about comparisons among the different high school transcript studies, please refer to chapter 1 of *The High School Transcript Study: A Decade of Change in Curricula and Achievement, 1990-2000* (Perkins et al., 2004).⁴ For discussion about comparisons with the transcript component of the Second Follow-Up to NELS:88, please refer to appendix A of *National Education Longitudinal Study of 1988, Second Follow-Up: Transcript Component Data File User's Manual* (Ingels et al., 1995). The similarities and differences between the high school transcript studies' data (NAEP, NELS, and HS&B) are also described extensively in the *NCES Handbook of Survey Methods* (Thurgood et al., 2003). The handbook looks at the comparability of the high school transcript studies' data based upon five criteria: (1) sample sizes, (2) oversampling of subgroups, (3) eligibility criteria for inclusion in the studies, (4) representativeness of cross-sectional and longitudinal populations, and (5) coding differences.

⁴ This report can be found at <https://nces.ed.gov/pubs2004/2004455.pdf>.

2. SAMPLE DESIGN FOR THE NAEP 2019 GRADE 12 ASSESSMENTS

The 2019 High School Transcript Study (HSTS 2019) was designed to allow for an analysis of the coursetaking patterns of students who graduated from American public and private high schools in 2019. It was further designed so that data on students' coursetaking patterns could be linked to the 2019 National Assessment of Education Progress (NAEP) assessment results. Since studies similar to HSTS 2019 were conducted on 1982, 1987, 1990, 1994, 1998, 2000, 2005, and 2009 graduates, changes in these patterns and relationships to NAEP performance in these years can also be studied.⁵

The HSTS 2019 sample consisted of the responding sample of twelfth-grade schools and students selected for participation in the 2019 NAEP operational science and mathematics assessments. Although there was also a NAEP grade 12 reading assessment in 2019, since 2000, NCES has required that the NAEP HSTS be linked only to the NAEP grade 12 mathematics and science assessments. This chapter describes aspects of the NAEP 2019 sample design that affect the HSTS 2019 sample. The focus of chapter 3 is on aspects of the selection of schools and students that are specific to HSTS 2019.

A. Overview of the NAEP 2019 Grade 12 Sample Design

The twelfth-grade student sample for NAEP 2019 was a national two-stage probability-based sample. The first stage of sampling involved the selection of schools, and the second stage involved selection of students within schools and their assignment to an assessment subject. Schools were sampled with probability proportional to estimated grade 12 student enrollment, students were sampled within each school with equal probability, and students were assigned to reading, mathematics, and science assessments at varying rates.

A unique aspect of the 2019 NAEP grade 12 student assessments was the administration of the assessments using two different assessment modes (1) paper and pencil and (2) computer tablets. This was done in part to facilitate the transition of NAEP from paper-based assessments (PBA) to digitally based assessments (DBA). As a consequence, students sampled within each school were first assigned an assessment mode—with roughly 44 percent randomly assigned to PBA and 56 percent assigned to DBA—before being assigned an assessment subject.

⁵ The 1987, 1990, 1994, 1998, 2000, 2005, and 2009 transcript data were collected by Westat in coordination with the 1987, 1990, 1994, 1998, 2000, 2005, and 2009 NAEP (Thorne et al., 1989; Legum et al., 1993b; Legum et al., 1997). The 1982 data were collected by the National Opinion Research Center as part of the High School and Beyond project (Jones et al., 1983).

As in past assessments, modest oversampling of Black and Hispanic students was undertaken in this sample and was carried out at the school level in order to provide adequate information from these groups for analysis. In addition, for the first time, American Indian and Alaska Native (AIAN) students were oversampled using a similar approach.

For the Black and Hispanic student oversample, a high Black/Hispanic school was given twice the selection probability of a low Black/Hispanic school of comparable size. A school was considered high Black/Hispanic if it had (1) more than 15 percent combined Black and Hispanic students, and (2) 10 or more such students. About 64 percent of the twelfth-grade student population was in high Black/Hispanic schools. As a result of the Black/Hispanic oversample, about 76 percent of the sampled twelfth-grade students were from high Black/Hispanic schools.

Similarly, for the AIAN student oversample, a school with both more than 5 percent AIAN students and five or more such students was considered a high AIAN school and given four times the selection probability of a low AIAN school of comparable size. About 2.5 percent of the twelfth-grade student population was in high AIAN schools. As a result of the AIAN student oversample, about 5.7 percent of the sampled students were from these schools.

The general target for the twelfth-grade public sample was 77,400 assessed students for the operational assessments in mathematics, reading, and science, with 34,200 assessed in PBA and 43,200 assessed in DBA. The general target for the twelfth-grade private school sample was 8,600 students, with 3,800 in PBA and 4,800 in DBA.

B. School Sampling Frame

A frame of twelfth-grade schools was created by combining the 2016–17 Common Core of Data (CCD) file of public schools and the 2015–16 Private School Survey (PSS) file of private schools. Public schools from CCD include regular and state-run public schools, Bureau of Indian Education (BIE) schools, and Department of Defense Education Activity (DoDEA) schools. Regular public schools are schools with students who are classified as being in a specific grade (as opposed to schools having only “ungraded” classrooms). These include statewide magnet schools and charter schools.

Private schools were obtained from PSS conducted by the National Center for Education Statistics (NCES). The PSS list of schools is an ongoing registry of private schools. The registry is updated prior to the survey through two sources. The first source, called the list frame, is a

conglomeration of a number of lists from several private school associations, state departments of education, and other national private school data sources. The second source uses an area frame to identify and represent schools not on the list frame. More details about PSS can be found on the NCES website (<https://nces.ed.gov/surveys/pss/>), in its 2015–16 public-use data files user’s manual (<https://nces.ed.gov/pubs2017/2017160.pdf>), or in its 2019–20 public-use data files user’s manual (<https://nces.ed.gov/pubs2022/2022021.pdf>).

The sampling frame excluded schools that were ungraded, provided only special education or vocational training, were part of hospital or treatment center programs, were part of juvenile correctional institutions, were home school or online entities, or were solely for adult education.

C. Stratification

Prior to sampling, schools on the sampling frame were formed into groups known as strata on the basis of various school characteristics related to achievement. Grouping schools within strata by such characteristics provides a more ordered selection process with improved reliability of the assessment results. NAEP school sampling utilizes two types of stratification: explicit and implicit. Explicit stratification involves assigning schools to mutually exclusive and exhaustive groups and selecting samples from each group independently. Implicit stratification involves the grouping of schools by the use of sort variables within explicit strata. The characteristics used to stratify the schools differed for public and private schools.

The public school sample had no explicit stratification; schools were stratified implicitly using a hierarchy of stratifiers and a serpentine sort. The highest level implicit stratification variable was AIAN student composition (low, high). This is the first time AIAN classification was used to implicitly stratify a national NAEP public school sampling frame. It is part of an oversampling scheme to ensure sufficient numbers of AIAN students are present in student sample. Within each of the low and high AIAN classifications, schools were further stratified by the following characteristics:

- Census division;
- Urbanicity or type of location status;
- Black/Hispanic composition;
- School type (public, BIE, DoDEA); and

- Median household income based on five-digit or three-digit ZIP Code Tabulation Area in which a school is located, as provided in the 2012-16 American Community Survey (ACS) data.

The private school sample was explicitly stratified by private school type: Catholic, nonCatholic, and unknown affiliation. Within each explicit stratum, the schools were stratified implicitly using a hierarchy of stratifiers in a serpentine sort order. The implicit stratifiers were

- Census region;
- Urbanicity or type of location status;
- Race/ethnicity composition; and
- Estimated grade enrollment.

D. Selection of Schools

Schools were selected (without replacement) systematically from the stratified school frames with probabilities proportional to assigned measure of size. The measure of size used for sampling was a function of the estimated number of enrolled twelfth-grade students. To increase cost-efficiency in sampling and data collection, small schools in both the public and private school frames were undersampled and schools in the public school frame with relatively high proportions of AIAN and/or Black/Hispanic students were oversampled. The probabilities of selection for small schools were lowered to reduce the expected number of small schools in the sample to be visited by field staff in recognition of the greater cost and burden per student of conducting assessments in such schools.

To ensure a sufficient number of AIAN, Black, and Hispanic students in the sample for analyses purposes, public schools classified as high AIAN schools were given four times the probability of selection of a low AIAN school of comparable size, and public schools classified as high Black/Hispanic schools were given twice the probability of selection of a low Black/Hispanic school of comparable size. Private schools were not oversampled in 2019.

E. Selection of Substitute Schools

Though efforts were made to secure the participation of all schools selected, it was anticipated that not all schools would choose to participate. Potential substitute schools were preselected

for all sampled schools by sorting the school frame file according to the actual order used in the sampling process and taking the “nearest neighbor.” The nearest neighbor is the school adjacent (immediately preceding or succeeding) the original school in the sorted frame with the closest estimated grade enrollment value.

There were several constraints on the assignment of substitutes. A sampled school was not allowed to substitute for another, and a given school could not be assigned to substitute for more than one sampled school. For private schools, only Catholic schools were chosen as substitutes for other Catholic schools. NonCatholic private schools—that is, any private school that was not a Catholic school—were chosen as substitutes for other nonCatholic private schools. For public schools, substitute schools had to be within the same state.

No sampled school was assigned more than one substitute, and no school was assigned to be a substitute for more than one school. The criteria for assigning substitutes was quite strict; many sampled schools were not assigned substitutes at all as there were no schools which met the necessary criteria to be a substitute.

F. New School Frame

The CCD and PSS files did not contain schools that opened between 2017 and the assessment dates. Therefore, special procedures were implemented to ensure that the NAEP assessment represented students in the new schools. Small public school districts—those that contained only one eligible school at grades 4, 8, and/or 12—were handled differently from large public school districts, which contained more than one eligible school at any of these grades. In small public school districts, the schools selected from those districts were thought highly likely to contain all students in the district that were eligible for the assessment. As an additional check, these small public school districts were asked if other schools with twelfth grade existed within their districts; if so, they were automatically included in the assessment. The same process used for small public school districts was also used for small Catholic dioceses.

For large public school districts, a district-level frame was constructed from the schools on the CCD file. The districts were then sampled systematically with probabilities proportional to a measure of size. In most cases, the measure of size was total district enrollment, but in very small districts a minimum measure of size was used. Each sampled district was asked to update the list of eligible schools derived from information on the CCD files. Frames of eligible new schools were then constructed for

twelfth grade, and samples of new schools were selected systematically with probability proportional to estimated twelfth-grade enrollment using the same sampling rates as the nonnew schools. Note, no substitute schools were selected for new schools. A similar procedure was used for large Catholic dioceses, although the PSS files were used for frame building.

G. Selection of Students and Assignment of Subject

In each sampled school, a sample of students was selected from all eligible twelfth-grade students provided on a student roster. Students were selected with equal probability using a systematic sampling approach. Student rosters were submitted either electronically through a process known as e-filing or in hardcopy. E-filing allows schools to easily submit student demographic data electronically with the student lists. Students in schools that submitted electronic rosters were sorted by age and race/ethnicity prior to student sampling. In schools that did not e-file, student rosters were not sorted. The within-school student sample size target was 75 for both public and private schools. Because the grade 12 NAEP assessments were being conducted in two modes, 33 students of the 75 students were randomly assigned to PBA and 42 were randomly assigned to DBA.

The students selected in this process were then randomly assigned a mathematics, reading, or science booklet, with a booklet defined as the assessment instrument created by combining preset blocks of assessment items.⁶ Booklet sets were delivered to each sampled school, and the subject of the booklets within these sets was allocated, on average, using the percentage rates shown in table 2 below. Spiraling was used to interleave booklets systematically so that students would receive predetermined proportions of the different booklets within a subject area. The reading, mathematics, and science spirals varied by assessment mode.

Table 2. Student sample size within schools and subject percentage distribution of NAEP grade 12 assessments, by assessment mode: 2019

Assessment mode	Student sample size	Percentage reading	Percentage mathematics	Percentage science
Paper-based (PBA)	33	38	35	27
Digitally based (DBA)	42	31	30	39

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2019.

⁶ Prior to 2017, most NAEP assessments utilized a paper-based format and were administered to students via printed test booklets. Selected items have been trans-adapted from the paper-based assessments for administration in a digitally based assessment environment via digital test forms.

H. Students Not Included in the Assessment

School staff members were asked to determine whether any of the students identified as students with disabilities (SD) or English learners (EL) could not participate in the assessment. They needed to determine if a student could not participate meaningfully, or if the accommodations required for the student to participate were not available. These students were not invited to the assessment and were coded as “excluded” to distinguish them from absent students. Although school staff were encouraged to follow NAEP standards regarding which students should be excluded from testing, the final decision was made by school personnel.

From the schools selected in the HSTS 2019 school sample, approximately 2.2 percent of the students were excluded from the NAEP 2019 assessment. As the transcript study attempted to collect high school transcripts for all students selected for the assessment, whether or not they participated, transcripts for these students are included in the transcript study.

3. SAMPLING OF SCHOOLS AND GRADUATES FOR THE NAEP HSTS 2019

A. Overview of Sample Design for NAEP HSTS 2019 Sample

The sample for the High School Transcript Study (HSTS) was designed to achieve a nationally representative sample of public and private high school graduates from the Class of 2019. The target population for the 2019 national assessments included all students in public and private schools who were enrolled in twelfth grade in the 2018–19 academic year, and who graduated before the start of the 2019–20 academic year. The samples were selected based on a two-stage sample design: selection of schools and selection of twelfth-grade students within schools.

B. Sampling of Schools

For both public and private schools, the HSTS sample was in fact the NAEP 2019 grade 12 public and private school sample for the operational mathematics and science assessments, respectively. All participating NAEP grade 12 public and private schools were part of the initial HSTS sample regardless of whether they were original or substitute NAEP schools.

C. Sampling of Students

The HSTS student sample was defined by both the school sample and the NAEP assessments. Among the schools sampled for the NAEP 2019 twelfth-grade assessments, all twelfth-grade students assigned to the NAEP mathematics and science assessments were included in the HSTS student sample, regardless of whether they completed the assessment. If a sampled school did not participate in NAEP, then their students were not included in the HSTS student sample. A total of 73,700 students were selected for inclusion in the HSTS.

Because sampling was performed in most schools prior to graduation, not all sampled students were, in fact, graduates. As HSTS analyses focus solely on high school graduates, inclusion criteria were set to ensure that only graduates were analyzed. Students who graduated with a regular or honors high school diploma were considered eligible. As stated in section A above, students must have

earned the diploma before the start of the 2019–20 academic year. Students who did not graduate with those diplomas were classified as not eligible.

D. HSTS School and Student Participation Results

The HSTS school and student participation results for HSTS 2019 are summarized in the tables below. Table 3 provides participation results at the school level, and tables 4 to 6 show participation results at the student level.

As discussed in section C above, students who graduated with a regular or honors high school diploma were considered as eligible students. The HSTS analyses also required that graduates' transcripts were complete so that coursetaking measures could be properly calculated. Graduates with either missing transcripts or insufficient transcripts were classified as eligible nonrespondents. Transcripts were considered insufficient if they had any of the following issues:

- contained fewer than 3 years of delineated courses;
- did not contain courses from the HSTS assessment year (i.e., the 2018–19 school year);
- had less than the equivalent of 16 year-long courses; or
- did not contain any credit-bearing English courses.⁷

Graduates with sufficient transcripts were classified as eligible respondents. Only graduates who were eligible respondents were analyzed for the HSTS web report and included in the HSTS 2019 restricted-use data files.

Table 3 shows the school-level sample counts by response status and the overall school-level response rate for public and private schools. Table 3 also shows the two component parts of the overall response rate. The first component is the response rate for NAEP (column 3), and the second component is the HSTS participation rate among the schools that participated in NAEP (column 4). The product of these two components yields the overall HSTS response rate (column 5). Presenting the response rates in this manner shows how much of the overall HSTS school nonresponse is attributable to NAEP nonresponse. For example, for public and private schools combined, the overall school-level response rate for HSTS 2019 was 70 percent. Of the schools eligible for HSTS, about 86 percent participated in NAEP,

⁷ As almost every United States high school requires English courses to graduate, a transcript that does not list any English courses or shows that no credits were earned in English courses likely indicates either an incomplete transcript or a transcript of a nongraduating student.

and among these participating NAEP schools about 81 percent participated in the HSTS. Looking at this from the point of view of nonresponse, the overall nonresponse rate for HSTS 2019 was 30 percent. Since 14 percent of the total sample nonresponse was attributable to NAEP nonresponse, it showed that 47 percent of the total HSTS nonresponse is due to NAEP.

Table 3. HSTS school sample counts by school type and response status and weighted HSTS school response rates, by school type decomposed by NAEP participation status: 2019

School type and HSTS response status	Unweighted number of schools selected	Weighted response rate for NAEP	Weighted response rate among participating NAEP schools	Weighted response rate overall
National	2,390	85.9	81.1	69.7
Eligible	2,160			
Respondent	1,410			
Nonrespondent	750			
Participated in NAEP	380			
Did not participate in NAEP	380			
Not eligible ¹	230			
Public	1,930	89.3	82.1	73.3
Eligible	1,810			
Respondent	1,330			
Nonrespondent	470			
Participated in NAEP	310			
Did not participate in NAEP	160			
Not eligible	120			
Private	460	42.8	55.4	23.7
Eligible	350			
Respondent	80			
Nonrespondent	280			
Participated in NAEP	60			
Did not participate in NAEP	220			
Not eligible	110			

¹ Schools were required to be eligible for NAEP in order to be eligible for HSTS.

NOTE: Counts of schools are rounded to nearest 10. Detail may not sum to totals due to rounding. Percentages are based on unrounded counts.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, NAEP High School Transcript Study (HSTS), 2019.

The weights used in response rate calculations were weighted enrollment counts, obtained by multiplying the school base weight by the twelfth-grade enrollment of the school. This is the same approach NAEP uses to calculate school response rates. Note that there is no distinction between school response rates for the unlinked sample, which consists of all high school graduates in the HSTS sample,

and the linked samples, which consists of high school graduates in the HSTS sample linked to a particular NAEP assessment (mathematics or science). That is because these samples are in the exact same schools.

As required by National Center for Education Statistics (NCES) standards, reporting groups with school-level participation rates below 85 percent must undergo a nonresponse bias analysis. Consequently, a nonresponse bias analysis is required for both public and private schools. Results of the nonresponse bias analysis suggest that, even after making nonresponse adjustments, there is possibly significant nonresponse bias in the HSTS achievement results for both public and private schools. A detailed explanation of the nonresponse bias analysis, which includes its results, can be found in chapter 9.

Tables 4, 5, and 6 show the participation results at the student level by public and private schools for the unlinked and linked samples. Each table shows unweighted and weighted counts by response status and the weighted student-level response rates, conditional and unconditional. Conditional response rates reflect student response rates within participating schools, and unconditional response rates reflect overall student response rates (the product of the school response rate and the conditional student response rate). Table 4 provides the response rates for the unlinked sample—that is, the HSTS study as a whole—counting as respondents those who participated in HSTS, regardless of their participation in NAEP. Table 4 also shows that a very small number of transcripts for eligible students were either missing or insufficient. The national conditional and unconditional weighted response rates were 98.6 percent and 68.7 percent, respectively. National response rates reflect public and private schools combined.

Tables 5 and 6 show the set of response rates for the NAEP-HSTS linked study for mathematics and science, respectively. For the NAEP-HSTS linked study, a graduate had to have complete transcripts and also had to participate in a NAEP assessment to be considered a respondent. Graduates with insufficient transcripts or who were eligible for NAEP but did not participate in NAEP were considered nonrespondents. Graduates who were excluded from participating in NAEP due to a disability or limited English proficiency were deemed ineligible for the linked study. The student-level response rates for the NAEP-HSTS linked studies for both mathematics and science are substantially lower than for the unlinked study (84 percent versus 99 percent). It also indicates that all but 1 percent of the nonresponse for the linked study is attributable to NAEP nonresponse.

Table 4. Unweighted and weighted HSTS (unlinked) student counts and weighted HSTS student response rates, by school type: 2019

School type and HSTS response status	Unweighted number of students	Weighted number of students	Weighted response rate (conditional)	Weighted response rate (unconditional)
National	73,700	2,962,707	98.6	68.7
Eligible	48,000	1,936,806		
Respondent	47,300	1,909,240		
Nonrespondent	700	27,565		
Not eligible	25,800	1,025,902		
Public	69,900	2,846,396	98.6	72.2
Eligible	46,000	1,878,646		
Respondent	45,400	1,851,965		
Nonrespondent	700	26,681		
Not eligible	23,900	967,750		
Private	3,800	116,311	98.5	23.4
Eligible	1,900	58,152		
Respondent	1,900	57,275		
Nonrespondent	#	884		
Not eligible	1,900	58,152		

Rounds to zero.

NOTE: Unweighted counts of students are rounded to the nearest hundred. Detail may not sum to totals due to rounding. Percentages are based on unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, NAEP High School Transcript Study (HSTS), 2019.

Table 5. Unweighted and weighted HSTS (linked) student counts and weighted HSTS student response rates, by school type for mathematics: 2019

School type and NAEP-HSTS linked response status	Unweighted number of students	Weighted number of students	Weighted response rate (conditional)	Weighted response rate (unconditional)
National	36,000	2,965,291	84.0	58.5
Eligible	23,200	1,915,176		
Respondent	19,500	1,606,340		
Nonrespondent	3,700	308,836		
Not eligible	12,800	1,050,116		
Public	34,100	2,848,245	83.8	61.4
Eligible	22,200	1,857,831		
Respondent	18,600	1,555,485		
Nonrespondent	3,600	302,346		
Not eligible	11,900	990,414		
Private	1,900	117,046	88.8	21.1
Eligible	900	57,344		
Respondent	900	50,855		
Nonrespondent	100	6,489		
Not eligible	900	59,702		

NOTE: Unweighted counts of students are rounded to the nearest hundred. Detail may not sum to totals due to rounding. Percentages are based on unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, NAEP High School Transcript Study (HSTS), 2019.

Table 6. Unweighted and weighted HSTS (linked) student counts and weighted HSTS student response rates, by school type for science: 2019

School type and NAEP-HSTS linked response status	Unweighted number of students	Weighted number of students	Weighted response rate (conditional)	Weighted response rate (unconditional)
National	37,800	2,963,086	83.6	58.2
Eligible	24,300	1,914,521		
Respondent	20,200	1,602,242		
Nonrespondent	4,000	312,279		
Not eligible	13,500	1,048,565		
Public	35,800	2,847,447	83.4	61.1
Eligible	23,300	1,856,292		
Respondent	19,300	1,549,914		
Nonrespondent	3,900	306,378		
Not eligible	12,500	991,155		
Private	1,900	115,639	89.9	21.3
Eligible	1,000	58,229		
Respondent	900	52,328		
Nonrespondent	100	5,901		
Not eligible	900	57,410		

NOTE: Unweighted counts of students are rounded to the nearest hundred. Detail may not sum to totals due to rounding. Percentages are based on unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, NAEP High School Transcript Study (HSTS), 2019.

4. DATA COLLECTION PROCEDURES

This chapter discusses the procedures used in data collection for the 2019 High School Transcript Study (HSTS 2019). Details on how the sample was drawn can be found in chapters 2 and 3. Included in this chapter are sections on the timeline for data collection activities, contacting the schools, obtaining course catalogs and other school materials, training field workers, collecting graduate transcripts, and sending the materials for processing.

A. Timeline for HSTS 2019 Activities

The data collection portion of HSTS 2019 took place in two phases. During phase 1, state-level coordinators, field workers, and HSTS project staff contacted schools by phone and email to introduce the study and collect catalogs from the sampled schools. School and course information were also obtained to understand the content of the transcripts that would be collected during phase 2. In phase 2, schools, school districts, and/or states could upload electronic transcript records of the sampled graduates. Field workers visited schools that could not provide electronic transcript records to collect hardcopy transcripts of the sampled graduates.

As seen in figure 1, phase 1 was scheduled to occur from October 2018 through March 2019, and phase 2 was scheduled to take place after transcripts were finalized, from August to December 2019. Several circumstances altered this planned timeline. First, phase 1 submissions were not all received by March 2019; consequently, further efforts were made to obtain catalogs and school information. Then, data collection was suspended for budgetary reasons from August to December 2019. The suspension occurred after electronic transcript submitters received instructions for uploading transcripts, but before field workers visited any schools to collect hardcopy records. Efforts to complete phase 1 data collection were also still underway and interrupted. Following the suspension, the in-person collection of hardcopy transcripts commenced in January 2020 and continued through March 2020, when it ended prematurely due to the COVID-19 pandemic. Ultimately, as a result of the suspension and the COVID-19 pandemic, collection of catalogs and school information was completed in mid-2020, and the collection of transcripts was completed in December 2020.

Figure 1. High School Transcript Study 2019 data collection timeline

	Planned Schedule	Actual Schedule		
2018				
October	Phase 1 (Collection of catalogs and school information)	Phase 1		
November				
December				
2019				
January	(Phase 1 continued)	(Phase 1 continued)		
February				
March				
April				
May				
June				
July				
August	Phase 2	Phase 2 – electronic submission		
(mid-August)	(Collection of transcripts)	Data collection suspension		
September				
October				
November				
December				
2020				
January		Phase 1 – final push	Phase 2 – hardcopy transcript collection	Phase 2 – electronic transcript follow-up
February				
March				
April		COVID-19 Pandemic shuts down most schools		
May				
June		Phase 1 – final submission		Phase 2 – final push for electronic transcripts
July				
August				
September				
October				
November				
December				

B. Phase 1

1. Initial Contacts With States, Districts, and Schools

National Assessment of Educational Progress (NAEP) State Coordinators had a Sample Introductory Letter to Sampled High Schools and the *NAEP in your School—HSTS* brochure that they could use to notify the principals of sampled public high schools of their selection for HSTS 2019 (see appendices E and F for the letter and brochure). Beginning in October 2018, NAEP State Coordinators in each state used these materials to inform public school districts and schools of their selection for HSTS 2019. NAEP field supervisors were responsible for notifying principals of private schools about the study. The introductory letter and brochure informed principals about the purpose of HSTS 2019, the activities to be conducted in their school, the timeline for data collection activities, the amount and nature of school staff time required for participating in the study, and the procedures that would be used to ensure confidentiality of the data. Principals were asked to identify a school staff person who could act as the HSTS coordinator.

In some cases, states and school districts opted to provide data on behalf of their schools. This decision was made when states and districts had access to student transcript records (in some cases better access than the individual schools) and wanted to reduce the burden on their schools.

2. Online Data Collection

Once the point of contact for data collection was established, HSTS project staff emailed instructions to the designated individuals for registering on the HSTS website. The HSTS website was organized into several distinct pages with different types of information. All users could see the following pages:

- an overview of HSTS 2019;
- instructions for uploading and/or mailing course catalogs;
- a link to the course catalog survey; and
- a link to complete the School Information Form (SIF) (or State Information Form / District Information Form, if applicable).

a. Overview Materials

Along with a brief overview of the HSTS 2019 study, the overview page contained several documents that were available for download:

- another copy of the *NAEP in your School—HSTS* brochure;
- a website tutorial video;
- a *Decision Guide for Submitting Student Transcripts*, which compared the requirements and major steps involved in submitting paper versus electronic transcripts (and was provided to school-level users only, as states and districts submitted electronic transcripts); and
- the Family Educational Rights and Privacy Act (FERPA) notice.

b. Course Catalog Submission

The course catalog submission page contained a link to a short course catalog survey, instructions for uploading electronic course catalog documents, and instructions for mailing hardcopy catalogs. The course catalog survey inquired about the number and type of catalogs that could be provided (appendix D). If possible, coordinators were asked to submit their then-current (2018–2019) course catalog, along with 3 previous years of catalogs (2017–2018, 2016–2017, and 2015–2016), to HSTS project staff either electronically or using a pre-addressed, postage-paid FedEx label and envelope. If a coordinator indicated in the course catalog survey that they would provide hardcopy catalogs, HSTS project staff mailed the FedEx label and envelope to the school for the collection of the hardcopy catalog(s).

Collection of catalogs prior to field worker school visits to conduct the NAEP assessment had a couple of advantages. First, it permitted home office staff to begin processing catalogs before NAEP field data collection and to review the catalogs and obtain, when necessary, clarification from schools. Second, because the information was obtained early, this collection eased the burden on NAEP field workers, who only had to collect catalogs not yet received.

Some schools had not submitted catalogs by the end of the NAEP field data collection period. In an effort to obtain catalogs for these schools, the home office staff searched the websites of the

schools or their districts to find out if they had posted their catalogs online. This step additionally reduced the burden on school staff for providing catalogs.

HSTS 2019 project staff requested course catalogs that contained the most comprehensive information about the courses offered by the schools. Ordered from most to least complete, the types of catalogs requested were as follows:

- a school-level catalog providing course titles and descriptions;
- a district-level catalog providing course titles and descriptions, if it indicated which courses were offered at the school;
- a district-level catalog providing course titles and descriptions that did not indicate which courses were offered at which school in the district;
- a school- or district-level course list that included general descriptions of course offerings by department;
- a school-level course list without course descriptions; or
- a district-level course list without any course descriptions.

In some cases, schools, districts, or states could supply the transcripts for the sampled HSTS schools, but were not able to provide any course catalogs. There may not have been a catalog available, or the catalog may not be publicly available. If catalogs were not available, or the burden to communicate with schools to obtain catalogs was considered too great, HSTS project staff created a course list during phase 2, based on the courses that appeared on student transcript records. This procedure was only used when all other catalog collection options were exhausted.

c. School Information Form (SIF)

The SIF (see appendix B) was an online survey and collected general school information as well as the following:

- sources of information within the school (if needed to complete HSTS 2019 data collection);
- graduation requirements;
- grading practices at the school; and
- format of the school's transcripts.

HSTS project staff downloaded the survey results for data processing along with the other preliminary materials as described above.

Starting in fall 2018, HSTS project staff monitored the completion of the course catalog submission and the SIF. Periodic reminders were sent if any tasks remained uncompleted. Usually, the target deadline for these activities was the sampled school's scheduled NAEP assessment date. If any uncompleted tasks remained as the school's assessment date approached, field workers would be provided with information about the status and what items to follow up on while conducting the NAEP assessment at the school.

To ease burden on private schools and reduce the likelihood of refusal, HSTS coordinators for private schools were not asked to register for the HSTS website. Instead, field workers contacted these schools beginning in January 2019 and collected catalogs and survey responses during in-person NAEP sampling visits. Coordinators could also email their catalogs to the field worker and/or provide survey responses over the phone. If necessary, the field worker visited the school to obtain this information during phase 2.

3. Training NAEP 2019 Field Supervisors as Data Collectors

Field worker training for phase 1 of HSTS 2019 took place in December 2018. The field workers were drawn from the pool of 2019 NAEP field supervisors and were trained in the HSTS 2019 data collection procedures. Produced and distributed by NAEP project staff in collaboration with HSTS staff, the training consisted of a recorded online module. In addition, field workers received an HSTS 2019 manual that outlined detailed procedures for collecting the data.

The training module established the background knowledge needed to help field workers make informed decisions about collecting information in the schools and to explain why attention to detail and accuracy would be crucial in ensuring the quality of HSTS 2019 data. The training also familiarized field workers with HSTS 2019 materials and forms. Specifically, field workers were given examples of various types of high school records and materials, including transcripts, and all the forms used for HSTS 2019. Field workers learned what to look for in these materials to obtain the information needed at the school and student levels.

4. HSTS Data Collection During NAEP 2019 Assessments

From January to March 2019, field workers visited schools to conduct NAEP assessments. In a traditional HSTS assessment, during these school visits, the field workers would

- collect any course catalogs not yet received by the home office; and
- complete any missing information on the HSTS SIF.

If the course catalogs had not already been sent to the HSTS staff, they would be carefully reviewed at the school by the field workers. They would verify the catalogs contained all of the courses that twelfth-graders could have taken in high school, including career/technical education, remedial, honors, special education, and off-campus courses. If these catalogs did not contain all available courses, every effort would be made to obtain additional information from school personnel or, in some cases, through web searches to document the existence of such courses and to describe them. All catalogs and course lists received by field workers would be forwarded to the HSTS data processing staff.

C. Phase 2

Transcripts were requested for all students who were sampled for the operational mathematics and science assessments of NAEP 2019. The sample included all assessed students, sampled students who were absent during the NAEP assessment, and students with disabilities (SD) and English learners (EL) who were excluded by the school from participating in the assessment. The procedures for obtaining electronic and hardcopy transcripts are described in this section.

1. Obtaining Transcripts

Electronic transcript submitters received instructions for preparing and uploading transcripts in August 2019 on the HSTS website. A new page on the website made it possible for submitters to access a downloadable list of eligible sampled students in an Excel format, along with detailed instructions for submitting transcript records for the listed students. Instructions directed submitters to begin by downloading the student list and obtaining the transcript records for the selected students. Then, the submitters had to process the records by ensuring that all required information was contained in the

file(s) and removing (or masking, for PDF files) any personally identifiable information. Required fields included

- course ID and title;
- school year and course term;
- credits and grade earned; and
- the student exit status.

A student's exit status describes the student's outcome at the school. The list of possible exit statuses that submitters could record included

- graduated with a standard diploma;
- graduated with an honors diploma;
- received a diploma with special education adjustments;
- received a certificate of attendance;
- received a certificate of completion;
- still enrolled in this school;
- dropped out; and
- other or reason unknown.

Transcript submitters were also requested to include a key or legend if the transcript records contained abbreviations or acronyms, so that HSTS project staff could correctly interpret the records. After preparing the transcript file(s), the submitter uploaded the records to the HSTS website.

HSTS project staff retrieved these documents and performed an initial review to ensure that the transcript files were viable, contained all required fields, and had all personally identifiable information removed. Sometimes follow-up with the submitter was required to obtain useable files. When the documents met all submission requirements, the transcripts were ready to send to data processing.

For schools who submitted paper transcripts, selected field workers were scheduled to return to the schools in August and September 2019 to collect copies of transcripts for the graduating sampled students. Because of the temporary suspension in data collection operations during HSTS 2019, the schedule was shifted to January through March 2020. At that time, the field worker used a copy of the

student list (see appendix C) that contained a column to record the student exit statuses. Using information provided by the school, field workers assigned an exit status to each student.

Once the field worker filled in the student exit statuses, the school HSTS coordinators pulled transcripts from school records and photocopied them at the school. The field worker reviewed the transcripts to ensure that a transcript had been received for each twelfth-grade student selected for the operational mathematics or science portion of the NAEP 2019 assessment, and whether or not that student had graduated. Even though nongraduate transcripts were not included in HSTS, each student graduation status needed to be accounted for and verified so that weighting could be done correctly. Each transcript was checked for eligibility, understandability (e.g., all the codes on it were defined on the transcript or explained in the SIF), and completeness. The field worker then labeled each transcript with preprinted labels containing the school ID and the student's NAEP ID. If a school did not have a student's transcript on file, the field worker completed a Missing Transcripts Form to explain the reasons the school gave for any missing transcripts.

After paper transcripts were collected and all information on sampled graduates recorded, field workers prepared the transcripts for transmittal to the data processing staff. They first compared the student ID and name on the transcripts to the information on the student list to verify that they had obtained and correctly labeled the transcripts. At the same time, they noted on the student list which transcripts were received and which were not. They then cut off the left-hand column of the student list, which contained the student names. The list of names remained in the schools (and was ultimately destroyed) and the remainder of the student list was placed in the package with the transcripts to send to the HSTS 2019 field office for data processing.

When schools submitted transcripts, they were reimbursed at a general rate of \$2 per transcript. If schools indicated that the costs of providing transcripts exceeded this general rate, then they were reimbursed for the required costs. During communications with HSTS project staff and/or field workers, schools had the opportunity to provide feedback on the reimbursement rate. HSTS project staff requested this feedback from electronic submitters in an email communication regarding the transcript reimbursement process. Field workers requested the feedback over the phone when scheduling in-person visits to collect paper transcripts, and verified the reimbursement rate at the school. Feedback received on the reimbursement rate was that the \$2 rate was fine, with only a small number of schools noting that it was not enough to cover transcript production costs.

5. DATA PROCESSING PROCEDURES

As discussed in chapter 4, schools provided a wide variety of data for use in the 2019 High School Transcript Study (HSTS 2019). These data included National Assessment of Educational Progress (NAEP) 2019 questionnaires, course catalogs, School Information Forms (SIFs), and other materials to help interpret the transcripts of sampled graduates. This chapter summarizes the procedures used to process these materials and produce the study's data files. Information is also included on the study's quality control procedures, including the extensive training that staff received. Figure 2 depicts the data flow for the project.

A. NAEP 2019 Questionnaires

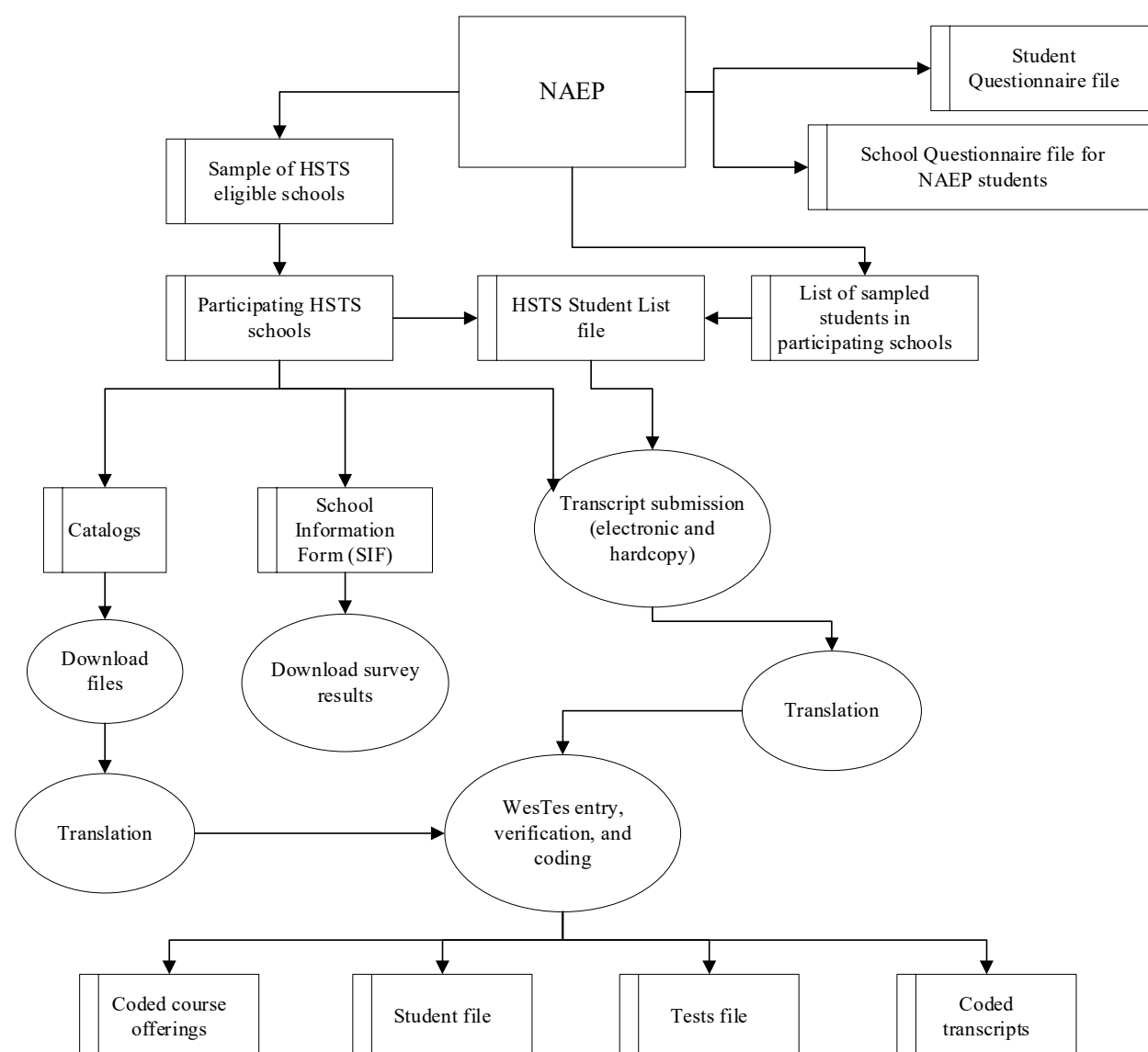
The main NAEP study provided HSTS staff with data files for schools and students included in NAEP 2019. The questionnaires used to gather information about schools and students for HSTS 2019 were the School Questionnaire and Student Questionnaire.⁸ If a school participating in the HSTS did not participate in NAEP, as has occurred in previous HSTS years, they would be given copies of both questionnaires to fill out. The 2019 HSTS school sample only contained schools from the participating NAEP school sample, so no additional NAEP survey data needed to be collected.

B. Processing Procedures for Other Data Collected for HSTS 2019

To process nonquestionnaire data collected as part of HSTS 2019, project staff used WesTes, a custom-built Structured Query Language (SQL) server application specifically designed for processing large-scale, transcript-based studies in an accurate and efficient manner. WesTes stores most of the school and graduate information collected for the study in a single integrated relational database. It is used to ensure that the data collected by HSTS 2019 is properly tracked and to assist the data entry and coding personnel in the prompt and accurate completion of their tasks. The following sections provide information on the receipt of electronic and hardcopy materials and describe the use of WesTes for catalog coding, transcript entry, and title matching.

⁸ See chapter 1, section C.1, for a description of these questionnaires.

Figure 2. Data flow for the High School Transcript Study 2019



1. Receipt Control

Receipt control began with creating an Excel database with a list of data submitters, according to the designations set by state and district coordinators. The listed submitters were individual schools eligible for HSTS 2019, their school districts, and/or their states. When the HSTS project staff received catalogs or course lists, completed catalog surveys, and completed SIFs, the receipt status of these items and format of the course catalogs was updated in the Excel database.

When the transcripts arrived for data processing, a receipt clerk carefully reviewed all items for legibility and completeness. For each school, the clerk compared the number of transcripts requested with the number actually received, and reviewed and verified the list of all student IDs assigned to that school. If necessary, follow-up communications with the transcript submitter resolved any issues with the transcript files. After reviewing the transcript materials, the clerk recorded the receipt of transcript materials and follow-up communication (when required) into the Excel database. Schools were reimbursed for the cost of producing the transcripts after having their materials received and reviewed for data processing.

2. School Information Form (SIF) Data

When designated data submitters completed the SIF, their responses were downloaded into a separate Excel database. This database could be referenced later to help interpret the student transcripts. Of particular importance was the information on the number of credits given by the school for one Carnegie unit, the grading system the school used, and the number of credits required by the school to graduate.

3. Catalog Coding

After catalogs were receipted, they were printed. Using the hardcopies, catalog translation staff highlighted vital fields such as the course titles; course numbers, if available; grade level; and course credits, and then sent the catalogs for key entry. Data entry personnel keyed the identified fields into WesTes and verified the data through double entry.⁹ The catalogs were then returned in school folders to the course coding staff.

Next, the catalog course coders reviewed all the materials in each school's folder to obtain an understanding of the school's curriculum and any special circumstances that would clarify the nature of the content of specific courses. Using the WesTes Catalog Coding screen, the catalog coder displayed each catalog title individually, reviewed the corresponding entry in the school's catalog, and then entered the School Courses for the Exchange of Data (SCED) code that best matched that description.¹⁰

⁹ Double entry, also sometimes referred to as blind entry, is the process in which data are entered into a computer twice, first by one individual, then by a second individual. The computer then compares the entries and shows any differences to be corrected.

¹⁰ See chapter 1, section E, for additional information about the SCED.

The course coder also verified or entered the grade level and set flags (electronic indicators) that indicated whether the course was used primarily for special education, for language learning purposes, or taken for dual enrollment credit (see appendix P for a description of flags).

When coding a course, catalog coders matched the course description in the high school's catalog to the course description in the SCED.¹¹ Using course descriptions rather than titles to assign SCED codes is important because the course title often does not provide sufficient information to differentiate between codes. For example, a course with a name such as algebra 1 could be a remedial course, a reduced-pace algebra course, a first semester algebra course, or the first year of a series of algebra courses. To facilitate the matching process, the full SCED was available to the catalog coders in hardcopy, in Excel format, and as part of the WesTes Catalog Coding screen.

During the transcript coding process, if a transcript course could not be found in the course catalogs from that school, the course was added to the course offerings file on the Catalog Coding screen. The need to add a course typically occurred when course catalogs were not up to date or did not include all 4 years (i.e., courses that had been offered previously while the students were in grades 9 through 11 but no longer appeared in the 2018–2019 catalog). Other courses not listed in catalogs may include college or career/technical education courses offered through the school but that are taught off-campus.

4. Transcript Processing

Transcripts contain lists of courses taken and the grades and credits earned for each course. They may also contain a variety of student information, such as graduation date, class rank, names of tests taken by the student, and test scores.

a. Student Information

When available on the transcript, the following information was entered into WesTes for each graduate:

- graduation date;
- class rank;

¹¹ The complete listing of codes in SCED version 7.0, used in the 2019 HSTS, can be accessed at: https://nces.ed.gov/forum/sced_previous.asp.

- size of class;
- grade point average (GPA);
- adjusted GPA (as reported by the school);
- days absent in grade 9;
- days absent in grade 10;
- days absent in grade 11;
- days absent in grade 12;
- total credits received;
- total credits attempted;
- whether the graduate received a General Equivalency Diploma (GED);
- date of GED completion; and
- PSAT, SAT, SAT II, or ACT scores.

These data were 100 percent verified (see section C.2 of this chapter for details).

b. Course Entry

Transcript course entry is a time-intensive activity. Students' transcripts averaged slightly less than 49 course records per graduate. For each course, the transcript entry staff recorded the catalog course ID number if available, course name, grade level (ninth, tenth, eleventh, or twelfth), year in which the course was taken, term (e.g., fall semester, summer school), grade received, and number of credits earned. The transcript entry staff was also responsible for setting two flags for each course based on the information provided on the transcripts. Staff were responsible for setting the flag to indicate a course that was transferred from another school and another flag to indicate if a course was taken online. These data were 100 percent verified.

5. Title Matching

One of the most challenging aspects of the transcript coding process is linking the course title on the transcripts to the course title in the catalog in order to ensure each transcript course is assigned

an appropriate SCED code. This process, known as title matching, was done after the transcript information for all graduates from a school had been entered. Title matching was performed by catalog coders who were trained for title matching. This permitted them to capitalize on their knowledge of state education systems, graduation requirements, and acronyms.

Because course titles on transcripts are frequently different from the course titles a school uses in its catalog, it is usually not practical to fully automate the title-matching process. In addition, even when it is possible to automate title matches, a review by knowledgeable staff of the resulting matches is an important quality-control check. For these reasons, title matching was performed by experienced catalog coders using computer-assisted matching tools built into WesTes.

WesTes presented the title matcher with a list of all the unique courses appearing on a school's student transcripts and a list of the coded catalog titles for the school. The title matcher's task was to match each of the titles from the transcripts to a catalog course. Title matchers assigned nontransfer course titles on transcripts to the high school's catalog and matched transfer courses directly to the most likely SCED code in the generic catalog. The generic catalog was the most current version of the SCED. In this case, the SCED was used like a course catalog.

Title matchers used titles and flags to correctly match each transcript course to the coded catalog file. For example, if the school distinguished between a regular English 9 course and an honors English 9 course in the catalog and on its transcripts, title matchers would ensure that a transcript course named English 9 honors would be matched with the catalog course for the honors-level English 9 course and not the average or remedial English 9 courses in the catalog. However, when a catalog did not distinguish between levels of a course but the transcripts did, the catalog coders would add courses to the school's catalog file in WesTes to account for each course level on the transcripts. This situation often occurred when courses in the catalog represented classes in which the student-ability levels were mixed, such as a regular-level class in which honors credit was given for students completing additional coursework. Coders reviewed all the documentation of a course to determine whether it was offered; if the course was not found in the catalog, then the coders added the course to the catalog.

C. Quality Control Procedures

Procedures designed to ensure a high-quality data processing operation include the careful hiring and training of HSTS staff, the rekeying of data for verification purposes, expert review of catalog

course coding, and a “real-time” system used to identify and solve problems quickly. Each of these quality assurance measures is discussed in a separate section below.

1. Hiring and Training of HSTS Staff

Central to quality control is having a thoroughly trained, well-qualified staff; therefore, a considerable effort was spent to select and train data processing staff. Two distinct groups of staff members were recruited and trained for HSTS 2019: catalog coders and data entry staff. Catalog coders matched the course descriptions in each school’s catalog to the corresponding code in the SCED, and matched the course titles on the transcripts to the corresponding titles in the school’s catalog. Data entry staff entered the catalog and transcript information into WesTes.¹²

a. Transcript Data Entry Staff

Transcript data entry staff members were selected for their ability to enter data accurately and consistently. They were then provided with extensive training that explained the study and taught them how to enter data from high school course catalogs and transcripts.

The transcript entry training spanned 2 days, with an explanation of the process in the morning, and practical application exercises in the afternoon and during the following day. The primary function of the training was to instruct the staff in the use of WesTes for entering data found on transcripts with an emphasis on hands-on practical experience. The secondary function of training was to cover the basic concepts and challenges the staff would encounter while entering information on high school transcripts. Individual feedback on each practice activity and additional activities were assigned if it was determined the new staff needed more practice.

b. Catalog Coders

Requirements for employment as a catalog coder included a minimum of a bachelor’s degree. A background in the social sciences and prior experience in schools (e.g., work as a teacher or school counselor) were preferred qualifications. The interview process paid special attention to prior work

¹² In addition to staff described here, other Westat data entry clerks did some straightforward data inputting tasks, such as typing the names of course titles.

experience that entailed attention to detail, application of analytical and research skills, and dedication to accuracy.

In-person training was scheduled for 5 days in March 2020. Due to rapidly changing public health guidelines regarding the COVID-19 pandemic, the in-person training was cancelled on the 4th day. HSTS project staff spent a week developing virtual training materials and making arrangements for remote coding operations. A 3-1/2 day virtual training was then completed to review and reinforce material covered previously during the in-person training and introduce the remaining material. Both trainings were guided by a training manual, which covered the following topics: high school catalog components, the structure and use of SCED, course flags, handling course lists without descriptions, and the WesTes software.

Training activities involved informative presentations, visual demonstrations, and practical applications. Examples illustrating salient points were drawn from actual materials. Coders learned to use the WesTes coding system and how to employ search features. Coders also became familiar with the SCED and the importance of studying a course's full description before assigning a SCED code. To verify that coders were prepared to begin coding activities, trainers monitored coders' performance on training exercises, and a final exercise was given as an evaluation of coding analysis and application.

The training for title matching was similar in both form and procedure to catalog coder training and conducted virtually. During a 2-day period, coders learned how to use the Transcript Coding section of WesTes and match transcript course records with the corresponding course records in the school's course catalog. Coders also learned how to identify and match transfer courses.

2. Rekeying for Verification

To ensure data was entered correctly, data from each transcript was entered twice by separate staff. After each set of transcripts were double keyed, the WesTes system would identify any discrepancies. Specially trained staff would then review each of the discrepancies and choose the correct entry by referring to the transcripts.

3. Catalog Coding Quality Control Review

Coding supervisors performed a quality control review of every coded course catalog as an added layer of data quality assurance. To conduct the quality control review, coding supervisors coded a random subset of courses in the catalog and compared their codes to the codes assigned by the original coders. The size of the subset varied and depended on the previous performance of each coder. For example, the first catalog that any coder completed was set at a 50 percent review, meaning that the supervisor coded a random 50 percent sample of the catalog by coding every other course listed. As coder performance improved with practice, the percentage was dropped until it reached 10 percent.

During the quality control review, when a coding supervisor assigned a code that disagreed with the code entered by the coder, the supervisor could change the code in WesTes. For marginal cases, the supervisor consulted with other supervisors and/or the analysts to determine which code was correct. If a coding error represented a misunderstanding of coding rules, the coder received re-training to address the error and reviewed previous work to correct the issue.

4. How Staff Identified and Solved Problems

HSTS 2019 staff had several ways to pursue a solution when they encountered issues during catalog coding and title-matching operations. Sometimes individual staff members brought an issue to the attention of their supervisor, who could often provide an immediate response. Staff members also discussed issues at regularly scheduled staff meetings and attempted to resolve the issues at that time. For problems that could affect data analysis—such as special flag situations, credit situations, or an unusual course description—the question would be directed to the analysts for their response, which was usually received within 24 hours. System-related problems were directed to the systems specialist.

This system of addressing problems in “real time” allowed for a quick turnaround in obtaining and implementing solutions. Staff met regularly to make certain they were all employing the same solutions, ensuring consistency, speed, and accuracy in this process.

6. WEIGHTING

A. Overview of Weighting in HSTS 2019

This chapter explains how the weights associated with the 2019 High School Transcript Study (HSTS 2019) were calculated. Restricted-file users do not need to understand all the material in this chapter; however, they do need to be aware of which types of weights are appropriate to use with the analyses they wish to do. This overview gives a brief discussion of the differences between the weights, and more detail about what appropriate weights to use for HSTS analyses are discussed in section 8.C.

Two types of weights were calculated for the HSTS 2019:

- **Unlinked weights**—Student-level weights designed to compute estimates for all high school graduates in the HSTS sample.
- **Linked weights**—Student-level weights designed to compute estimates for high school graduates in the HSTS sample linked to a particular National Assessment of Educational Progress (NAEP) assessment.

There is one set of unlinked weights, and two sets of linked weights, one for each assessment subject (mathematics and science). Each set of weights include a survey weight (used to produce point estimates) and replicate weights (used to compute variances for point estimates). All sets of these weights are designed to estimate variables for all graduates.

Which type of weight should be used depends upon what type of data the user is analyzing. For example, in estimating the overall grade point average (GPA) of graduates, the set of unlinked weights would be used. These weights cover all analysis-eligible high school graduates in the HSTS sample, regardless of what NAEP assessment they took. If, however, the user wishes to explore the relationship between NAEP mathematics scores and overall GPA, the user would use the set of linked weights for mathematics, because these estimates must be based on the subsample of all HSTS graduates who also took the NAEP mathematics assessment. Similarly, if the user wishes to explore the relationship between NAEP science scores and overall GPA, the user would use the set of linked weights for science, because these estimates must be based on the subsample of all HSTS graduates who also took the NAEP science assessment.

The next sections of this chapter describe the weighting procedures used to calculate the unlinked and linked survey weights. The final section presents additional information about the calculation of replicate weights.

B. HSTS Unlinked Weights

The HSTS unlinked weights reflect the probability-sampling scheme used to arrive at the sample of students for whom transcripts were requested. The HSTS-unlinked weights were constructed without regard to the NAEP participation or nonparticipation status of schools and students. The HSTS unlinked student-level weight contains six components: the student base weight, a school-level weight trimming adjustment, a school-level nonresponse adjustment, a student-level nonresponse adjustment, a student-level weight trimming adjustment, and a student-level raking adjustment. A description of each weighting component is contained in the following subsections. One major difference from past HSTS cycles is the addition of the student-level raking adjustment, which is detailed in sections 6.B.6 and 6.C.6.

1. Student Base Weight

The student base weight reflects a student's overall probability of being selected for the 2019 HSTS. The student base weight (*STU_BWT*) may be expressed as

$$STU_BWT = SCH_BWT \times WINSCHWT \times HSTS_WT \times SUBADJ \times YRRND_AF$$

where

- The NAEP school weight, *SCH_BWT*, is the inverse of the probability of selection of the school for NAEP.
- The NAEP within-school student weight, *WINSCHWT*, is the inverse of the probability of selection of the student for NAEP.
- The HSTS student weight, *HSTS_WT*, is the inverse of the probability of selection of the student for HSTS given that the student was selected for NAEP. This weighting component takes into account that students selected for NAEP reading (for either DBA or PBA) are not part of the HSTS student sample.
- The substitution adjustment factor, *SUBADJ*, is an additional adjustment to account for the difference in grade enrollment between the participating substitute school and its corresponding original school that it replaced. This adjustment is necessary because the weights of students in a substitute school have to reflect what the weights of the students in its corresponding original school would have been if the original school participated. So, for example, if the original school was twice the size of the substitute school, then *SUBADJ* would be equal to 2 for each student in the participating substitute school.

- The year-round adjustment factor, *YRRND_AF*, applies only to students in year-round schools. In year-round schools, only a portion of the total student body is in school at any given point in time. The year-round adjustment factor inflates the weight to account for students that were on break at the time of student sampling. So, for example, if 20 percent of students were on scheduled break at the time of the NAEP assessment, then *YRRND_AF* would be equal to 1.25, that is, the inverse of 1 minus 20 percent.

2. School Trimming Adjustment

Weight trimming is an adjustment procedure that involves detecting and reducing extremely large weights. "Extremely large weights" generally refer to large sampling weights that were not anticipated in the design of the sample. Unusually large weights are likely to produce large sampling variances for statistics of interest, especially when the large weights are associated with sample cases reflective of rare or atypical characteristics. To reduce the impact of these large weights on variances, weight reduction methods known as trimming are typically employed.

Large school weights requiring weight trimming can occur when the actual grade enrollment of a school, determined at the time of student sampling, is grossly larger than its enrollment used for school sampling. School base weights may be large relative to schools of similar enrollment size.

To detect extremely large weights among new schools,¹³ a comparison was made between a new school's school base weight and its ideal weight (i.e., the weight that would have resulted had the school been selected from the original school sampling frame). If the school base weight was more than three times the ideal weight, a trimming factor was calculated for that school that scaled the base weight back to three times the ideal weight. The calculation of the school-level trimming factor for a new school is expressed in the following formula:

$$SCH_TRIM = \begin{cases} \frac{3 \times EXP_WT}{SCH_BWT}, & \text{if } \frac{SCH_BWT}{EXP_WT} > 3 \\ 1, & \text{otherwise} \end{cases}$$

¹³ A new school is defined in the NAEP Glossary of Terms (<https://nces.ed.gov/nationsreportcard/glossary.aspx>) as "a school selected from the new school sampling frame, created to update the NAEP school frame to account for newly constructed or newly eligible schools not on the original NAEP school frame."

where

- *EXP_WT* is the ideal base weight the school would have received if it had been on the NAEP public school sampling frame, and
- *SCH_BWT* is the actual school base weight the school received as a sampled school from the new school frame.

Private schools that were eligible for weight trimming were Private School Universe (PSS) nonrespondents, who were found subsequently to have either larger enrollments than assumed at the time of sampling or an atypical probability of selection given their affiliation at the time of sampling. For private schools, the formula for computing the school-level weight trimming factor *SCH_TRIM* is identical to that used for new schools but where

- *EXP_WT* is the ideal base weight the school would have received if it had been on the NAEP private school sampling frame with accurate enrollment and known affiliation; and
- *SCH_BWT* is the actual school base weight the school received as a sampled private school.

For the 2019 HSTS study, out of all the responding schools, only one school had weights considered excessively large and had its weights trimmed.

3. School Nonresponse Adjustment

The school nonresponse adjustment procedure inflates the weights of schools that participated in the HSTS to account for schools eligible for HSTS but did not participate. This procedure involves assigning sample members to mutually exclusive and exhaustive nonresponse cells based on predetermined characteristics. A nonresponse adjustment factor is calculated for each cell and then applied to the weight of each responding school. In this way, the weights of responding schools in the cell are "weighted up" to represent the full set of responding and nonresponding schools in a nonresponse cell.

The characteristics used to define nonresponse cells differed by public and private schools. The characteristics for public schools included Census division, urbanicity, Black and Hispanic composition (low, high)¹⁴, and median income. For private schools, the characteristics included affiliation (Catholic or nonCatholic), Census region, urbanicity, and race/ethnicity.

¹⁴ See section A in chapter 2 for how Black and Hispanic composition is defined for schools.

The nonresponse adjustment factor was calculated in each cell h as follows:

$$SCH_NRAF_c = \frac{\sum_{S_c} SCH_BWT_s \times SCH_TRIM_s \times SCHSESWT_s \times X_s}{\sum_{R_c} SCH_BWT_s \times SCH_TRIM_s \times SCHSESWT_s \times X_s}$$

where

S_c = the set of all eligible HSTS schools in nonresponse cell h ; and

R_c = the set of all eligible schools in nonresponse cell h that participated in the HSTS.

SCH_BWT_s = the school base weight for school s in nonresponse cell c ;

SCH_TRIM_s = the school trimming factor for school s in nonresponse cell c ; and

X_s = the estimated grade 12 enrollment corresponding to the original sampled school.

4. Student Nonresponse Adjustment

The HSTS student nonresponse adjustment procedure inflates the weights of “participating” students to account for “nonparticipating” eligible students. Students who graduated in the 2019 school year are considered respondents (students with transcripts) if the transcripts met the following criteria:

- contained at least 3 years of delineated courses;
- contained courses from the HSTS assessment year (i.e., the 2018–2019 school year);
- had at least the equivalent of 16 year-long courses; and
- contained at least one credit-bearing English course.

If they did not meet the criteria, they were considered nonrespondents (students with missing transcripts). Students that did not graduate in the school year 2019 were considered ineligible for the HSTS, regardless of whether or not transcripts were received. They were not included in this adjustment.

The nonresponse adjustment procedure at the student level used the same approach as its counterpart at the school level. Students were assigned to mutually exclusive and exhaustive nonresponse cells based on predetermined characteristics. A nonresponse adjustment factor is calculated for each cell and then applied to the weights of each participating student. The variables used to define the student

nonresponse cells were SD and EL status, school nonresponse cell; age (classed into "older" student and "modal age or younger" student); gender (male, female); and race/ethnicity (White, not Hispanic; Black or African American, not Hispanic; Hispanic, of any race; Asian; American Indian or Alaska Native; Native Hawaiian or Pacific Islander; Two or more races).

In each nonresponse adjustment cell c , the student nonresponse adjustment factor STU_NRAF_c was calculated as follows:

$$STU_NRAF_c = \frac{\sum_{S_c} STU_BWT_k \times SCH_TRIM_k \times SCH_NRAF_k}{\sum_{R_c} STU_BWT_k \times SCH_TRIM_k \times SCH_NRAF_k}$$

where

- S_c = the set of eligible HSTS students (graduates with or without transcripts) in student nonresponse cell c ; and
- R_c = the set of graduates with complete and usable transcripts (respondents) in student nonresponse cell c .
- STU_BWT_k = the student base weight, as defined in section 6.2.1, for student k in student nonresponse cell c ;
- SCH_TRIM_k = the school-level weight trimming factor, as defined in section 6.2.2, for the school associated to student k in student nonresponse cell c ; and
- SCH_NRAF_k = the school-level nonresponse adjustment factor, as defined in section 6.2.3, for the school associated to student k in student nonresponse cell c .

The unlinked weight used in the student nonresponse procedure reflects the student base weight and all school- and student-level weighting adjustments prior to this adjustment.

Each graduate with complete and usable transcripts (respondent) in a nonresponse cell received a nonresponse adjustment factor, as calculated above, corresponding to that cell.

5. Student Trimming Adjustment

Another trimming adjustment procedure was done to detect and trim extremely large weights at the student level. Large student weights generally result from compounding nonresponse adjustments at

the school and student levels coupled with low to moderate probabilities of selection at the various stages of sampling. As with school trimming weights, the purpose of the trimming student weights is to reduce the effect of unusually large weights on survey estimates.

The student weight trimming procedure used a multiple median rule to detect excessively large student weights. Any student weight within a given trimming group greater than a specified multiple of the median weight value of the given trimming group had its weight scaled back to that threshold. The multiple used for all trimming groups was 3.5. The trimming groups were defined by subgroup domain for private schools (Catholic private and nonCatholic private); American Indian and Alaska Native composition (low, high); and Black and Hispanic composition (low, high) for both public and private schools. The trimming factor was calculated using the following formula:

$$STU_TRIM_{gk} = \begin{cases} \frac{M \times MEDIAN_g}{STUWGT_{gk}}, & STUWGT_{gk} > M \times MEDIAN_g \\ 1, & \text{otherwise} \end{cases}$$

where

- M = the trimming multiple (3.5);
- $MEDIAN_g$ = the median of nonresponse-adjusted student weights in trimming group g ; and
- $STUWGT_{gk}$ = the weight after student nonresponse adjustment for student k in trimming group g .

For the 2019 HSTS study, relatively few students had weights considered excessively large. Out of the approximately 50,000 eligible students included in the study, roughly 80 students had their weights trimmed.

6. Student Raking Adjustment

In 2019, a new weighting adjustment was added to the HSTS weighting process in order to reduce sampling variance for HSTS estimates. It adjusts student weights in such a way that the sums of the adjusted weights equaled the sums of the weights for the NAEP grade 12 student population for a variety of student-level characteristics. It was implemented using a raking procedure and applied only to public school assessments.

The dimensions used in the raking process for each student in the public school student sample were race/ethnicity, SD/EL status, and gender. The control totals used in the raking procedure were estimates of high school graduate students derived from the NAEP grade 12 student samples pooled across subjects and assessment modes.

For responding students in the HSTS sample the raking adjustment factor STU_RAKE_k was computed as below.

First, the weight for student k was initialized as follows:

$$STUSAWT_k^{adj(0)} = STU_BWT_k \times SCH_TRIM_k \times SCH_NRAF_k \times STU_NRAF_k \times STU_TRIM_k$$

Then, the sequence of weights for the first iteration was calculated as follows for student k in category c of dimension d :

For dimension 1:

$$STUSAWT_k^{adj(1)} = \frac{TOTAL_{c(1)}}{\sum_{R_{c(1)} \cup E_{c(1)}} STUSAWT_k^{adj(0)}} \times STUSAWT_k^{adj(0)}$$

For dimension 2:

$$STUSAWT_k^{adj(2)} = \frac{TOTAL_{c(2)}}{\sum_{R_{c(2)} \cup E_{c(2)}} STUSAWT_k^{adj(0)}} \times STUSAWT_k^{adj(0)}$$

For dimension 3:

$$STUSAWT_k^{adj(3)} = \frac{TOTAL_{c(3)}}{\sum_{R_{c(3)} \cup E_{c(3)}} STUSAWT_k^{adj(0)}} \times STUSAWT_k^{adj(0)}$$

where

$TOTAL_{c(d)}$ = the control total for category c of dimension d .

The process is said to converge if the maximum difference between the sum of adjusted weights and the control totals is 1.0 for each category in each dimension. If after the sequence of adjustments the maximum difference was greater than 1.0, the process continues to the next iteration, cycling back to the first dimension with the initial weight for student k equaling $STUSAWT_k^{adj(3)}$ from the previous iteration. The process continued until convergence was reached.

Once the process converged, the adjustment factor was computed as follows:

$$STU_RAKE_k = \frac{STUSAWT_k}{STU_BWT_k \times SCH_TRIM_k \times SCH_NRAF_k \times STU_NRAF_k \times STU_TRIM_k}$$

where

$STUSAWT_k$ = the weight for student k after convergence, as defined in the previous step.

STU_TRIM_k = the student-level trimming factor, as defined in section 6.2.5, for student k of trimming group g .

7. Final Unlinked HSTS Sample Weight

Final unlinked HSTS sampling weights were assigned to all students in the HSTS study who graduated and for whom usable transcripts were received. The weights were computed by multiplying the student base weight and the nonresponse adjustment and weight trimming and raking factors together. That is,

$$FSTUWGT = STU_BWT \times SCH_TRIM \times SCH_NRAF \times STU_NRAF \times STU_TRIM \times STU_RAKE$$

where

STU_BWT = student base weight (as defined in section 6.B.1);

SCH_TRIM = school trimming adjustment factor (as defined in section 6.B.2);

SCH_NRAF = school nonresponse adjustment factor (as discussed in section 6.B.3);

STU_NRAF = student nonresponse adjustment factor, (as defined in section 6.B.4);

STU_TRIM = student trimming adjustment factor, (as defined in section 6.B.5); and

STU_RAKE = student raking adjustment factor, (as defined in section 6.B.6).

C. HSTS Linked Weights

The HSTS NAEP-linked weights allow users to analyze the relationship between students' proficiencies, as measured by their NAEP assessment outcomes, and students' coursetaking in their high school careers. Twelfth-grade students in these populations of analyses are those that participated in a given NAEP assessment, with a completed transcript, and graduated as determined by the HSTS. There were many students for whom a completed transcript was received but no NAEP assessment exists (because either the school or the student refused to participate in NAEP or the student was absent on assessment day). These students can be part of the unlinked database but not the linked database that requires both transcripts and assessment results for the same student.

The students in the linked database require a different set of sampling weights than those in the unlinked database alone, as the set of students that qualify for these databases is a subset of the larger HSTS set. In particular, the school and student nonresponse adjustments will be larger for the linked weights than for the unlinked weights. This is so because a student or school had to participate in both the NAEP and the HSTS studies to qualify as a “respondent” for the linked database. In addition, the schools had to maintain the link between the HSTS transcripts and NAEP student assessment scores. This reduced the number of school and student responses, thereby increasing the nonresponse adjustment factors.

Two sets of NAEP-linked weights were computed, one for each assessment (mathematics and science). The linked weights were computed using a weighting procedure similar to the HSTS-unlinked weights. Each assessment sample represents the full population, so each of the two sets of NAEP-linked weights aggregates separately to the population totals. This section of the report describes the weighting procedure used to weight the NAEP-linked samples.

The HSTS linked student-level weight also contains six components: the student base weight, a school-level weight trimming adjustment, a school-level nonresponse adjustment, a student-level nonresponse adjustment, a student-level weight trimming adjustment, and a student-level raking adjustment. A description of each weighting component is contained in the following subsections.

1. Student Base Weights

The student base weight for a NAEP linked weight (STU_BWT_{linked}) reflects a student's overall probability of being selected for the given NAEP-linked HSTS sample. It is the product of the HSTS unlinked student base weight and a weighting factor to reflect the probability that a student was assigned to a particular NAEP assessment subject. That is,

$$STU_BWT_{linked} = STU_BWT_{unlinked} \times SUBJ_AF$$

where

- $STU_BWT_{unlinked}$ is the HSTS unlinked student base weight described in section 6.B.1.
- $SUBJ_AF$ is the subject allocation factor to reflect the probability that a student was assigned to a particular NAEP assessment subject. The subject allocation weighting factor varied by mode and subject of the assessment, and school type (public or private).

2. School Trimming Adjustment

By design, the unlinked and linked samples comprised the exact same schools. Therefore, the school trimming factors (SCH_TRIM) calculated for the unlinked weights, as described in section 6.B.2, also applied to the linked weights. The school trimming factors used for the unlinked weights were also used for the linked weights.

3. School Nonresponse Adjustment

By design, the student transcripts were only collected in participating NAEP schools. Therefore, the school nonresponse adjustment factors (SCH_NRAF) calculated for the unlinked weights, as described in section 6.B.3, applied to the linked weights as well. The school nonresponse adjustment factors used for the unlinked weights were also used for the linked weights.

4. Student Nonresponse Adjustment

This procedure adjusts for “student nonresponse” in the linked HSTS samples. The response disposition of students depended on their response disposition for both the HSTS and NAEP. Eligible students who participated in the HSTS and NAEP were considered respondents for the linked samples. Those eligible students who did not participate in both were considered nonrespondents. Students who were ineligible for the HSTS (those who did not graduate) were ineligible for the linked samples regardless of their NAEP dispositions.

The nonresponse procedure was carried out using the same procedure as NAEP to the extent possible to maintain consistency with the NAEP weights. Students were assigned to mutually exclusive and exhaustive nonresponse cells based on predetermined characteristics. A nonresponse adjustment factor was calculated for each cell and then applied to the weights of each participating student. The variables used to define the student nonresponse cells were SD by EL status by subject (SD or EL mathematics, SD or EL science, nonSD and nonEL mathematics or science); school nonresponse cell; age (classified into "older" student and "modal age or younger" student); gender (male, female); and race/ethnicity (White, not Hispanic; Black or African American, not Hispanic; Hispanic, of any race; Asian; American Indian or Alaska Native; Native Hawaiian or Pacific Islander; Two or more races).

In each nonresponse adjustment cell c , the student nonresponse adjustment factor STU_NRAF_c was calculated as follows:

$$STU_NRAF_c = \frac{\sum_{S_c} STU_BWT_k \times SCH_TRIM_k \times SCH_NRAF_k}{\sum_{R_c} STU_BWT_k \times SCH_TRIM_k \times SCH_NRAF_k}$$

where

S_c = the set of eligible NAEP-linked HSTS students (respondents and nonrespondents) in student nonresponse cell c ; and

R_c = the set of NAEP-linked HSTS respondents in student nonresponse cell c .

STU_BWT_k = the student base weight, as defined in section 6.C.1, for student k in student nonresponse cell c ;

SCH_TRIM_k = the school-level weight trimming factor, as defined in section 6.C.2, for the school associated to student k in student nonresponse cell c ; and

SCH_NRAF_k = the school-level nonresponse adjustment factor, as defined in section 6.C.3, for the school associated to student k in student nonresponse cell c .

The NAEP-linked sample weight used in the student nonresponse procedure reflects the linked student base weight and all school- and student-level weighting adjustments prior to this adjustment.

Each graduate with complete and usable transcripts (respondent) who participated in NAEP received a nonresponse adjustment factor, as calculated above, corresponding to that cell.

5. Student Weight Trimming

The same student-level weight trimming procedure was used for the linked weights as was used for the unlinked weights described in section 6.B.5. The linked weights for graduates were trimmed using the multiple median-rule trimming procedure. The trimming procedure detects and truncates excessively large weights. Any weight within a given trimming group greater than a specified multiple of the median weight value of the given trimming group had its weight scaled back to that threshold. The procedure was carried out separately by subject. Variables used to define the trimming groups were subgroup domain (Catholic private and nonCatholic private) for private schools and American Indian and Alaska Native composition (low, high) and Black and Hispanic composition (low, high) for public schools. The multiple used for all trimming groups was 3.5. The trimming factor was calculated using the following formula:

$$STU_TRIM_{gk} = \begin{cases} \frac{M \times MEDIAN_g}{STUWGT_{gk}}, & STUWGT_{gk} > M \times MEDIAN_g \\ 1, & \text{otherwise} \end{cases}$$

where

- M is the trimming multiple (3.5);
- $MEDIAN_g$ is the median of nonresponse-adjusted student weights in trimming group g ; and
- $STUWGT_{gk}$ is the weight after student nonresponse adjustment for student k in trimming group g .

For the 2019 HSTS study, relatively few students had weights considered excessively large. Out of the approximately 40,000 eligible students included in the study, roughly 70 students had their weights trimmed.

6. Student Raking Adjustment

For the linked weights, weighted estimates of population totals for student-level subgroups at grade 12 will vary across subjects (mathematics and science) even though the student samples for each subject generally come from the same schools. These differences are the result of a sampling error associated with the random assignment of subjects to students through a process known as spiraling. To remove these random differences and potential data quality concerns, a similar student-level raking procedure was used for the linked weights as was used for the unlinked weights described in section 6.B.6 for public school assessments.

The dimensions used in the raking process for each public school student sample were race/ethnicity (White, not Hispanic; Black or African American, not Hispanic; Hispanic, of any race; Asian; American Indian or Alaska Native; Native Hawaiian or Pacific Islander; Two or more races); SD/EL status (SD, not EL; EL, not SD; both SD and EL; neither SD nor EL); and gender (male, female). The control totals used in the raking procedure were estimates of high school graduate students derived from the NAEP grade 12 student samples pooled across subjects and assessment modes.

In a given subject, for responding students the raking adjustment factor STU_RAKE_k was computed as below.

First, the weight for student k was initialized as follows:

$$STUSAWT_k^{adj(0)} = STU_BWT_k \times SCH_TRIM_k \times SCH_NRAF_k \times STU_NRAF_k \times STU_TRIM_k$$

Then, the sequence of weights for the first iteration was calculated as follows for student k in category c of dimension d :

For dimension 1:

$$STUSAWT_k^{adj(1)} = \frac{TOTAL_{c(1)}}{\sum_{R_{c(1)} \cup E_{c(1)}} STUSAWT_k^{adj(0)}} \times STUSAWT_k^{adj(0)}$$

For dimension 2:

$$STUSAWT_k^{adj(2)} = \frac{TOTAL_{c(2)}}{\sum_{R_{c(2)} \cup E_{c(2)}} STUSAWT_k^{adj(0)}} \times STUSAWT_k^{adj(0)}$$

For dimension 3:

$$STUSAWT_k^{adj(3)} = \frac{TOTAL_{c(3)}}{\sum_{R_{c(3)} \cup E_{c(3)}} STUSAWT_k^{adj(0)}} \times STUSAWT_k^{adj(0)}$$

where

$TOTAL_{c(d)}$ = the control total for category c of dimension d .

The process is said to converge if the maximum difference between the sum of adjusted weights and the control totals is 1.0 for each category in each dimension. If after the sequence of adjustments the maximum difference was greater than 1.0, the process continues to the next iteration, cycling back to the first dimension with the initial weight for student k equaling $STUSAWT_k^{adj(3)}$ from the previous iteration. The process continued until convergence was reached.

Once the process converged, the adjustment factor was computed as follows:

$$STU_RAKE_k = \frac{STUSAWT_k}{STU_BWT_k \times SCH_TRIM_k \times SCH_NRAF_k \times STU_NRAF_k \times STU_TRIM_k}$$

where

$STUSAWT_k$ = the weight for student k after convergence, as defined in the previous step; and

STU_TRIM_k = the student-level trimming factor, as defined in Section 6.B.5, for student k of trimming group g .

7. Final Linked HSTS Weights

Final NAEP-linked HSTS sampling weights were assigned to all graduates in the HSTS study for whom usable transcripts were received and who were assessed (or excluded) in the given NAEP subject. The weights were computed for each linked sample as follows:

$$FSTUWGT = STU_BWT \times SCH_TRIM \times SCH_NRAF \times STU_NRAF \times STU_TRIM \times STU_RAKE$$

where

STU_BWT = Student base weight (as defined in section 6.C.1);

SCH_TRIM = School trimming adjustment factor (as defined in section 6.C.2);

SCH_NRAF = School nonresponse adjustment factor (as discussed in section 6.C.3);

STU_NRAF = Student nonresponse adjustment factor, (as defined in section 6.C.4);

STU_TRIM = Student trimming adjustment factor, (as defined in section 6.C.5); and

STU_RAKE = Student raking adjustment factor, (as defined in section 6.C.6).

D. Replicate Weights

Replicate weights have been provided for each set of sample weights to allow users to compute variances for HSTS 2019 estimates. The particular method used for HSTS 2019 was the stratified jackknife assuming two primary sampling units (PSUs) per stratum, the same method used for the main NAEP 2019.

Estimates of high school graduates based on HSTS 2019 are subject to sampling error because they are derived from a sample, rather than from the whole population. The variance is a measure of sampling error and, for the most part, determines the reliability of an estimate. Sampling variance indicates how much a population estimate for a given statistic would be likely to change if it were based on another equivalent sample of individuals drawn in exactly the same manner as the actual sample.

1. Jackknife (JK2) Replication Method

The basic idea behind replication is to select subsamples repeatedly from the whole sample, calculate the statistic of interest for each subsample, and then use the variability among the subsample or replicate statistics to estimate the variance of the full sample statistic. Different ways of creating subsamples from the full sample result in different replication methods. The subsamples are called replicates, and the statistics calculated from these replicates are called replicate estimates.

In general, the stratified jackknife replication method involves initially pairing clusters of first-stage sampling units to form H variance strata ($h = 1, 2, 3, \dots, H$) with two units per stratum. The first replicate is formed by assigning, to one unit at random from the first variance stratum, a replicate weighting factor of less than 1.0, while assigning the remaining unit a complementary replicate factor greater than 1.0, and assigning all other units from the other $(H - 1)$ strata a replicate factor of 1.0. This procedure is carried out for each variance stratum resulting in H replicates, each of which provides an estimate of the population total.

For HSTS 2019, the process of creating jackknife replicate weights takes place at both the school and student level. This method allows the use of a finite population correction factor at the school sampling stage, a new feature since the previous HSTS.

The jackknife estimate of sampling variance for any given statistic t is calculated by taking the sum of M squared differences (where M is the number of replicate weights developed):

$$\hat{Var}(t) = \sum_{i=1}^M (t_i - t)^2$$

where t_i denotes the statistic of interest obtained using the i^{th} set of replicate weights and t denotes the statistic obtained using the set of full sample weights.

Each replicate undergoes the same weighting procedure as the full sample so that the jackknife variance estimator reflects the contributions to or reductions in variance resulting from the various weighting adjustments.

2. Calculating Replicate Weights

Along with the full-sample weight, 62 replicate weights were created on each graduate record in the unlinked and linked HSTS 2019 data sets. As stated above, replicate weights were calculated at both the school and student levels to facilitate the use of the finite population correction factor¹⁵ at the school level.

The creation of the replicate weights at the school level involved the pairing of schools to form school-level variance strata. The sampled schools were listed in order of selection, and successive schools were paired within each school sampling strata. If there were an odd number of schools within a sampling stratum, the last three schools were grouped into a triple. Each school grouping was referred to as an initial variance stratum. Each school in a pair was randomly assigned to one of two different variance units, and each school in a triple was randomly assigned to one of three different variance units. Since the number of initial variance strata greatly exceeded the desired number of variance strata (62), the initial strata were systematically assigned to 62 “combined” variance strata.¹⁶ School-level replicate factors were calculated for each replicate. The following shows how the replicate factors were calculated for variance pairs.

$$SCH_REPFAC(r) = \begin{cases} 1 + \sqrt{1 - \min(\pi_1, \pi_2)}, & \text{if school is in variance unit 1 of variance stratum } r \\ 1 - \sqrt{1 - \min(\pi_1, \pi_2)}, & \text{if school is in variance unit 2 of variance stratum } r \\ 1, & \text{if school is not in variance stratum } r \end{cases}$$

where $\min(\pi_1, \pi_2)$ is the smaller school probability of selection of the two schools comprising variance stratum r .

¹⁵ An explanation of a finite population correction factor and its use in NAEP studies can be found in Rizzo and Rust’s 2011 article “Finite population correction (FPC) for NAEP variance estimation” in the American Statistical Association’s Proceedings of the Section on Survey Research Methods. The journal article can be found online (nonsecure website) at http://www.asasrms.org/Proceedings/y2011/Files/301555_66949.pdf.

¹⁶ Initial variance strata comprising three schools were assigned two variance strata so that two replicates are created for each of these strata. This is one common approach to handle three PSUs per stratum.

For variance strata comprising three schools, the school-level replicate factors were calculated as follows:

$$SCH_REPFAC(r) = \begin{cases} 1 + \frac{\sqrt{(1 - \min(\pi_1, \pi_2, \pi_3))}}{2}, & \text{if school is in variance unit 1 of variance stratum } r \\ 1 + \frac{\sqrt{(1 - \min(\pi_1, \pi_2, \pi_3))}}{2}, & \text{if school is in variance unit 2 of variance stratum } r \\ 1 - \sqrt{(1 - \min(\pi_1, \pi_2, \pi_3))}, & \text{if school is in variance unit 3 of variance stratum } r \\ 1, & \text{if school is not in variance stratum } r \end{cases}$$

while for $r' = r + 31 \pmod{62}$:

$$SCH_REPFAC(r') = \begin{cases} 1 + \frac{\sqrt{(1 - \min(\pi_1, \pi_2, \pi_3))}}{2}, & \text{if school is in variance unit 1 of variance stratum } r' \\ 1 - \sqrt{(1 - \min(\pi_1, \pi_2, \pi_3))}, & \text{if school is in variance unit 2 of variance stratum } r' \\ 1 + \frac{\sqrt{(1 - \min(\pi_1, \pi_2, \pi_3))}}{2}, & \text{if school is in variance unit 3 of variance stratum } r' \\ 1, & \text{if school is not in variance stratum } r' \end{cases}$$

where $\min(\pi_1, \pi_2, \pi_3)$ is the smallest school probability of selection among the three schools comprising variance stratum r .

Similarly, the creation of replicate weights at the student level involved pairing of students to form student-level variance strata. The sampled students were listed in order of selection and successive students were paired within each school. If there were an odd number of students within a school, the last three students were grouped into a triple. Each student grouping was referred to as an initial variance stratum. Each student in a pair was randomly assigned to one of two different variance units, and each student in a triple was randomly assigned to one of three different variance units. The initial strata were systematically assigned to 62 “combined” variance strata. Student-level replicate factors were calculated for each replicate. The following shows how the replicate factors were calculated for variance pairs.

$$STU_REPFAC(r) = \begin{cases} (1 + \sqrt{\pi}), & \text{if student is in variance unit 1 of variance stratum } r \\ (1 - \sqrt{\pi}), & \text{if student is in variance unit 2 of variance stratum } r \\ 1, & \text{if student is not in variance stratum } r \end{cases}$$

where π is the school probability of selection with which the student is associated.

For students in variance strata comprising three students, the student-level replicate factors were calculated as follows:

$$STU_REPFAC(r) = \begin{cases} (1 + \frac{\sqrt{\pi}}{2}), & \text{if student is in variance unit 1 of variance stratum } r \\ (1 + \frac{\sqrt{\pi}}{2}), & \text{if student is in variance unit 2 of variance stratum } r \\ (1 - \sqrt{\pi}), & \text{if student is in variance unit 3 of variance stratum } r \\ 1, & \text{if student is not in variance stratum } r \end{cases}$$

while for $r' = r + 31 \pmod{62}$:

$$STU_REPFAC(r') = \begin{cases} (1 + \frac{\sqrt{\pi}}{2}), & \text{if student is in variance unit 1 of variance stratum } r' \\ (1 - \sqrt{\pi}), & \text{if student is in variance unit 2 of variance stratum } r' \\ (1 + \frac{\sqrt{\pi}}{2}), & \text{if student is in variance unit 3 of variance stratum } r' \\ 1, & \text{if student is not in variance stratum } r' \end{cases}$$

where π is the school probability of selection with which the student is associated.

The final replicate weights ($SRWT_i$) for a given HSTS 2019 data set were calculated by multiplying the school and student replicate factors to the student base weights and then applying the same weighting adjustment procedures described in sections 6.2 and 6.3 to each set of replicate base weights. By applying the weighting procedures on each set of replicate base weights, variance estimates reflected the intended effects of the weighting adjustment.

7. VARIANCE ESTIMATION

This chapter details the steps required to calculate the sampling, measurement, and overall variances of NAEP assessment scores and other NAEP-related measures using the HSTS data. This information can be found in chapter 3 of *National Assessment of Educational Progress (NAEP) 2019 Mathematics and Reading Grade 12 Assessments Restricted-Use Data Files Data Companion* (NCES, 2021) and chapter 3 of *National Assessment of Educational Progress (NAEP) 2019 Science Grades 4, 8, and 12 Assessments Restricted-Use Data Files Data Companion* (NCES, 2022). The information below has been edited to focus on the HSTS 2019’s reconditioned NAEP grade 12 mathematics and science assessment scores.

Restricted-file users do not need to understand all the material in this chapter; however, they do need to be aware of which sets of replicate weights are appropriate to use for the analyses they wish to do. For example, in estimating the overall grade point average (GPA) of graduates, the set of unlinked student and replicate weights would be used. These weights cover all analysis-eligible high school graduates in the HSTS sample, regardless of what NAEP assessment they took. Statistical packages, such as WesVar, SAS, and SUDAAN, can appropriately handle these calculations.

If, however, the user wishes to explore the relationship between NAEP mathematics scores and overall GPA, the user would use the set of linked student and replicate weights for mathematics, because these estimates must be based on the subsample of all HSTS graduates who also took the NAEP mathematics assessment. Similarly, if the user wishes to explore the relationship between NAEP science scores and overall GPA, the user would use the set of linked student and replicate weights for science, because these estimates must be based on the subsample of all HSTS graduates who also took the NAEP science assessment. Section 8.C discusses in more detail which replicate weights to use for specific HSTS analyses.

For previous HSTS years, the statistical packages stated above would be able to handle the variance calculations needed to analyze NAEP assessment scores with HSTS coursetaking measures. However, because NAEP 2019 used two different assessment modes—paper-based and digitally based assessments—additional procedures are needed to calculate the variances and standard errors of any HSTS analyses involving the NAEP 2019 mathematics and science assessment scores. Section D in this chapter covers the additional procedures in technical detail, while appendix Q provides detailed steps on how to calculate those variances and standard errors using SAS.

A. Introduction

Standard statistical procedures should not be applied to NAEP data without modification because the special properties of the data affect the validity of conventional techniques of statistical inference. There are two reasons for this. First, to ensure accurate results, the relatively small samples of students selected for the NAEP assessments must be truly representative of the entire population and subgroups of this population. Therefore, a complex sampling scheme, rather than simple random sampling, was used to collect NAEP data. Second, because scaling models were used to summarize performance in each subject area, measurement error must be taken into account when analyzing scale-score proficiency variables.

In the NAEP sampling scheme, students do not have an equal probability of being selected. Therefore, as in all complex surveys, each student has been assigned a sampling weight. The larger the probability of selection for students within a particular demographic group, the smaller the weights for those students will be. When computing descriptive statistics or conducting inferential procedures, one should weight the data for each student. **Performance of statistical analyses without weights can lead to misleading results.**

Another way in which the complex sample design used by NAEP differs from simple random sampling is that the NAEP sampling scheme involves the selection of clusters of students from the same school in the national assessment. As a result, observations are not independent of one another as they are in a simple random sample (with replacement). Therefore, **use of standard formulas for estimating the standard error of sample statistics such as means, proportions, or regression coefficients will result in values that are generally too small.** The standard error, which is a measure of the variability of a sample statistic, gives an indication of how well that statistic estimates the corresponding population value. It is used to conduct tests of statistical significance. If conventional simple random sampling formulas are used to compute standard errors, the number of statistically significant results will be substantially overestimated in most instances.

Another effect of the NAEP sampling scheme is a reduction of the effective degrees of freedom. In a simple random sample, the degrees of freedom of a variance estimate are based primarily on the number of observations (although it also depends on the distribution of the variable under consideration). In the NAEP design, the degrees of freedom are a function of the number of strata (as represented by the replicate weights) rather than the number of observations. Therefore, **the standard formulas for obtaining degrees of freedom are not valid with NAEP data.**

Proficiencies in content areas were summarized through item response theory (IRT) scaling models, but not in the way that these models are used in standard applications in which enough responses are available from each person to estimate that person's proficiency precisely. NAEP administers relatively few items to each respondent in order to track *population* levels of proficiency more efficiently. Because the data are not intended to estimate *individual* levels of proficiency, more complicated analyses are required.

The following sections outline the procedures used in NAEP to account for the special properties of the data. Section B discusses jackknife procedures that can be used to estimate sampling variability. Section C describes the plausible values that can be used to estimate population levels of proficiency in the subject areas, and shows how to use them in analyses. Section B applies to all HSTS analyses, while section C focuses on HSTS analyses that examine NAEP grade 12 assessment scores, as the assessment scores are represented as plausible values.

The analysis of NAEP grade 12 assessment scores in previous HSTS administrations incorporated the procedures shown in sections B and C. As the 2019 NAEP grade 12 assessments incorporated both PBA and DBA, however, additional procedures were needed to link the DBA results with the trend established by the PBA results in previous NAEP grade 12 assessments. These procedures added an additional linking error to the variance estimation. The procedures in section D should be used when the linking error applies, as is the case with the 2019 mathematics and science assessments at grade 12 to which the HSTS data are linked. Appendix Q discusses how to use SAS programs included with the HSTS restricted-use data to calculate the proper variance and standard errors for HSTS analyses involving NAEP 2019 grade assessment scores.

B. Procedures Used by NAEP to Estimate Sampling Variability (Jackknife)

This section describes how the sampling variability of statistics based on NAEP data can be estimated. As mentioned in the above section, these procedures should only be used when linking error is not involved. When linking error applies, as in the 2019 NAEP grade 12 mathematics and science assessments, please refer to the variance estimation procedures in section D.

The jackknife variance estimator described below gives fairly precise estimates of the total sampling error for population estimates derived from NAEP student and school data, and for conducting multivariate analyses. A major source of uncertainty in the estimation of the population value for a

variable of interest exists because information about the variable is obtained on only a sample from the population. To reflect this fact, it is important to attach to any statistic (e.g., a mean) an estimate of the sampling variability to be expected for that statistic. Estimates of sampling variability provide information about how much the value of a given statistic would likely change if the statistic had been based on another equivalent sample of individuals drawn in exactly the same manner as the achieved sample.

The NAEP samples are obtained via a stratified multistage probability sampling design that includes provisions for sampling certain subpopulations at higher rates. Additional characteristics of the sample may necessitate adjustments for nonresponse. The resulting samples have different statistical characteristics than those of a simple random sample. In particular, because of the effects of cluster selection (students within schools, schools within primary sampling units [PSUs]) and nonresponse and other weighting adjustments, observations made on different students cannot be assumed to be independent of one another. (For the purpose of this discussion, PSU refers to either the primary sampling units defined for the national-only assessment or to the states in the combined national and state assessments.) To account for the differential probabilities of selection and the various sample weighting adjustments, each student has an associated sampling weight that must be used in the computation of any statistic and, in itself, is subject to sampling variability.

Treatment of the data as a simple random sample, with disregard for the special characteristics of the NAEP sample design, will usually produce underestimates of the true sampling variability. A procedure known as jackknifing is suitable for estimating sampling errors from such a complex design. This procedure has a number of properties that make it particularly suited to the analysis of NAEP data:

- It provides unbiased estimates of the sampling error arising from the complex sample selection procedure for linear estimates such as simple totals and means, and does so approximately for more complex estimates.
- It reflects the component of sampling error introduced by the use of weighting factors, such as nonresponse adjustments, that are dependent on the sample data actually obtained.
- It can be adapted readily to the estimation of sampling errors for parameters estimated using statistical modeling procedures, as well as for tabulation estimates such as totals and means.
- Once appropriate weights are derived and attached to each record, jackknifing can be used to estimate sampling errors. A single set of replicate weights is required for all tabulations and model parameter estimates that may be needed.

See section D in chapter 6 for the methodology in forming replicate weights.

As a specific example of the use of the student replicate weights, let $t(\underline{y}, \underline{w})$ be any statistic that is a function of the sample responses y and the weights w that estimate population value T . For example, t could be a weighted mean, a weighted percent-correct point, or a weighted regression coefficient. Computed with the full sample weights (FINLNKWT on the HSTS data files), the $t(\underline{y}, \underline{w})$, is the appropriate sample estimate of T . To estimate $Var(t)$, the sampling variance for this statistic, proceed in the following manner:

1. For each of the 62 replicates, indicated by i , compute the following statistic:

$$t_i = t(\underline{y}, \underline{SRWT}_i)$$

which is the statistic t recalculated by using $SRWT_i$ instead of the full sample weight.

2. The estimated sample variance of t is

$$Var(t) = \sum_{i=1}^{62} (t_i - t)^2.$$

This estimation technique is referred to as the paired jackknife approach. Special procedures for jackknife variance estimation are available in several statistical packages such as SAS, Stata, AM, and SUDAAN.

1. Degrees of Freedom of the Jackknife Variance Estimate

The effective number of degrees of freedom of the variance estimate $Var(t)$ will be at most equal to the number of variance strata used in forming the replicates. The number of degrees of freedom in sampling from normally distributed variates is sufficient information to indicate the variability of the variance estimate, and is equal to the number of independent pieces of information used to generate the variance. For each assessment sample, the pieces of information are the 62 squared differences $(t_i - t)^2$, each supplying at most one degree of freedom, regardless of how many individuals were sampled within any replicate groups.

The effective number of degrees of freedom of the sample variance estimator can be less than the number of pairs (62) if the differences are not normally distributed or if some of the squared

differences $(t_i - t)^2$ are markedly different in magnitude from others. An extreme case of the latter is when one or more of the t_i values are identical to t , so that $(t_i - t)^2 = 0$. This may happen, for example, when the statistic t is a mean for a subgroup, such as a type of location, and no members of that subgroup come from the pair i . Such a pair contributes zero to the effective number of degrees of freedom of the variance estimate.

An estimate of the effective number of degrees of freedom for $V\hat{a}r(t)$ comes from an approximation defined by the Satterthwaite method (Cochran, 1977, p. 96; Satterthwaite, 1941). If the t_i values are normally distributed, the effective number of degrees of freedom using this approximation is

$$df_{eff} = \left(3.16 - \frac{2.77}{\sqrt{K}} \right) \frac{[\sum_{i=1}^K (t_i - t)^2]^2}{\sum_{i=1}^K (t_i - t)^4}$$

where K is the number of pairs used (Johnson & Rust, 1993).

C. Procedures Used by NAEP to Handle Imprecision of Individual Measurement

This section describes how the measurement variability of statistics based on NAEP data can be estimated. As mentioned in the section A, these procedures should only be used when linking error is not involved. When linking error applies, as in the 2019 NAEP grade 12 mathematics and science assessments, please refer to the variance estimation procedures in section D.

Another important source of variability is due to imprecision in the measurement of individual proficiencies. Because the NAEP design gives each student a small proportion of the pool of assessment items, the assessment cannot provide reliable information about individual performance. Traditional test scores for individual students, even those based on IRT, would result in misleading estimates of population characteristics, such as subgroup means and percentages of students at or above a certain scale-score level. However, it is the goal of NAEP assessments to estimate these population characteristics.

NAEP's objectives can be achieved with methodologies that produce estimates of the population-level parameters directly, without the intermediary computation of estimates of individuals. This is accomplished using marginal estimation scaling model techniques for latent variables (Mislevy & Sheehan, 1987). Under the assumptions of the scaling models, these population estimates will be

consistent in the sense that the estimates approach the model-based population values as the sample size increases. This would not be the case for population estimates obtained by aggregating optimal estimates of individual performance (Mislevy, 1991).

Jackknifing provides a reasonable estimate of uncertainty due to the sampling of respondents when the variable of interest is observed without error from every respondent. Population percentages correct for cognitive items meet this requirement, but scale-score proficiency values do not. The IRT models used to summarize performance in a subject area or subarea posit an unobservable proficiency variable θ to summarize performance on the items in that area. The fact that θ values are not observed even for the respondents in the sample requires additional statistical machinery to draw inferences about θ distributions and to quantify the uncertainty associated with those inferences. To this end, Rubin's (1987) multiple imputation procedures for missing data to the context of latent variable models were adapted to produce the plausible values that appear in the NAEP restricted-use data files.

The essential idea of plausible values methodology is that even though the θ value of respondent i is not observed, other kinds of variables that are related to it are: x_i , the respondent's answers to the cognitive items the respondent was administered in the area of interest, and y_i , the respondent's answers to demographic and contextual variables. Suppose inferences are drawn about a population value number $T(\Theta, Y)$ that could be calculated explicitly if the θ and y values of each member of the population were known. Suppose further that T could be estimated from a sample of N pairs of θ and y values by the statistic $t(\theta, y)$, where $(\theta, y) \equiv (\theta_1, y_1, \dots, \theta_N, y_N)$, and that the variance in t around T could be estimated due to sampling respondents by the function $U(\theta, y)$. Given that observations consist of (x_i, y_i) rather than (θ_i, y_i) , t can be approximated by its expected value conditional on (x, y) or

$$t^*(x, y) = E[t(\theta, y)|x, y] = \int t(\theta, y) p(\theta|x, y) d\theta.$$

It is possible to approximate t^* with random draws from the conditional distributions $p(\theta|x, y)$. Let $\hat{\theta}_m$ be the m th such vector of "plausible values." It is a plausible representation of what the true θ might have been, had it been observable. The following steps describe how an estimate of a scalar statistic $t(\theta, y)$ and its sampling variance can be obtained from M (>1) such sets of plausible values. Please note that prior to 2019, five sets were provided on the HSTS data files for each subject area or subarea analyzed by these procedures; for 2019 and onward, 20 sets have been provided.

1. Using each set of plausible values $\hat{\theta}_m$ in turn, evaluate t as if the plausible values were true values of θ . Denote the results \hat{t}_m , for $m=1, \dots, M$.

2. Using the multiple weight jackknife approach, compute the estimated sampling variance of \hat{t}_m , denoting the result as U_m .
3. The final estimate of t is

$$t^* = \sum_{m=1}^M \hat{t}_m / M.$$

4. Compute the average sampling variance over the M sets of plausible values, to approximate uncertainty due to sampling respondents:

$$U^* = \sum_{m=1}^M U_m / M.$$

5. Compute the variance among the M estimates \hat{t}_m , to approximate uncertainty due to not observing θ values from respondents:

$$B = \sum_{m=1}^M (\hat{t}_m - t^*)^2 / (M - 1).$$

6. The final estimate of the variance of t^* is the sum of two components:

$$V = U^* + (1 + M^{-1}) B.$$

Note: As with NAEP, due to the excessive computation that would be required, HSTS reports use a single jackknife estimate U_I in place of the average of 5 (or 20), as would be required for U^* .

Computation of statistics t^* involving the plausible values and categories of variables included in the conditioning variables y yields consistent estimates of the corresponding population values T . Statistics involving contextual variables on which y was **not** conditioned are subject to biases whose magnitudes depend on the type of statistic and the strength of the relationships between those variables and the variables that were included in the conditioning model. The **direction** of the bias is typically to underestimate the effect of nonconditioned variables. For a given statistic t^* involving one or more nonconditioned contextual variables, the **magnitude** of the bias is related to the extent to which observed responses account for the latent variable θ , and the degree to which the nonconditional contextual variables are explained by conditioning contextual variables. For more details about bias, see Section 10.3.5 of *Implementing the New Design: The NAEP 1983–84 Technical Report* (Beaton, 1987), Section

8.4.3 of *Expanding the New Design: The NAEP 1985–86 Technical Report* (Beaton, 1988), and Mislevy (1991).

D. An Introduction to Linking Error, and the Procedures Used by NAEP for 2019 Grade 12 Mathematics and Science

Because of the transition from a paper-based assessment (PBA) to a digitally based assessment (DBA) and the nature of the combined assessment design of the 2019 NAEP grade 12 mathematics and reading assessments, common population linking was used to align results from the DBA to the existing trend scale used to report the PBA results from previous administrations, referred to as the “trend PBA.” Common population linking involves linking scales by matching the distributions of scores on two different scales for a single group or for randomly equivalent groups of examinees. Two randomly equivalent samples from the same population were administered the 2019 assessments—one digitally, the other via paper and pencil—and used to estimate the common population linking functions. (In this case, the PBA sample is referred to as “bridge PBA”). A new method, called internal linking¹⁷, was developed to estimate error variance for group scale score statistics for the 2019 mathematics and science combined PBA/DBA assessments. More detailed information follows below. Please note that, throughout this section, the statistic of interest, $\hat{\tau}$, for example, can be a mean, a percentile, a standard deviation, or an achievement-level percentage. The transformation coefficients and other information needed to replicate the calculations in this section can be found in the Linking Errors folder of the 2019 NAEP HSTS restricted-use data files.

1. Procedures for Estimating Error Variance for Group Scale Score Statistics From the Combined PBA/DBA Sample—Internal Linking

In internal linking, the common population linking functions are estimated using two randomly equivalent samples—the DBA sample and the bridge PBA sample. Then, the common population linking functions are applied to link the results of the same DBA sample used to derive the linking function to the existing trend scale used to report the trend PBA results from previous years. This

¹⁷ Information about internal linking was adapted from Section 3.5 of the *National Assessment of Educational Progress (NAEP) 2019 Mathematics and Reading Grade 12 Assessments Restricted-Use Data Files Data Companion*, which is available with a NAEP restricted-use data license. Section 8.A.2 provides instructions on how to get a restricted-use license for NAEP and HSTS data.

is referred to as internal linking. Next, the DBA and bridge PBA samples used to derive the linking function are combined in estimating group statistics of interest, $\hat{t}_{combine}$.

1. For the m th set of plausible values, calculate $\hat{t}_{combine,m}$, where $m = 1, 2, \dots, 20$.
2. The estimate of the statistic of interest is computed as

$$\hat{t}_{combine} = \frac{1}{20} \sum_{m=1}^{20} \hat{t}_{combine,m}.$$

3. Using internal linking, the error variance of $\hat{t}_{combine}$, $\widehat{Var}(\hat{t}_{combine})$, is estimated as

$$\widehat{Var}(\hat{t}_{combine}) = \widehat{Var}_{samplerlinking}(\hat{t}_{combine}) + \widehat{Var}_{measlinking}(\hat{t}_{combine}),$$

where

- $\widehat{Var}_{samplerlinking}(\hat{t}_{combine})$ is the sampling variance, considering the uncertainty due to sampling in deriving the linking functions, as well as in the estimation of the group statistics; and
- $\widehat{Var}_{measlinking}(\hat{t}_{combine})$ is the measurement variance, considering the uncertainty due to latency in deriving the linking functions, as well as in the estimation of the group statistics.

For NAEP subjects that report results on a univariate scale only, such as science, the error variance estimation for the group statistics on the overall scale based on the combined PBA/DBA sample follows only the first procedure (for “subscale”) described below. The second procedure (for “composite”) does not apply to subjects with only one scale, because the composite scale is formed by combining two or more subscales. Mathematics report results based on both subscale and composite scale; therefore, both the “subscale” and “composite” procedures are needed for those subjects.

a. *Estimating Error Variance for Group Scale Score Statistics on Subscale: Combined Sample and Internal Linking*

The following steps describe how to estimate the error variance of statistics of interest $\hat{t}_{combine}^s$ using the combined PBA/DBA sample, for a subscale s .

To estimate the sampling error variance, $\widehat{Var}_{samplerlinking}(\hat{t}_{combine}^s)$, a total of 62 pairs of transformation coefficients (A_i^s, B_i^s) , $i = 1, 2, \dots, 62$ are used, as well as the first set of plausible values

(PVs) of the combined sample $\begin{pmatrix} Y_1^s \\ X_1^s \end{pmatrix}$. Here, Y_1^s represents the DBA PVs, and X_1^s represents the bridge PBA PVs.

1. For each pair of transformation coefficients (A_i^s, B_i^s) , $i = 1, 2, \dots, 62$, complete the following steps:

- I. Apply (A_i^s, B_i^s) to transform Y_1^s , in the following way:

$$\hat{Y}_i^s = A_i^s * Y_1^s + B_i^s.$$

- II. Combine the transformed sets of DBA PVs, \hat{Y}_i^s , $i = 1, 2, \dots, 62$ with the bridge PBA-part of the PVs, X_1^s to get the combined PV:

$$Z_i^s = \begin{pmatrix} \hat{Y}_i^s \\ X_1^s \end{pmatrix}.$$

- III. Calculate the statistics of interest, $\hat{t}_{combine,i}^s$ the statistic of interest, $\hat{t}_{combine,i}^s$ based on Z_i^s and W_i^c , where W_i^c denote the i th replicate weight for the combined sample.

2. $\widehat{Var}_{samp|linking}(\hat{t}_{combine}^s)$ is then calculated as

$$\widehat{Var}_{samp|linking}(\hat{t}_{combine}^s) = \sum_{i=1}^{62} (\hat{t}_{combine,i}^s - \bar{\hat{t}}_{combine,i}^s)^2,$$

$$\text{where } \bar{\hat{t}}_{combine,i}^s = \frac{1}{62} \sum_{i=1}^{62} \hat{t}_{combine,i}^s.$$

To calculate the measurement error variance $\widehat{Var}_{meas|linking}(\hat{t}_{combine}^s)$, a total of 100 pairs of transformation coefficients are used, which are grouped into 5 replications with 20 pairs of coefficients within each replication: $(A_{j|k}^s, B_{j|k}^s)$, where $j = 1, 2, \dots, 20$ and $k = 1, 2, \dots, 5$.

1. For the k th replication, $k = 1, 2, \dots, 5$, complete the following steps:
 - I. Apply the transformation coefficients to transform the DBA PVs in the following way:

$$\hat{Y}_{j|k}^s = A_{j|k}^s * Y_j^s + B_{j|k}^s, \text{ where } j = 1, 2, \dots, 20.$$

- II. For each set of $\hat{Y}_{j|k}^s$, combine them with the bridge PBA PVs as

$$Z_{j|k}^s = \begin{pmatrix} \hat{Y}_{j|k}^s \\ X_{j|k}^s \end{pmatrix}, \text{ where } j = 1, 2, \dots, 20.$$

For a given k , $(X_{1|k}^s, X_{2|k}^s, \dots, X_{20|k}^s)$ is a random permutation of the 20 sets of bridge PBA PVs $(X_1^s, X_2^s, \dots, X_{20}^s)$, which is in turn used to derive the transformation coefficients $(A_{j|k}^s, B_{j|k}^s)$.

- III. $\widehat{Var}_{meas|linking}^k(\hat{t}_{combine}^s)$, using the k th replicate of coefficients, is calculated as

$$\widehat{Var}_{meas|linking}^k(\hat{t}_{combine}^s) = \left(1 + \frac{1}{20}\right) \frac{\sum_{j=1}^{20} (\hat{t}_{combine,j|k}^s - \bar{\hat{t}}_{combine,j|k}^s)^2}{20 - 1},$$

where $\hat{t}_{combine,j|k}^s$ is calculated based on $Z_{j|k}^s$, weighted by the student sampling weight, and $\bar{\hat{t}}_{combine,j|k}^s = \frac{1}{20} \sum_{i=1}^{20} \hat{t}_{combine,j|k}^s$.

2. $\widehat{Var}_{meas|linking}(\hat{t}_{combine}^s)$ is then calculated as

$$\widehat{Var}_{meas|linking}(\hat{t}_{combine}^s) = \frac{1}{5} \sum_{k=1}^5 \widehat{Var}_{meas|linking}^k(\hat{t}_{combine}^s).$$

The approaches described here are used in estimating the sampling and measurement variance of the statistics for the 2019 science assessments, when

1. estimating sampling and measurement variance for the combined PBA/DBA sample group scale scores statistics themselves within 2019; and
2. comparing the group scale score statistics from the combined PBA/DBA sample in 2019 to those from trend PBA in 2015 and earlier years.

When comparing the statistics estimated from the combined PBA/DBA sample, $\hat{t}_{combine}$, to the one estimated from trend PBA in previous years, \hat{t}_{PBA} , where the trend PBA sample and the combined sample are independent, the error variance of $|\hat{t}_{combine} - \hat{t}_{PBA}|$ is

$$\widehat{Var}(\hat{t}_{PBA}) + \widehat{Var}(\hat{t}_{combine})$$

$\widehat{Var}(\hat{t}_{PBA})$ is estimated as

$$\widehat{Var}(\hat{t}_{PBA}) = \widehat{Var}_{samp}(\hat{t}_{PBA}) + \widehat{Var}_{meas}(\hat{t}_{PBA}),$$

where $\widehat{Var}_{samp}(\hat{t}_{PBA})$ and $\widehat{Var}_{meas}(\hat{t}_{PBA})$ are the sampling and measurement variances for \hat{t}_{PBA} .

b. Estimating Error Variance for Group Scale Score Statistics on Composite Scale: Combined Sample and Internal Linking

To calculate the sampling variance of statistics on the composite scale, assume there are a total of S subscales and the subscale weights are $\beta_1, \beta_2, \dots, \beta_S$, where $0 < \beta_s < 1$, $s = 1, 2, \dots, S$.

1. First, calculate the DBA composite PVs in the following way:

$$\hat{Y}_i = \sum_{s=1}^S \beta_s \hat{Y}_i^s, \text{ for } i = 1, 2, \dots, 62,$$

where \hat{Y}_i^s is the i th set of transformed DBA PVs for subscale S as described in the previous section.

2. Let

$$Z_i = \begin{pmatrix} \hat{Y}_i \\ X_1 \end{pmatrix}, \text{ for } i = 1, 2, \dots, 62$$

be the i th set of PVs on the composite scale, where X_1 is the first set of composite scale PVs for bridge PBA.

3. For statistic $\hat{t}_{combine}$ on the composite scale, $\widehat{Var}_{samp|linking}(\hat{t}_{combine})$ is then calculated as

$$\widehat{Var}_{samp|linking}(\hat{t}_{combine}) = \sum_{i=1}^{62} (\hat{t}_{combine,i} - \bar{\hat{t}}_{combine})^2,$$

where $\hat{t}_{combine,i}$ is calculated based on Z_i and W_i^c , $i = 1, 2, \dots, 62$ and $\bar{\hat{t}}_{combine} = \frac{1}{62} \sum_{i=1}^{62} \hat{t}_{combine,i}$.

To calculate the measurement variance of the group scale score statistics on the composite scale,

1. Calculate the DBA and bridge PBA composite PVs in the following way:

$$\tilde{Y}_{j|k} = \sum_{s=1}^S \beta_s \tilde{Y}_{j|k}^s, \text{ for } j = 1, 2, \dots, 20$$

and

$$X_{j|k} = \sum_{s=1}^S \beta_s X_{j|k}^s, \text{ for } j = 1, 2, \dots, 20.$$

2. Let

$$Z_{j|k} = \begin{pmatrix} \tilde{Y}_{j|k} \\ X_{j|k} \end{pmatrix}, \text{ for } j = 1, 2, \dots, 20$$

be the j th set of PVs within replicate k on the composite scale, where $X_{j|k}$ is the j th set of composite scale PVs for bridge PBA within replicate k .

3. $\widehat{Var}_{meas|linking}(\hat{t}_{combine})$ is calculated as

$$\begin{aligned} \widehat{Var}_{meas|linking}(\hat{t}_{combine}) \\ = \frac{1}{5} \sum_{k=1}^5 \left\{ \left(1 + \frac{1}{20} \right) \frac{\sum_{j=1}^{20} (\hat{t}_{combine,j|k} - \bar{\hat{t}}_{combine|k})^2}{20 - 1} \right\}, \end{aligned}$$

where $\hat{t}_{combine,j|k}$ is calculated based on $Z_{j|k}$, weighted by the student sampling weight, and $\bar{\hat{t}}_{combine|k} = \frac{1}{20} \sum_{i=1}^{20} \hat{t}_{combine,j|k}$.

The approaches described here are used in estimating the sampling and measurement variance of the statistics for the 2019 mathematics assessments, when

1. estimating sampling and measurement variance for the combined PBA/DBA sample group scale scores statistics themselves within 2019; and
2. comparing the group scale score statistics from the combined PBA/DBA sample in 2019 to those from trend PBA in 2015 and earlier years.

When comparing the statistics estimated from the combined PBA/DBA sample, $\hat{t}_{combine}$, to the one estimated from trend PBA in previous years, \hat{t}_{PBA} , where the trend PBA sample and the combined sample are independent, the error variance of $|\hat{t}_{combine} - \hat{t}_{PBA}|$ is

$$\widehat{Var}(\hat{t}_{PBA}) + \widehat{Var}(\hat{t}_{combine})$$

$\widehat{Var}(\hat{t}_{PBA})$ is estimated as

$$\widehat{Var}(\hat{t}_{PBA}) = \widehat{Var}_{smp}(\hat{t}_{PBA}) + \widehat{Var}_{meas}(\hat{t}_{PBA}),$$

where $\widehat{Var}_{smp}(\hat{t}_{PBA})$ and $\widehat{Var}_{meas}(\hat{t}_{PBA})$ are the sampling and measurement variances for \hat{t}_{PBA} .

c. *Degrees of Freedom for Variance Estimation of Group Scale Score Statistics: Combined Sample and Internal Linking*

Using the notations from the previous sections, the degrees of freedoms for variance estimation of subscale statistics are calculated as

$$df_{subscale} = \left(3.16 - \frac{2.77}{\sqrt{62}} \right) \frac{\left[\sum_{i=1}^{62} (\hat{t}_{combine,i}^s - \bar{\hat{t}}_{combine}^s)^2 \right]^2}{\sum_{i=1}^{62} (\hat{t}_{combine,i}^s - \bar{\hat{t}}_{combine}^s)^4}.$$

Similarly, the degrees of freedom for statistics on the composite scale are calculated as

$$df_{composite} = \left(3.16 - \frac{2.77}{\sqrt{62}} \right) \frac{\left[\sum_{i=1}^{62} (\hat{t}_{combine,i} - \bar{\hat{t}}_{combine})^2 \right]^2}{\sum_{i=1}^{62} (\hat{t}_{combine,i} - \bar{\hat{t}}_{combine})^4}.$$

E. *Additional Sources of Error*

In addition to errors due to sampling and imprecision of individual measurement, NAEP results are also subject to other kinds of errors, including the effects of necessarily imperfect adjustment for student and school nonresponse and other largely unknowable effects associated with the particular instrumentation and data collection methods used.

Nonsampling errors can be attributed to a number of sources: inability to obtain complete information about all selected students in all selected schools in the sample (some students or schools declined to participate, or students participated but answered only certain items); differences in interpreting questions; inability or unwillingness to give correct information; mistakes in recording, coding, or scoring data; and other errors of collecting, processing, sampling, and estimating missing data. The extent of nonsampling errors is difficult to estimate. By their nature, the impact of such errors cannot be reflected in the data-based estimates of uncertainty.

Users of NAEP and HSTS data should also be aware that there are additional components of variance (due to the statistical nature of the scaling and linking process) that are not included in the various estimation procedures discussed in sections B through D. In NAEP—as in other applications of IRT—where item parameters are unknown, estimates must be used. Research was conducted on how

uncertainty associated with item parameter estimates affects the estimation of proficiency distributions (see, e.g., Oranje & Richardson, 2007; Swaminathan & Rogers, 2004).

The estimation error associated with the common-item linking of the results from the current assessment to the NAEP scales represents another source of uncertainty. Some preliminary investigations into estimating the uncertainty associated with this “trend scale linking” were carried out by Johnson, Mislevy, and Zwick (1990) and Sheehan and Mislevy (1988). Two more recent studies (Cheng & Yuan, 2010; Hsieh, et al., 2009) provide further information. At present, standard errors for NAEP results do not reflect this source of uncertainty.

F. A Note Concerning Multiple Comparisons

If many statistical tests are conducted at one time, it is likely that significance tests will overstate the degree of statistical significance of the results. In the preceding sections, it was noted that because of the design of the NAEP sample, conventional significance tests will overstate significance because they fail to consider the effects of clustering. In contrast, the problem of multiple comparisons noted here is independent of sample design; it arises even if one uses the appropriate statistical tests described previously. The problem arises because the more statistical tests are calculated, the more likely it becomes that one will find a “significant” finding because of chance variation. In other words, the chance of a type I error—a spurious “significant” finding—rises with the number of tests conducted.

In sets of confidence intervals, statistical theory indicates that the certainty associated with the entire set of intervals is less than that attributable to each individual comparison from the set. To hold the significance level for the set of comparisons at a particular level (e.g., 0.05), adjustments called multiple comparison procedures (Miller, 1981) must be made to the methods described in the previous sections. One such method, the False Discovery Rate (FDR) procedure (Benjamini & Hochberg, 1995), is used to control the certainty level. Unlike many other multiple comparison procedures (e.g., the Bonferroni procedure) that control the familywise error rate (i.e., the probability of making even one false rejection in the set of comparisons), the FDR procedure controls the expected proportion of falsely rejected hypotheses. Generally, most familywise procedures are overly conservative for large families of comparisons (Williams et al., 1994). Therefore, the FDR procedure is a suitable approach for multiple comparisons in NAEP. A detailed description of the FDR procedure appears in *The NAEP 1998 Technical Report* (Allen, et al., 2001) and on the NAEP Technical Documentation website: https://nces.ed.gov/nationsreportcard/tdw/analysis/2000_2001/infer_multiplecompare_fdr.aspx.

8. GUIDE TO THE DATA FILES AND CODEBOOKS

This chapter describes the content and organization of the 2019 High School Transcript Study (HSTS 2019) data files and codebooks. It also details the process for accessing and obtaining the data files.

A. Public-Use and Restricted-Use Data

1. Public-Use Data—NAEP Data Explorer for HSTS

Though no public-use microdata are available for HSTS 2019, researchers may analyze the data through a secure web-based analysis tool. Researchers will be able to conduct interactive analyses on the National Assessment of Educational Progress (NAEP) HSTS 2019 data with the HSTS version of the NAEP Data Explorer (NDE). An adaptation of NDE, the NDE for HSTS is a Data Analysis System that enables users to access and analyze the graduate transcript data collected for HSTS 2019. Users can construct tables with as many variables as can be supported by the data, although data disclosure rules will place some limitations on the number of crossed variables, as well as the number of categories within the variables.

The NDE for HSTS is designed to allow users to analyze the data with the NAEP scores or to look at all the transcript data. Researchers can generate tables of average NAEP assessment scores for a number of independent variables, which include coursetaking and other transcript information, school and student demographic information, and the NAEP questionnaire responses. These data are limited to graduates who participated in both the NAEP assessment and HSTS and were eligible for inclusion in the transcript analysis. All analyses of these NAEP-linked data use the NAEP scores as the default-dependent variable. The NAEP-based questionnaire data available in the NDE for HSTS are categorical or binary variables and can be used for user table requests.

The other analyses available in the NDE for HSTS are enabled by the feature that provides researchers with additional flexibility in variable selection for dependent variables, such as earned course credits and grade point average (GPA). Transcript data will be available for all graduates eligible for inclusion in the transcript analysis, regardless of their participation in NAEP. Other transcript data from 1990, 2000, 2005, and 2009 are included in the NDE for HSTS, so that users can examine trends in HSTS data.

With the switch of secondary course coding systems in 2019 from Classification of Secondary School Courses (CSSC) to School Courses for the Exchange of Data (SCED), the NDE for HSTS contains data files for both coding systems. There are the current SCED-coded files for 1990, 2000, 2005, 2009, and 2019, and there are the historical CSSC-coded files for 1990, 2000, 2005, and 2009. As noted in section 1.E, the CSSC and SCED coding systems differ in which subject areas they classify courses, so subject-specific coursetaking variables will differ between the two coding systems. Nonsubject-specific coursetaking measures, such as total credits earned and overall grade point average, are not affected by the switch in coding systems. Given the CSSC and SCED files generally have the same coursetaking variables, the subject-specific coursetaking variables have been named differently in the NDE to distinguish them. The variable name labels listed in the NDE for HSTS will indicate in which coding system the variable was generated. It is strongly recommended to use SCED-coded data when working with the NDE for HSTS, as that is the data NCES is using for reporting analyses.

The NDE for HSTS can be accessed at the following web address:

<https://www.nationsreportcard.gov/ndecore/xplore/hsts>.

2. Restricted-Use Data

By federal law, information that directly or potentially identifies graduates who participated in HSTS 2019, for example the schools they attended and the courses they took, must remain confidential. For this reason, HSTS data are not made publicly available at the individual student (i.e., micro) level. However, all NAEP microdata files, including the NAEP HSTS 2019 data files, are available to users as restricted-use data files. Restricted-use data files contain variables for schools and graduates that cannot be released to the public because of confidentiality concerns but are made available to educational researchers. Because these data contain direct identifiers of schools, educational researchers using the HSTS 2019 data files must agree not to release any information that directly identifies a school or graduate, such as school name or address.

Users who wish to obtain a copy of the restricted-use data files must belong to an organization that has a National Center for Education Statistics (NCES) restricted data license. If an organization does not have a restricted data license, they can apply for a license through NCES. It is necessary first to obtain a copy of the *Restricted-Use Data Procedures Manual* (<https://nces.ed.gov/statprog/rudman>). The manual includes checklists that detail the steps involved in obtaining a license.

If an organization already has a restricted data license, the organization may need only to have the license amended to add new datasets and/or authorized data users. Note that, in college or university settings, only personnel at the level of postdoctoral researcher or higher may serve as the primary project officer, who will be responsible for the day-to-day activities involving the NAEP and/or HSTS data.

To obtain a restricted data license (or to amend an existing license), an organization should apply following the instructions available at <https://nces.ed.gov/statprog/instruct.asp>.

B. Content and Organization of the Restricted-Use Files

Data from HSTS 2019 were organized into seven data files:

- Catalog file;
- NAEP mathematics file;
- NAEP science file;
- School file;
- Student file;
- Test file; and
- Transcript file.

All files can be linked by unique school identifiers. The NAEP, student, transcript, and test files can be linked by unique student identifiers. Each file contains the appropriate weighting variables and replicate weights.¹⁸ To obtain accurate results, users must select the appropriate weights for the type of analyses they are undertaking.

This section will provide an overview of the information available in each of the data files. More detailed information is available in the codebooks in appendices I through O.

¹⁸ See section 6.A for discussion of the appropriate weights to use.

1. Catalog File

The Catalog file is a complete listing of courses offered in all participating HSTS schools. Organized by school, each of the file's approximately 344,000 records contains the following information:

- catalog ID;
- school ID;
- course title;
- grade levels the course is offered;
- course SCED code (both the full code and broken down into its components, which include the base course code, course level, the Carnegie credits earned, and the course sequence);
- the source of the catalog (e.g., generated from transcripts or from a school-provided catalog);
- the catalog type (whether the catalog is a state-level catalog, a district-level catalog, a school catalog, or a list of courses generated by the school);
- special education course flag;
- course language flag (indicating whether the course targeted particular language-learning goals or methods); and
- online course flag.

It should be noted that schools may not offer all courses that are on a transcript. For example, in a high school that covers grades 10 through 12, the grade 9 courses that graduates took in middle school were not treated as transfer courses but appeared as if they were offered by the high school. This treatment provides a more balanced picture of the courses available to graduates in 4 years of high school than would be provided by treating such courses as transfer courses. For the schools from which no catalogs were received, the list of unique course titles appearing on the sampled transcripts was the only available source of course offering entries.

2. NAEP Mathematics and Science Files

These files contain data from the NAEP 2019 mathematics and science assessments for the HSTS sampled graduates. Because NAEP scores are designed to provide accurate group estimates rather than student-level information, plausible values for graduates are developed. These plausible value variables have been “conditioned” on other variables (e.g., parents’ education level and NAEP region) in the NAEP datasets. In addition to the variables used to estimate plausible values for the main NAEP study, all transcript study variables in the student file were used in the conditioning process. These plausible values provide more unbiased estimates of graduate scores when NAEP data are analyzed in conjunction with the conditioning variables.¹⁹

The NAEP data files include the plausible values for NAEP proficiency scores for each 2019 high school graduate who participated in a NAEP assessment in a school that was fully linked to HSTS 2019. The NAEP mathematics data file also contains the plausible values for the four components of the mathematics assessment—number properties and operations, measurement and geometry, data analysis and probability, and algebra. As NAEP did not publish components for the science assessment, the NAEP science file only has the plausible values for the univariate science assessment score.

Because of the inclusion of the transcript study variables, the NAEP scores reported in the HSTS files are slightly different from the scores contained in the records for the same graduates distributed solely as NAEP data. The overall national scores from the two studies are different with the HSTS scores being slightly higher since HSTS is based on graduates while NAEP includes nongraduates.

If the need arises to match transcript study records with records obtained from NAEP files, the user will need to take into account the differences in naming conventions for the school and student IDs noted in table 7.

Table 7. HSTS and NAEP record identifier naming conventions: 2019

HSTS transcript study record identifier			NAEP record identifier		
Variable name	Variable descriptor	Field length	Variable name	Variable descriptor	Field length
SCHOOLID	School ID	7	SCHID	School ID	7
STUDENTI	Student ID	10	BOOK	Book Assessment	3
			BKSER	Book Serial Number	6
			CHKDIG	Book Check Digit	1

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress, 2019; NAEP High School Transcript Study (HSTS), 2019.

¹⁹ The plausible value estimation process for NAEP is explained in the NAEP technical report for 1996 (<https://nces.ed.gov/nationsreportcard/pdf/main1996/1999452b.pdf>). A detailed discussion of conditioning can be found on the NAEP Technical Documentation web site (<https://nces.ed.gov/nationsreportcard/tdw/>).

The HSTS SCHOOLID variable can be matched directly to the NAEP SCHID variable. The student identifier in the transcript study, STUDENTI, is created by concatenating the NAEP book number (BOOK, which identifies the form of the assessment administered), the book serial number (BKSER), and the check digit (CHKDIG). If the file contains a nine-digit book serial number (BKSER9), then it can be used instead of concatenating the BOOK and BKSER variables. If the NAEP file does not have a check digit variable, then the first nine digits of the HSTS STUDENTI field can be matched to the combined BOOK-BKSER variables or the BKSER9 variable.

3. School File

The School file contains one record for each of the participating HSTS schools. The file includes school variables gathered on the School Information Form (SIF) during the transcript study, as well as the school's responses to the NAEP School Questionnaire. The NAEP questionnaires can be found at https://nces.ed.gov/nationsreportcard/experience/survey_questionnaires.aspx. Data collected on the SIF that appear on the HSTS 2019 School file include credit requirements and minimum grade point average required for graduation, number of instructional hours for a year-long course, and differences in credits awarded for specific courses (honors, special education, and/or EL courses).

4. Student File

The Student file contains a record for each of the high school graduates who were sampled for HSTS 2019 and for whom complete transcript information was obtained. Each record in the file contains demographic information, sampling information, student weights, and replicate weights for variance estimation. The file also contains derived coursetaking measures as calculated from the graduates' transcript data. The coursetaking measures focus on credits earned and grade point averages, both overall and broken down by course subjects or types. Other coursetaking measures include curriculum levels, which are overall measures of high school coursework rigor, as well as highest level courses earned, last grade level courses that were taken, and flags indicating whether the graduate took courses in a specific subject. Because a number of transcripts for graduates were not received or were incomplete, approximately 47,300 graduates have full transcript information on their student records so as to be included in the student file.

5. Test File

The Test file contains information on standardized test scores that appeared on the high school transcripts collected for HSTS 2019. Of the transcripts collected for high school graduates, about 5,400 transcripts contained standardized test scores. Transcripts without this information may belong to graduates who did not take standardized tests; however, they may also be for graduates attending schools that did not report some or all of this information on transcripts. Because of the relatively small percentage of transcripts represented and the uncertainty about the source of missing data, the data in this file should be used with caution.

For most tests, scores were provided; however, it was not always possible to give meaningful entries for some test scores. The subtests that are reported also varied tremendously. Scores are provided for the Preliminary Scholastic Aptitude Test (PSAT) mathematics and verbal subtests, the Scholastic Aptitude Test (SAT) mathematics and verbal subtests, and the American College Test (ACT) composite and subtests that appeared on the transcripts. The file contains about 37,000 records.

Graduates in the Test file are identified by the combination of school and student ID variables. Each test on a transcript is identified with a unique sequence number. The combination of student ID and test sequence number allows for a unique ID number for each test within the file. Each entry also contains the standardized test (ACT, PSAT, SAT), the month and year of the test (if available), and the test score.

6. Transcript File

The Transcript file contains a record for each course appearing on the transcripts of sampled graduates for whom complete transcript information was obtained. It is an extremely large file, containing about 2.3 million records. Courses are uniquely identified by a course ID number. Each course record includes the following variables:

- school and student ID numbers;
- transcript course ID number;
- grade level when course was taken;
- school year when course was taken;

- school term when course was taken;
- course title;
- grade received (original and standardized);
- credits received (original and standardized Carnegie units);
- course ID that links to the catalog;
- whether the course was an online course; and
- whether the course was a transfer course.

The analyst may wish to use this file to create new coursetaking summary variables that are not currently on the Student file.

C. Additional Information for Researchers Wishing to Use Restricted-Use Files

The HSTS data files contain a wealth of education-based information for researchers to use to understand issues related to coursetaking, access to courses, and achievement. This section addresses some topics that were not addressed in preceding sections such as the use of NAEP scores for individuals.

1. Selecting the Proper Weights

As discussed in chapter 6, there are multiple weights associated with HSTS 2019. Selecting the appropriate weight to use in analyses involving HSTS 2019 is critical for ensuring accurate results.²⁰ All HSTS analyses that do not involve either NAEP assessment scores or measures derived from NAEP assessment scores should use the unlinked student and replicate weights. Using the unlinked weights guarantees that the analyses will include all eligible HSTS 2019 high school graduates, regardless of what NAEP assessment they took. The unlinked student and replicate weights are found in the Student file.

All HSTS analyses that examine NAEP assessment scores, or measures associated with NAEP assessment scores (such as NAEP achievement level percentages), should use the appropriate set of linked student and replicate weights. Using the linked weights ensures that only the high school graduates who took the NAEP assessment are included in the analyses. The mathematics linked weights

²⁰ Chapter 6, section A, describes the weights to be used for different types of analyses.

should be used for analyses concerning the NAEP mathematics assessment scores, while the science linked weights should be used for analyses concerning the NAEP science assessment scores. The linked student and replicate weights can be found in the NAEP mathematics and science files. Analyses that compare HSTS coursetaking measures to NAEP student assessment questions, such as examining the average GPA in mathematics courses for students who indicated they enjoyed taking mathematics classes, should also use the linked weights associated with the course subject associated with the student assessment question.

Users wishing to estimate variances as well as point estimates should be aware of the importance of using replicate weights²¹ with HSTS 2019. Since HSTS 2019 used a complex sample design with several stages of sampling, unequal selection probabilities,²² and complex weighting procedures, use of standard textbook formulas or standard routines in software packages such as SAS and SPSS generally underestimate the true variance of survey estimates and should not be used. Further discussion about HSTS 2019b data and statistical-use software packages can be found in the next section.

2. Statistical Software for Use with HSTS 2019

Specialized software is required to produce the appropriate statistics from the HSTS 2019 data due to the complex sample design reflected in the jackknife replicate weights and the plausible values of the NAEP scale scores. Standard SAS and SPSS code can produce accurate point estimates but cannot easily produce correct standard errors.

Commercial software such as WesVar can also be used for analyzing the HSTS data (<https://www.westat.com/wesvar/>). Other commercially available software includes SUDAAN v11 (<https://www.rti.org/impact/sudaan-statistical-software-analyzing-correlated-data>) and STATA v17 (<https://www.stata.com/>). Users of the SAS statistical software package can use the SURVEYFREQ and SURVEYMEANS procedures to calculate variance and standard error using the appropriate HSTS replicate weights. The R statistical software package has modules available that will also handle jackknife variance estimation and plausible values.

As noted in chapter 2, a unique aspect of the 2019 NAEP grade 12 assessments was the administration of the assessments using two different assessment modes, paper and pencil and computer tablets, which was done to facilitate the transition of NAEP from paper-based assessments (PBA) to

²¹ See chapter 6, section D, for additional information on the replicate weights.

²² See chapters 2 and 3 for more information on the sampling used in HSTS.

digitally based assessments (DBA). This split between PBA and DBA required common population linking²³ to align results from the DBA to the existing trend scale used to report the PBA results from previous NAEP administrations. It affects how the variance is calculated for all analyses involving the 2019 NAEP grade 12 assessment scores, which includes HSTS analyses involving the NAEP 2019 assessment scores. While the software packages listed above can handle any HSTS analyses that do not involve the NAEP grade 12 mathematics and science assessment scores, they will not produce the correct variances and standard errors for HSTS analyses involving the NAEP 2019 assessment scores because of the common population linking procedures.

Appendix Q contains more information on what users will need to do to calculate the correct variance and standard errors for HSTS analyses involving 2019 NAEP grade 12 mathematics and science assessment scores. The HSTS restricted-use data files include the linking parameter needed for the correct variance estimation, as well as sample SAS programs that users can run to generate the correct variances. Users who have access to the NAEP 2019 restricted-use data files can find more detailed information about the PBA-DBA linking error in section 3.5 of the NAEP Restricted-Use Data Files Data Companion. The NDE for HSTS accounts for the linking error, so the variances and standard errors it produces for NAEP 2019 score analyses are correct.

3. Use of NAEP Scores for Individuals

The design of the NAEP studies does not allow reporting on the performance of individual students. Rather, it assesses student performance in selected academic areas for specific populations of students or subgroups of these students. The NAEP sample includes students from both public and private schools. To maximize student participation, NAEP policy states that a student should be asked to participate in the assessment, unless their inability to do so can be clearly established. Beginning with the 2000 assessment, NAEP-HSTS linked analyses have included graduates who took the assessments with accommodations because they had disabilities or were English learners.

Because of the design of the NAEP assessments, each student typically responds to only a few questions within any content area, and not all students are asked the same questions. Unlike many traditional assessments, there is no linear transformation between correct/incorrect items and a single score. Using a single student-level score would result in misleading estimates of population

²³ Common population linking involves linking scales by matching the distributions of scores on two different scales for a single group or for randomly equivalent groups of examinees.

characteristics. Instead, NAEP constructs sets of plausible values (in sets of 20) designed to represent the distribution of performance in the population for each subject assessed. A plausible value is a representative value from the potential scale scores for all students in the population with similar characteristics and identical patterns of item response. Because HSTS collects additional information about the student characteristics and item responses that can be used in this estimation process, plausible values for NAEP scale scores are recalculated for the HSTS sample for use in analyses relating NAEP scores and HSTS transcript data. As a result, NAEP scale scores associated with the HSTS 2019 data differ slightly from NAEP scale scores associated with NAEP 2019 student data.

Since the statistics describing the performance on the NAEP mathematics and science scales are based on the plausible values, the statistical software used to conduct these analyses must properly compute the statistics for the plausible values.

More information about NAEP 2019, including scale scores, plausible values, and jackknife variance replication, can be found in the online NAEP 2019 technical report (<https://nces.ed.gov/nationsreportcard/tdw/>).

D. HSTS Analysis Reports

The HSTS 2019 initial release report (<https://www.nationsreportcard.gov/hstsreport>) represented high school graduates with complete transcripts. Students whose transcripts did not include course-by-course data for either at least 3 full years of high school or the senior school year (i.e., 2018–19) were excluded. To be consistent with other published analyses, the following rules were adopted for including and excluding students in the analyses that produced the tables:

1. Both public and private school students who graduated with a regular or honors diploma were included.
2. Students with special education diplomas, certificates of attendance, and certificates of completion were excluded. Certificates of completion indicate that a student completed the necessary school requirements for graduation but failed to successfully complete a required state graduation exam.
3. Students with disabilities who received regular or honors diplomas (i.e., those students who were not screened out by rule 2) were included.
4. Students whose transcripts had fewer than 16 Carnegie Units were excluded. A Carnegie Unit was a factor used to standardize all credits indicated on transcripts

across the study. The Carnegie Unit is defined as the number of credits received for 120 hours of classroom instruction over the course of a year.

5. Students with zero English Carnegie credits were excluded.

When applying the above criteria to determine which sampled high school graduates could be used for analysis, their transcript records were subject to quality control procedures that listed transcripts needing to be examined because the transcript records were inconsistent with the student's exit status. In a few cases, it was determined that a student initially recorded as a graduate had not actually graduated, and the student's exit status was revised accordingly. Among students with transfer courses, it was sometimes determined that although a student had fewer credits than were required to graduate, the transcript had all the other attributes of a graduated senior. These attributes included student exit status, graduation date, GPA, and class standing. Credits from transfer schools may not have been recorded on the transcript, or the transferred credits may have had a different credit assignment than the school of graduation. In these cases, if a careful review of the transcript and the data files showed no data entry or coding errors, and the lack of credits resulted from missing or improperly converted Carnegie credits for the transfer courses, the record was updated by adding an additional transcript record with undifferentiated credit or by modifying the existing transfer credit records to assign the actual number of credits the graduate had taken.

The transition of secondary school course coding systems from Classification of Secondary School Courses (CSSC) to School Courses for the Exchange of Data (SCED) required creating new data analysis files for previous HSTS years' data, given that the two coding systems do not always agree on what subject areas to assign courses.²⁴ Because of this disagreement, HSTS analyses involving SCED codes cannot be compared to HSTS analyses involving CSSC codes. Therefore, the HSTS 2019 initial release report, which uses the SCED-coded data, cannot be compared to the HSTS 2009 and previous initial release reports, which used the CSSC-coded data. All HSTS analyses published by NCES in the future will use the SCED-coded trend data established for HSTS 2019.

²⁴ Chapter 1, section E, has more information on the effects of switching from CSSC to SCED.

9. HSTS 2019 NONRESPONSE BIAS ANALYSIS

A. HSTS Nonresponse Bias Analysis

This chapter covers the nonresponse bias analysis results for the 2019 High School Transcript Study (HSTS). The results pertain only to the unlinked HSTS sample, and not the NAEP-linked samples. For the linked samples, the school nonresponse was almost identical to that for the unlinked analyses, and thus the nonresponse bias analyses in this report are equally relevant to the linked analyses. On the other hand, almost all the student nonresponse for the NAEP-linked HSTS samples is attributable to nonparticipation to NAEP. Therefore, any findings in the NAEP grade 12 student nonresponse bias analyses would apply directly to the NAEP-linked samples as well (Zhang & Goodnow, 2020).

NCES statistical standards call for a nonresponse bias analysis when response rates at any stage fall below 85 percent. The weighted school response rate for the 2019 HSTS was 69.7 percent (73.3 percent for public schools and 23.7 percent for private schools), so a nonresponse bias analysis was conducted at the school level. The results of these analyses are contained in this chapter. These results can be extrapolated to the student level. There could also be separate student-level bias that was not examined here.

B. School Nonresponse Bias Analysis

The required school nonresponse bias analysis was conducted in three parts.

1. The distribution of the responding original school sample was compared with that of the entire eligible school sample. Schools were weighted by their school base weights and their enrollment, referred to as a size-adjusted weight. The original sample is the sample before substitution.
2. The distribution of the responding sample including participating substitutes was compared to the full sample (but in this case, substitutes were included in place of those nonrespondents that they replaced). Again, the size-adjusted school base weights were used for both the full sample and the respondents.
3. The same sets of schools were compared as in the second analysis, but this time when analyzing the responding schools alone, school nonresponse adjustments were applied to the size-adjusted weights.

The first part of the analysis indicates the potential for bias that was introduced through school nonresponse. The second part of the analysis suggests the remaining potential for nonresponse bias after the mitigating effects of substitution, if any, have been accounted for. The third part indicates the potential for bias after accounting for the mitigating effects of both substitution and nonresponse weight adjustments. Both the second and third parts, however, may provide an overly optimistic scenario because while substitution and nonresponse adjustments may correct somewhat for deficiencies in the few characteristics examined here, there is no guarantee that they are equally as effective for other characteristics.

In theory, bias is the difference between the expected value of a survey-estimated statistic and the actual population value. For these analyses, the weighted estimates for the respondent sample were used as the expected value of the survey-estimated statistics, and the weighted estimates for the entire eligible school sample (hereafter referred to as “full sample”) were used as a proxy for the actual population values. Estimates of the absolute bias were computed by taking the differences of the weighted survey estimates and the weighted full sample estimates. In addition to absolute biases, relative bias estimates were computed to take into account the size or magnitude of the survey estimates. The relative bias was computed by dividing the absolute bias by the full sample estimate.

In each analysis, chi-square tests of association were conducted between school response status and each of the following four categorical variables:

- Census region;
- Reporting subgroup (for private schools only);
- Urban-centric locale; and
- Estimated grade enrollment divided into three equally sized categories (size class).

The chi-square tests were carried out using procedures that appropriately account for the complex sample design used in HSTS, and the weighting procedures. The Rao-Scott chi-square test (Rao & Scott, 1984) was computed using the SAS/STAT® 15.1 survey procedures software (SAS Institute Inc., 2019).

In addition, mean values of race/ethnicity percentages and enrollment were compared. Two measures of the mean size of enrollment in twelfth grade were considered, one using the size adjusted school weight (mean twelfth-grade enrollment averaged across students), and the other using the school weight without the size adjustment (mean twelfth-grade enrollment). Differences between the means for

the respondents and full sample were tested using *t*-tests. These tests also took account of the complex sample design, as well as the fact that the respondents are a subset of the full sample. In that sense, the first set of comparisons (using only school base weights) are equivalent to testing whether the mean for respondents is significantly different from the mean for nonrespondents.

The results of these analyses for both public and private schools are presented in the tables in appendix R, and are summarized in tables 8 and 9. In these summary tables, the first column, Analysis, shows the analytic groups being compared. The second column, Characteristics with nonresponse bias, lists all the school characteristics with significant statistical test results, and thus likely to carry potential nonresponse bias. A statistical test result is significant when its *p*-value is less than 0.05.

Table 8. School characteristics with significant nonresponse bias, based on nonresponse bias analysis of public schools: 2019

Analysis	Characteristics with nonresponse bias
Original sample	Census region, Mean grade 12 enrollment, percentage Black, percentage Hispanic, percentage American Indian/Alaska Native
Sample with substitutes	Census Region, Mean grade 12 enrollment, percentage Black, percentage Hispanic, percentage American Indian/Alaska Native
Nonresponse adjusted	Census region, locale, size class, size of school attended by average student

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2019.

Table 9. School characteristics with significant nonresponse bias, based on nonresponse bias analysis of private schools: 2019

Analysis	Characteristics with nonresponse bias
Original sample	Reporting subgroup, percentage Hispanic, percentage Asian, percentage Two or more races
Sample with substitutes	Reporting subgroup, percentage Hispanic, percentage Asian, percentage Two or more races
Nonresponse adjusted	Reporting subgroup, locale, size class, percentage Black, percentage Asian, percentage Two or more races

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2019.

In general, substitution did not have much effect in reducing nonresponse bias for both public and private schools. Nonresponse adjustments seemed to be somewhat effective in reducing nonresponse bias for public schools; after adjusting for nonresponse, the number of characteristics with significant bias and the magnitude of the bias for several characteristics were reduced. Nonetheless, results became significant for three characteristics after nonresponse adjustment. Nonresponse adjustments did not help much with reducing the number of characteristics with significant bias for

private schools. They helped to reduce the magnitude of the bias for a few characteristics but increased the bias for other characteristics.

For public schools, the results after nonresponse adjustments for Census Region remained significant, but the amount of bias decreased for all four regions. The absolute bias decreased from 0.20 to 0.14 percent for the Northeast region, from 1.73 to 0.41 percent for the Midwest region, from 6.22 to 0.50 percent for the South region, and from 4.28 to 0.22 percent for the West region. The results for locale, size class, and size of school attended by average student changed from nonsignificant to significant after nonresponse adjustments. For locale, the main difference was in the bias for schools located in towns, where the absolute bias increased from 0.44 to 0.72 percent, which is relatively small. For size class, the absolute bias for large schools increased from 0.25 to 1.7 percent, for medium schools it decreased from 1.00 to 0.09 percent, and it increased from 1.25 to 1.61 percent for small schools. The reason for that could be that school size is not one of the variables used in the school nonresponse weights adjustment, so using the nonresponse adjusted weights would not necessarily help to reduce bias for school size. It could also indicate that there is bias in other characteristics not investigated here that are not used in the nonresponse adjustment. The absolute bias for size of school attended by average student increased from 1.80 (nonsignificant) to 7.70 (significant) percent. The reason could be that nonresponse adjustments adjusted other important analysis variables to reduce their bias (e.g., mean grade 12 enrollment changed from significant to nonsignificant), and as a tradeoff, the bias for size of school attended by average students increased. For the race/ethnicity percentages, none of the characteristics with nonresponse bias remained significant after nonresponse adjustment, and no newly significant characteristics were introduced.

For private schools, the result after nonresponse adjustments for reporting subgroup, percentage Asian, and percentage Two or more races were still significant, but the amount of bias decreased for reporting subgroup and percentage Asian. The absolute bias decreased from 29.5 to 2.30 percent for reporting subgroup, and from 1.81 to 1.55 for percentage Asian. The absolute bias increased slightly from 1.35 to 1.67 percent for percentage Two or more races. Three new significant variables were introduced for private schools after nonresponse adjustment, which are locale, size of school attended by average student, and percentage Black. Keep in mind that the response rate for private schools was 23.7 percent. The very low response rate for private schools increased the potential bias and thus, increased the number of characteristics with significant differences that were tested in this analysis. Given the relatively low response rate, there is likely to be bias in other characteristics not investigated here that are not used in the nonresponse adjustments.

In summary, these results suggest that, even after making nonresponse adjustments, there is possibly significant nonresponse bias in the HSTS achievement results for both public and private schools, which is likely carried down to the student-level results. This is because nontrivial statistically significant differences remain between the responding and original samples for several key characteristics. In addition, the response rates were much lower than in past HSTS assessments. Compared with the 2009 HSTS assessment, the 2019 public and private school response rates were 13 and 30 percentage points lower, respectively. The big decline in response rates, especially for private schools, increases the potential for bias.

REFERENCES

- Allen, N.L., Carlson, J.E., and Zelenak, C.A. (1999). *The NAEP 1996 Technical Report* (NCES 1999-452). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Publishing Office.
- Allen, N.L., Donoghue, J.R., and Schoeps, T.L. (2001). *The NAEP 1998 Technical Report* (NCES 2001-509). U.S. Department of Education, Institute of Education Sciences. Washington, DC: U.S. Government Publishing Office.
- Beaton, A.E. (1987). *Implementing the New Design: The NAEP 1983–84 Technical Report* (No. 15-TR-20) (pp. 293–360). Princeton, NJ: Educational Testing Service, National Assessment of Educational Progress.
- Beaton, A.E. (1988). *Expanding the New Design: The NAEP 1985–86 Technical Report* (No. 17-TR-20) (pp. 243–255). Princeton, NJ: Educational Testing Service, National Assessment of Educational Progress.
- Benjamini, Y., and Hochberg, Y. (1995). Controlling the False Discovery Rate: A Practical and Powerful Approach to Multiple Testing. *Journal of the Royal Statistical Society, Series B*, 57(1): 289–300.
- Cheng, Y., and Yuan, K. (2010). The Impact of Fallible Item Parameter Estimates on Latent Trait Recovery. *Psychometrika*, 75(2): 280–291.
- Cochran, W.G. (1977). *Sampling Techniques*. New York: John Wiley and Sons, Inc.
- Hsieh, C., Xu, X., and von Davier, M. (2009). Variance Estimation for NAEP Data Using a Resampling-Based Approach: An Application of Cognitive Diagnostic Models. In M. von Davier and D. Hastedt (Eds.), *IERI Monograph Series: Issues and Methodologies in Large-Scale Assessments* (pp. 161–174). Hamburg/Princeton: IEA-ETS Research Institute.
- Ingels, S.J., Dowd, K.L., Taylor, J.R., Bartot, V.H., Frankel, M.R., and Pulliam, P.A. (1995). *National Education Longitudinal Study of 1988, Second Follow-Up: Transcript Component Data File User's Manual* (NCES 95-377). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Publishing Office.
- Johnson, E.G., Mislevy, R.J., and Zwick, R. (1990). Estimation of the Standard Errors of the Adjusted 1986 NAEP Results. In A.E. Beaton and R. Zwick (Eds.), *The Effect of Changes in the National Assessment: Disentangling the NAEP 1985-86 Reading Anomaly Revised* (pp. 235–240). Princeton, NJ: Educational Testing Service.
- Johnson, E.G., and Rust, K.F. (1993, August). *Effective Degrees of Freedom for Variance Estimates From a Complex Sample Survey*. Paper Presented at the Annual Meeting of the American Statistical Association, San Francisco.
- Jones, C., Knight, S., Butz, M., Crawford, I., and Stephenson, B. (1983). *High School and Beyond Transcripts Survey (1982): Data File User's Manual* (NCES 84-205). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Publishing Office.

- Legum, S., Caldwell, N., Davis, B., Haynes, J., Hill, T., Litavec, S., Rizzo, L., Rust, K., and Vo, N. (1997). *The 1994 High School Transcript Study Technical Report* (NCES 97-262). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Publishing Office.
- Legum, S., Caldwell, N., Goksel, H., Haynes, J., Hynson, C., Rust, K., and Blecher, N. (1993a). *The 1990 High School Transcript Study Tabulations: Comparative Data on Credits Earned and Demographics for 1990, 1987, and 1982 High School Graduates* (NCES 93-423). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Publishing Office.
- Legum, S., Caldwell, N., Goksel, H., Haynes, J., Hynson, C., Rust, K., and Blecher, N. (1993b). *User's Manual: 1990 High School Transcript Study* (NCES 93-416). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Publishing Office.
- Ludwig, M.J., Olivetti, L., Sandberg, N., and Waite, B. (1982). *A Classification of Secondary School Courses*. Alexandria, VA: Evaluation Technologies, Inc.
- Miller, R.G. (1981). *Simultaneous Statistical Inference*. New York: Springer-Verlag.
- Mislevy, R.J. (1991). Randomization-Based Inferences About Latent Variables From Complex Samples. *Psychometrika*, 56(2): 177–196.
- Mislevy, R.J., and Sheehan, K.M. (1987). Marginal Estimation Procedures. In A.E. Beaton (Ed.), *Implementing the New Design: The NAEP 1983-84 Technical Report* (No. 15-TR-20) (pp. 293–360). Princeton, NJ: Educational Testing Service, National Assessment of Educational Progress.
- National Center for Education Statistics. (2021). *National Assessment of Educational Progress (NAEP) 2019 Mathematics and Reading Grade 12 Assessments Restricted-Use Data Files Data Companion* by A.M. Rogers and A.M. De Santo. U.S. Department of Education. Institute of Education Sciences, Washington, DC.
- National Center for Education Statistics. (2022). *2019 NAEP High School Transcript Study (HSTS) Results*. Retrieved March 29, 2022, from <https://www.nationsreportcard.gov/hstsreport>.
- National Center for Education Statistics. (2022). *National Assessment of Educational Progress (NAEP) 2019 Science Grades 4, 8, and 12 Assessments Restricted-Use Data Files Data Companion* by M.E. Hanly and A.M. De Santo. U.S. Department of Education. Institute of Education Sciences, Washington, DC.
- National Commission on Excellence in Education. (1983). *A Nation at Risk: The Imperative for Educational Reform*. (Report No. ED226006). Washington, DC: U.S. Department of Education.
- Nord, C., Roey, S., Perkins, R., Lyons, M., Lemanski, N., Brown, J., and Schuknecht, J. (2011). *The Nation's Report Card: America's High School Graduates* (NCES 2011-462). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Publishing Office.
- Oranje, A., and Richardson, J. (2007). *Task 2.2.8: Sources of Variance in NAEP*. Washington, DC: National Center for Education Statistics, Institute for Education Sciences.

- Perkins, R. (2020). *Switching From CSSC to SCED: How it Affects NAEP High School Transcript Study Trends*. Paper scheduled to be presented at the 2020 annual meeting of the American Educational Research Association, San Francisco (cancelled due to COVID-19).
- Perkins, R., Kleiner, B., Roey, S., and Brown, J. (2004). *The High School Transcript Study: A Decade of Change in Curricula and Achievement, 1990–2000* (NCES 2004-455). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Publishing Office.
- Rao, J.N.K., and Scott, A.J. (1984). On Chi-Squared Tests for Multiway Contingency Tables With Cell Proportions Estimated From Survey Data. *Annals of Statistics*, 12(1): 46–60.
<https://doi.org/10.1214/aos/1176346391>.
- Rizzo, L., and Rust, K. (2011). Finite Population Correction (FPC) for NAEP Variance Estimation. In *Proceedings of the Section on Survey Research Methods, American Statistical Association* (pp. 2501–2515).
- Roey, S., Caldwell, N., Rust, K., Blumstein, E., Krenzke, T., Legum, S., Kuhn, J., Waksberg, M., and Haynes, J. (2001). *The 1998 High School Transcript Study User's Guide and Technical Report* (NCES 2001-477). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Publishing Office.
- Roey, S., Caldwell, N., Rust, K., Hicks, L., Lee, J., Perkins, R., Blumstein, E., and Brown, J. (2005). *The 2000 High School Transcript Study User's Guide and Technical Report* (NCES 2005-483). U.S. Department of Education. Washington, DC: National Center for Education Statistics.
- Rubin, D.B. (1987). *Multiple Imputation for Nonresponse in Surveys*. New York: John Wiley & Sons, Inc.
- SAS Institute, Inc. (2019). *SAS/STAT® 15.1 User's Guide*. Cary, NC: SAS Institute, Inc.
https://documentation.sas.com/?docsetId=statug&docsetTarget=statug_introsamp_sect002.htm&docsetVersion=15.1&locale=en.
- Satterthwaite, F.E. (1941). Synthesis of Variance. *Psychometrika*, 6(5): 309–316.
- Sheehan, K.M., and Mislevy, R.J. (1988). *Some Consequences of the Uncertainty in IRT Linking Procedures* (ETS Research Report No. RR-88-38-ONR). Princeton, NJ: Educational Testing Service.
- Shettle, C., Roey, S., Mordica, J., Perkins, R., Nord, C., Teodorovic, J., Brown, J., Lyons, M., Averett, C., and Kastberg, D. (2007). *America's High School Graduates: Results From the 2005 NAEP High School Transcript Study* (NCES 2007-467). U.S. Department of Education. Washington, DC: National Center for Education Statistics.
- Swaminathan, H., and Rogers, J.R. (2004). *The Effect of Uncertainty in Item Parameters on NAEP Population Characteristics*. Paper presented at the annual meeting of the National Council on Measurement in Education, San Diego, CA.
- Thorne, J., Burke, J., Rust, K., Marshall, R., Caldwell, N., Sickles, D., and Ha, P. (1989). *1987 High School Transcript Study Technical Report*. Rockville, MD: Westat.

- Thurgood, L., Walter, E., Carter, G., Henn, S., Huang, G., Nooter, D., Smith, W., Cash, R.W., and Salvucci, S. (2003). *NCES Handbook of Survey Methods* (NCES 2003-603). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Publishing Office.
- Williams, V.S.L., Jones, L.V., and Tukey, J.W. (1994). *Controlling Error in Multiple Comparisons With Special Attention to the National Assessment of Educational Progress*. Research Triangle Park, NC: National Institute of Statistical Sciences.
- Zhang, S., and Goodnow, M. (2020). *NAEP 2019 Nonresponse Bias Analysis Report: Grade 4 and Grade 8 Science, and Grade 12 Mathematics, Reading, and Science* [unpublished report]. National Center for Education Statistics.

Appendix A

2019 High School Transcript Study Disclosure Notice

Authorization - FERPA Disclosure Record Annotation Text

2019 High School Transcript Study

“A copy of this student’s transcript_____ will be _____ has been provided to WESTAT, agent for the U.S. Department of Education, National Center for Education Statistics (NCES). The granting of Education Department authority for collection of the transcript data has been made pursuant to the provisions of the Family Education Rights and Privacy Act (FERPA) (20 U.S.C. 1232g) as implemented by 34 CFR 99.31(a)(3)(ii) and 99.35, summarized on the back of this notice. This disclosure statement fulfills the requirements of provision 34 CFR 99.32 of FERPA.

The High School Transcript Study (HSTS), sponsored by NCES, is being conducted to collect information on current course offerings and course taking in the nation’s secondary schools. This student has been selected to participate in HSTS, and data from these records will be combined with other into statistical summaries and tables. No individually identifiable information will be released in any form.”

Appendix B

2019 High School Transcript Study State, District, and School Information Forms

[State Information Form]

2019 NAEP HSTS School Information Form (SIF)

The following survey asks important questions about your jurisdiction's policies concerning high school course credits, graduation requirements, and other subjects. It also asks questions about the transcripts that will be submitted for the students sampled in the 2019 NAEP Grade 12 assessments. Thank you in advance for the time and effort needed to answer these questions. Please complete the entire survey before Thursday, January 31, 2019.

Introduction

1. What is your jurisdiction?

A. School Information

This section primarily asks questions about credits awarded for high school courses and the requirements for graduating with a standard diploma. In responding to the questions in this section, think only about the graduating Class of 2019.

1. How many credits does a student earn for a year-long course; that is, a course taken for a single period over the 2018-19 school year or its block equivalent?

of credits: _____

2. Has this value changed during the last four school years?

- ☐ Yes (Continue below)
- ☐ No (Skip to Question 3)

- a. How many credits were earned for a year-long course or its block equivalent for the following years?

2017-18 # of credits: _____

2016-17 # of credits: _____

2015-16 # of credits: _____

3. Are there differences in the number of credits awarded for these courses?

- a. Honors courses (including AP and IB)

- ☐ Yes – Please explain the differences.

☐ No

- b. Special education courses

- ☐ Yes – Please explain the differences.

☐ No

- c. English as a Second language courses
☐ Yes – Please explain the differences.

☐ No

4. How many hours of instruction does a student receive for a year-long course or its block equivalent? (Please report using whole numbers.)

hours of instruction: _____

5. What are the total number of credits a student must earn to graduate with a standard high school diploma?

Total # of credits: _____

6. What are the number of credits required for a standard high school diploma in the following subject areas? If the subject area is not required, please write NA on the credit line.

Note: The number of credits entered for parts ‘a’ through ‘j’ should add up to the total number of credits that was entered for a student to graduate with a standard high school diploma.

- | | |
|------------------------------|---------------------|
| a. English/Language Arts | # of credits: _____ |
| b. Mathematics | # of credits: _____ |
| c. Computer Science | # of credits: _____ |
| d. Social Studies/History | # of credits: _____ |
| e. Science | # of credits: _____ |
| f. Foreign Language | # of credits: _____ |
| g. Physical Education/Health | # of credits: _____ |
| h. Other (specify: _____) | # of credits: _____ |
| i. Other (specify: _____) | # of credits: _____ |
| j. Other (specify: _____) | # of credits: _____ |

7. Do credits earned prior to ninth grade count toward graduation?

☐ No

☐ Yes - please explain:

8. Are there any courses or activities required for graduation that do not receive credits?

☐ No

☐ Yes - please explain:

9. Must the student meet a minimum overall grade point average (GPA) to graduate with a standard high school diploma?

☐ No

☐ Yes - what is the minimum GPA? _____

10. Are there state or district competency tests or performance assessments that are required for graduation with a standard high school diploma?

- ☐ Yes (Continue below)
- ☐ No (Skip to Section B)

a. What content areas (e.g., Reading, Citizenship, Mathematics) do the competency tests or performance assessments cover?

b. If a student does not pass the tests or assessments, what is his/her graduation status?

B. Transcript Information

This section asks questions about the information listed on the student transcripts, such as what course information is included, how courses are graded, and how to identify selected types of courses.

1. Are the following information listed on the student transcript for each course that students take? (Please check all that apply.)

- a. Course name ☐
- b. Grade level course was taken ☐
- c. School year course was taken ☐
- d. Course term (i.e., length of course) ☐
- e. Grade earned in course ☐
- f. Number of credits awarded for course ☐
- g. Course level (i.e., Regular, Honors, AP, IB, Special Education) ☐
- h. Course location (if not taught at school) ☐
- i. Language of instruction (if not taught in English) ☐
- j. Online course indicator ☐
- k. Transfer course indicator ☐
- l. Course ID number ☐

2. How are the following types of courses identified on the student transcripts? For example, course indicators may be located within the course ID number, included as abbreviations added after the course ID number or course title, or stored as separate data fields in the course record.

a. Are the vocational courses identified in any special way?

- ☐ No
- ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.

b. Are the remedial courses identified in any special way?

- ☐ No
- ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.

- c. Are the honors, AP, or IB courses identified in any special way?
☐ No
☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.

- d. Are the dual or college credit courses identified in any special way?
☐ No
☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.

- e. Are the special education courses identified in any special way?
☐ No
☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.

- f. Are the courses taught off-campus identified in any special way?
☐ No
☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.

- g. Are the online courses identified in any special way?
☐ No
☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.

- h. Are the ESL or bilingual courses identified in any special way?
☐ No
☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.

3. What type of grading system is used in your jurisdiction? Mark all that apply.
☐ Letter grades (A, B, C, ...)
☐ Numeric grades (63, 78, 100, ...)
☐ Proficiency levels (Exceed expectations, Meets expectations, ...)
☐ Pass/Fail
☐ Satisfactory/Unsatisfactory
☐ Other (please specify): _____

- a. If you use a letter, numeric, or proficiency level grading system, what is the lowest possible grade a student can have to pass a course?

- b. If you use a letter, pass/fail, or satisfactory/unsatisfactory grading system, what do the grades stand for numerically? Please list a numeric range or description; for example, A = 90 – 100, B = 80 – 89, P = 61 and up, and so on. (Example, A=90-100, B= 80-89, P = 61-100,etc.)

Grade	Numeric Range (or description)	Grade	Numeric Range (or description)
A+		D+	
A		D	
A-		D-	
B+		F	
B		Pass	
B-		Fail	
C+		Satisfactory	
C		Unsatisfactory	
C-			

4. How are transfer courses identified on the transcripts? Mark all that apply.
- ☐ There are no markers to indicate transfer courses on the transcripts.
 - ☐ Different school name
 - ☐ Different city or state name
 - ☐ Different student ID
 - ☐ Different set of course IDs
 - ☐ In the course name (e.g., “Transfer credits”)
 - ☐ By a special code or symbol (please specify: _____)
5. Are there abbreviations or symbols on the transcripts that are not common or self-evident? For example, an “H” is a common abbreviation used for honors courses but using the code “XA” for honors courses would not be common.
- ☐ No
 - ☐ Yes - please indicate the symbols and explain what they mean.

C. Transcript Submission

The final set of questions ask about how the high school transcripts for the sampled students will be submitted. There are two methods of collecting transcripts from schools: a) electronic transmission by the school, and b) school visit by NAEP field staff for hard copies of the transcripts. You have chosen to submit electronic transcripts on behalf of all participating schools in your jurisdiction, using the secure MyNAEP for HSTS site to upload the transcripts. You will be asked to transmit the transcripts for your schools by the end of August 2019, but it would be greatly appreciated if the transcripts were sent before then.

1. When will the final transcripts for the Class of 2019 students be available?

Date: _____

2. In which format would the transcripts be sent?

- ☐ Microsoft Excel workbook
- ☐ Microsoft Access database
- ☐ Microsoft Word files
- ☐ Comma separated value (CSV) files
- ☐ XML files
- ☐ Plain text files
- ☐ Adobe Acrobat PDFs
- ☐ Other (please specify): _____

[District Information Form]

2019 NAEP HSTS District Information Form (SIF)

The following survey asks important questions about your district's policies concerning course credits, graduation requirements, and other subjects. It also asks questions about the transcripts that your district will submit for the students sampled in the 2019 NAEP Grade 12 assessments. Thank you in advance for the time and effort needed to answer these questions. Please complete the entire survey before Thursday, January 31, 2019.

Introduction

1. What is the name of your district?

A. District Information

This section primarily asks questions about credits awarded for high school courses and the requirements for graduating with a standard diploma. In responding to the questions in this section, think only about the graduating Class of 2019.

1. How many credits does a student earn for a year-long course; that is, a course taken for a single period over the 2018-19 school year or its block equivalent?

of credits: _____

2. Has this value changed during the last four school years?

- ☐ Yes (Continue to Question 4)
- ☐ No (Go to Question 5)

3. How many credits were earned for a year-long course or its block equivalent for the following years?

2017-18 # of credits: _____

2016-17 # of credits: _____

2015-16 # of credits: _____

Are there differences in the number of credits awarded for these courses?

4. Honors courses (including AP and IB)

- ☐ Yes – Please explain the differences.

- ☐ No

5. Special education courses

- ☐ Yes – Please explain the differences.

- ☐ No

6. English as a Second language courses
☐ Yes – Please explain the differences.

☐ No

7. How many hours of instruction does a student receive for a year-long course or its block equivalent?
(Please report using whole numbers.)

hours of instruction: _____

8. What are the total number of credits a student must earn to graduate with a standard high school diploma from your district?

Total # of credits: _____

9. What are the number of credits required for a standard high school diploma in your district in the following subject areas? If the subject area is not required, please write NA on the credit line.

Note: The number of credits entered for parts ‘a’ through ‘j’ should add up to the total number of credits that was entered for a student to graduate with a standard high school diploma.

k. English/Language Arts	# of credits: _____
l. Mathematics	# of credits: _____
m. Computer Science	# of credits: _____
n. Social Studies/History	# of credits: _____
o. Science	# of credits: _____
p. Foreign Language	# of credits: _____
q. Physical Education/Health	# of credits: _____
r. Other (specify: _____)	# of credits: _____
s. Other (specify: _____)	# of credits: _____
t. Other (specify: _____)	# of credits: _____

10. Do credits earned prior to ninth grade count toward graduation?

☐ No

☐ Yes - please explain:

11. Are there any courses or activities required for graduation that do not receive credits?

☐ No

☐ Yes - please explain:

12. Must the student meet a minimum overall grade point average (GPA) to graduate with a standard high school diploma?

☐ No

☐ Yes - what is the minimum GPA? _____

13. Are there state or district competency tests or performance assessments that are required for graduation with a standard high school diploma?
- ☐ Yes (Continue to question 15 and 16)
 - ☐ No (Skip to Section B: Transcript Information)
14. What content areas (e.g., Reading, Citizenship, Mathematics) do the competency tests or performance assessments cover?

15. If a student does not pass the tests or assessments, what is his/her graduation status?

B. Transcript Information

This section asks questions about the information listed on the student transcripts, such as what course information is included, how courses are graded, and how to identify selected types of courses.

1. Are the following information listed on the student transcript for each course that students take? (Please check all that apply.)

- | | |
|--|--------------------------|
| a. Course name | <input type="checkbox"/> |
| b. Grade level course was taken | <input type="checkbox"/> |
| c. School year course was taken | <input type="checkbox"/> |
| d. Course term (i.e., length of course) | <input type="checkbox"/> |
| e. Grade earned in course | <input type="checkbox"/> |
| f. Number of credits awarded for course | <input type="checkbox"/> |
| g. Course level (i.e., Regular, Honors, AP, IB, Special Education) | <input type="checkbox"/> |
| h. Course location (if not taught at school) | <input type="checkbox"/> |
| i. Language of instruction (if not taught in English) | <input type="checkbox"/> |
| j. Online course indicator | <input type="checkbox"/> |
| k. Transfer course indicator | <input type="checkbox"/> |
| l. Course ID number | <input type="checkbox"/> |

2. Do they match the course ID numbers that are listed in the course catalog or listing?

- ☐ Yes
- ☐ No

How are the following types of courses identified on the student transcripts? For example, course indicators may be located within the course ID number, included as abbreviations added after the course ID number or course title, or stored as separate data fields in the course record.

3. Are the vocational courses identified in any special way?

- ☐ No
- ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.

4. Are the remedial courses identified in any special way?
- ☐ No
 - ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.
-
5. Are the honors, AP, or IB courses identified in any special way?
- ☐ No
 - ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.
-
6. Are the dual or college credit courses identified in any special way?
- ☐ No
 - ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.
-
7. Are the special education courses identified in any special way?
- ☐ No
 - ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.
-
8. Are the courses taught off-campus identified in any special way?
- ☐ No
 - ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.
-
9. Are the online courses identified in any special way?
- ☐ No
 - ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.
-
10. Are the ESL or bilingual courses identified in any special way?
- ☐ No
 - ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.
-
11. What type of grading system is used in your district? Mark all that apply.
- ☐ Letter grades (A, B, C, ...)
 - ☐ Numeric grades (63, 78, 100, ...)
 - ☐ Proficiency levels (Exceed expectations, Meets expectations, ...)
 - ☐ Pass/Fail
 - ☐ Satisfactory/Unsatisfactory
 - ☐ Other (please specify): _____
-
12. If you use a letter, numeric, or proficiency level grading system, what is the lowest possible grade a student can have to pass a course?
- _____

13. If you use a letter, pass/fail, or satisfactory/unsatisfactory grading system, what do the grades stand for numerically? Please list a numeric range or description; for example, A = 90 – 100, B = 80 – 89, P = 61 and up, and so on. (Example, A=90-100, B= 80-89, P = 61-100,etc.)

Grade	Numeric Range (or description)	Grade	Numeric Range (or description)
A+		D+	
A		D	
A-		D-	
B+		F	
B		Pass	
B-		Fail	
C+		Satisfactory	
C		Unsatisfactory	
C-			

14. How are transfer courses identified on the transcripts? Mark all that apply.

- ☐ There are no markers to indicate transfer courses on the transcripts.
- ☐ Different school name
- ☐ Different city or state name
- ☐ Different student ID
- ☐ Different set of course IDs
- ☐ In the course name (e.g., “Transfer credits”)
- ☐ By a special code or symbol (please specify: _____)

15. Are there abbreviations or symbols on the transcripts that are not common or self-evident? For example, an “H” is a common abbreviation used for honors courses but using the code “XA” for honors courses would not be common.

- ☐ No
- ☐ Yes - please indicate the symbols and explain what they mean.

C. Transcript Submission

The final set of questions ask about how the high school transcripts for the sampled students will be submitted. There are two methods of collecting transcripts from schools: a) electronic transmission by the school, and b) school visit by NAEP field staff for hard copies of the transcripts.

If the school will transmit transcripts electronically, they will use the secure MyNAEP for HSTS site to upload the transcripts. The school will be asked to transmit the transcripts by the end of August 2019, but it would be greatly appreciated if the transcripts were sent before then.

If the school chooses to submit paper copies of the transcripts, a separate procedure will be used to collect the transcripts. During the summer, when transcripts are ready, NAEP field staff will return to the school to make copies of the sampled students' transcripts. Once the transcripts are copied, all personally identifying information will be removed from the copies, and the copies will be sent to the NAEP HSTS processing center.

1. Our normal procedures for the transcript study, as specified by the Family Educational Rights and Privacy Act (FERPA), are to provide FERPA notices for the school, but not to notify parents of their child's inclusion because no student time is involved and all transcript information is collected anonymously. Is there any reason that we should use different procedures in your district?
☐ Yes, please send me a Parental Information letter.
☐ No
2. When will the final transcripts for the Class of 2019 students be available?
Date: _____
3. Do your school(s) plan to submit electronic or paper copies of the transcripts for the sampled NAEP students?
☐ Electronic (Go to Question 35)
☐ Paper (Go to Question end of survey)

If the district will be submitting electronically, please answer the following question.

4. In which format would the transcripts be sent?
☐ Microsoft Excel workbook
☐ Microsoft Access database
☐ Microsoft Word files
☐ Comma separated value (CSV) files
☐ XML files
☐ Plain text files
☐ Adobe Acrobat PDFs
☐ Other (please specify): _____

If you have any questions about this survey, please contact the NAEP Help Desk (naephelp@westat.com).

[School Information Form]

2019 NAEP HSTS School Information Form (SIF)

The following survey asks important questions about your high school's policies concerning course credits, graduation requirements, and other subjects. It also asks questions about the transcripts that your school will submit for the students sampled in the 2019 NAEP Grade 12 assessments. Thank you in advance for the time and effort needed to answer these questions. Please complete the entire survey before Thursday, January 31, 2019.

Introduction

1. What is your school name?

2. What is your state/school district name?

A. School Information

This section primarily asks questions about credits awarded for high school courses and the requirements for graduating with a standard diploma. In responding to the questions in this section, think only about the graduating Class of 2019.

1. How many credits does a student earn for a year-long course; that is, a course taken for a single period over the 2018-19 school year or its block equivalent?

of credits: _____

2. Has this value changed during the last four school years?

- ☐ Yes (Continue below)
☐ No (Skip to Question 3.)

- b. How many credits were earned for a year-long course or its block equivalent for the following years?

2017-18 # of credits: _____

2016-17 # of credits: _____

2015-16 # of credits: _____

3. Are there differences in the number of credits awarded for these courses?

- a. Honors courses (including AP and IB)

- ☐ Yes – Please explain the differences.

☐ No

- b. Special education courses
☐ Yes – Please explain the differences.

☐ No

- c. English as a Second language courses
☐ Yes – Please explain the differences.

☐ No

4. How many hours of instruction does a student receive for a year-long course or its block equivalent?
(Please report using whole numbers.)

hours of instruction: _____

5. What are the total number of credits a student must earn to graduate with a standard high school diploma from your school?

Total # of credits: _____

6. What are the number of credits required for a standard diploma in your high school in the following subject areas? If the subject area is not required, please write NA on the credit line.

Note: The number of credits entered for parts ‘a’ through ‘j’ should add up to the total number of credits that was entered for a student to graduate with a standard high school diploma.

u. English/Language Arts	# of credits: _____
v. Mathematics	# of credits: _____
w. Computer Science	# of credits: _____
x. Social Studies/History	# of credits: _____
y. Science	# of credits: _____
z. Foreign Language	# of credits: _____
aa. Physical Education/Health	# of credits: _____
bb. Other (specify: _____)	# of credits: _____
cc. Other (specify: _____)	# of credits: _____
dd. Other (specify: _____)	# of credits: _____

7. Do credits earned prior to ninth grade count toward graduation?

- ☐ No
☐ Yes - please explain:

8. Are there any courses or activities required for graduation that do not receive credits?

- ☐ No
☐ Yes - please explain:

9. Must the student meet a minimum overall grade point average (GPA) to graduate with a standard diploma in your high school?
- ☐ No
 - ☐ Yes - what is the minimum GPA? _____

10. Are there state or district competency tests or performance assessments that are required for graduation with a standard high school diploma?
- ☐ Yes (Continue below)
 - ☐ No (Skip to Section B.)

- c. What content areas (e.g., Reading, Citizenship, Mathematics) do the competency tests or performance assessments cover?

- d. If a student does not pass the tests or assessments, what is his/her graduation status?

B. Transcript Information

This section asks questions about the information listed on the student transcripts, such as what course information is included, how courses are graded, and how to identify selected types of courses.

1. Are the following information listed on the student transcript for each course that students take? (Please check all that apply.)

- | | |
|--|--------------------------|
| a. Course name | <input type="checkbox"/> |
| b. Grade level course was taken | <input type="checkbox"/> |
| c. School year course was taken | <input type="checkbox"/> |
| d. Course term (i.e., length of course) | <input type="checkbox"/> |
| e. Grade earned in course | <input type="checkbox"/> |
| f. Number of credits awarded for course | <input type="checkbox"/> |
| g. Course level (i.e., Regular, Honors, AP, IB, Special Education) | <input type="checkbox"/> |
| h. Course location (if not taught at school) | <input type="checkbox"/> |
| i. Language of instruction (if not taught in English) | <input type="checkbox"/> |
| j. Online course indicator | <input type="checkbox"/> |
| k. Transfer course indicator | <input type="checkbox"/> |
| l. Course ID number | <input type="checkbox"/> |

2. How are the following types of courses identified on the student transcripts? For example, course indicators may be located within the course ID number, added after the course ID number or course title, or stored as separate data fields in the course record.

- a. Are the vocational courses identified in any special way?
- ☐ No
 - ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.

- b. Are the remedial courses identified in any special way?
- ☐ No
- ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.
-
- c. Are the honors, AP, or IB courses identified in any special way?
- ☐ No
- ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.
-
- d. Are the dual or college credit courses identified in any special way?
- ☐ No
- ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.
-
- e. Are the special education courses identified in any special way?
- ☐ No
- ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.
-
- f. Are the courses taught off-campus identified in any special way?
- ☐ No
- ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.
-
- g. Are the online courses identified in any special way?
- ☐ No
- ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.
-
- h. Are the ESL or bilingual courses identified in any special way?
- ☐ No
- ☐ Yes – please list what specific indicator to look for to identify the courses on the transcript.
-
3. What type of grading system is used at your high school? Mark all that apply.
- ☐ Letter grades (A, B, C, ...)
- ☐ Numeric grades (63, 78, 100, ...)
- ☐ Proficiency levels (Exceed expectations, Meets expectations, ...)
- ☐ Pass/Fail
- ☐ Satisfactory/Unsatisfactory
- ☐ Other (please specify): _____
-
- a. If you use a letter, numeric, or proficiency level grading system, what is the lowest possible grade a student can have to pass a course?
-

- b. If you use a letter, pass/fail, or satisfactory/unsatisfactory grading system, what do the grades stand for numerically? Please list a numeric range or description; for example, A = 90 – 100, B = 80 – 89, P = 61 and up, and so on. (Example, A=90-100, B= 80-89, P = 61-100, etc.)

Grade	Numeric Range (or description)	Grade	Numeric Range (or description)
A+		D+	
A		D	
A-		D-	
B+		F	
B		Pass	
B-		Fail	
C+		Satisfactory	
C		Unsatisfactory	
C-			

4. How are transfer courses identified on the transcripts? Mark all that apply.
- ☐ There are no markers to indicate transfer courses on the transcripts.
 - ☐ Different school name
 - ☐ Different city or state name
 - ☐ Different student ID
 - ☐ Different set of course IDs
 - ☐ In the course name (e.g., “Transfer credits”)
 - ☐ By a special code or symbol (please specify: _____)
5. Are there abbreviations or symbols on the transcripts that are not common or self-evident? For example, an “H” is a common abbreviation used for honors courses but using the code “XA” for honors courses would not be common.
- ☐ No
 - ☐ Yes - please indicate the symbols and explain what they mean.
- _____
- _____
- _____
- _____
- _____

C. Transcript Submission

The final set of questions ask about how the high school transcripts for the sampled students will be submitted. There are two methods of collecting transcripts from schools: a) electronic transmission by the school, and b) school visit by NAEP field staff for hard copies of the transcripts.

If the school will transmit transcripts electronically, they will use the secure MyNAEP for HSTS site to upload the transcripts. The school will be asked to transmit the transcripts by the end of August 2019, but it would be greatly appreciated if the transcripts were sent before then.

If the school chooses to submit paper copies of the transcripts, a separate procedure will be used to collect the transcripts. During the summer, when transcripts are ready, NAEP field staff will return to the school to make copies of the sampled students’ transcripts. Once the transcripts are copied, all personally

identifying information will be removed from the copies, and the copies will be sent to the NAEP HSTS processing center.

1. Our normal procedures for the transcript study, as specified by the Family Educational Rights and Privacy Act (FERPA), are to provide FERPA notices for the school, but not to notify parents of their child's inclusion because no student time is involved and all transcript information is collected anonymously. Is there any reason that we should use different procedures in your school?
 - ☐ Yes, please send me a Parental Information letter.
 - ☐ No
2. When will the final transcripts for the Class of 2019 students be available?
Date: _____
3. Does your school plan to submit electronic or paper copies of the transcripts for the sampled NAEP students?
 - ☐ Electronic
 - ☐ Paper
 - ☐ State/school district will submit

If the school will be submitting electronically, please answer the following question.

4. In which format would the transcripts be sent?
 - ☐ Microsoft Excel workbook
 - ☐ Microsoft Access database
 - ☐ Microsoft Word files
 - ☐ Comma separated value (CSV) files
 - ☐ XML files
 - ☐ Plain text files
 - ☐ Adobe Acrobat PDFs
 - ☐ Other (please specify): _____

If the school will be submitting paper copies of the transcripts, please answer the following question.

5. Whom should the NAEP field staff contact to schedule a date and time to collect the transcripts?
 - ☐ To myself
 - ☐ To the person listed below
 - Name: _____
 - E-mail: _____
 - Phone Number: _____

Appendix C

2019 High School Transcript Study Student List

Figure C-1. Example student list file (Tab 1 of Excel file)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
	State			E-File			Student t				Student		Grad e	School Year	Course Term	Credits Earned	Grade Earned	Course Level	Special Education Course	Course Location	Course Language	College Credit	Transfer Course
1	NAEP School ID	School ID	School Name	Grad e 12	Student ID	New Enrollee	State Unique Student ID	First Name	Middle Name	Last Name	Course ID	Course Title											
2	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	ENG0009	ENGLISH 9												
3	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	MTH0112	ALGEBRA I	09	15-16	Y	1	B	REG	N	HS	ENG	N	N	
4	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	SCIO134	EARTH SCIENCE	09	15-16	Y	1	B	REG	N	HS	ENG	N	N	
5	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	HST0238	WORLD GEOGRAPHY	09	15-16	S1	0.5	A	REG	N	HS	ENG	N	N	
6	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	HST0029	STATE HISTORY	09	15-16	S2	0.5	B	REG	N	HS	ENG	N	N	
7	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	PHE0009	PHYS ED 9	09	15-16	Y	1	A	REG	N	HS	ENG	N	N	
8	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	CMP0088	COMPUTER APPLICATIONS	09	15-16	Y	1	A	REG	N	HS	ENG	N	N	
9	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	ENG0010	ENGLISH 10	10	16-17	Y	1	C	REG	N	HS	ENG	N	N	
10	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	MTH0122	GEOMETRY	10	16-17	Y	1	C	REG	N	HS	ENG	N	N	
11	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	SCIO185	BIOLOGY I	10	16-17	Y	1	B	REG	N	HS	ENG	N	N	
12	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	HST0011	U.S. HISTORY	10	16-17	Y	1	B	REG	N	HS	ENG	N	N	
13	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	PHE0010	PHYS ED 10	10	16-17	S1	0.5	A	REG	N	HS	ENG	N	N	
14	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	PHE0025	HEALTH	10	16-17	Q3	0.25	B	REG	N	HS	ENG	N	N	
15	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	PHE0119	DRIVER'S ED	10	16-17	Q4	0.25	A	REG	N	HS	ENG	N	N	
16	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	CMP0316	WEB DEVELOPMENT	10	16-17	Y	1	A	REG	N	HS	ENG	N	N	
17	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	ENG0011	ENGLISH 11	11	17-18	Y	1	C	REG	N	HS	ENG	N	N	
18	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	MTH0132	ALGEBRA II	11	17-18	Y	1	B	REG	N	HS	ENG	N	N	
19	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	SCIO222	CHEMISTRY	11	17-18	Y	1	B	REG	N	HS	ENG	N	N	
20	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	HST0075	WORLD HISTORY	11	17-18	Y	1	B	REG	N	HS	ENG	N	N	
21	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	FLN1183	SPANISH I	11	17-18	Y	1	C	REG	N	HS	ENG	N	N	
22	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	CMP0334	COMPUTER PROGRAMMING	11	17-18	Y	1	A	REG	N	HS	ENG	N	N	
23	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	ENG0012	ENGLISH 12	12	18-19	Y	1	B	REG	N	HS	ENG	N	N	
24	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	MTH0152	PRE-CALCULUS	12	18-19	Y	1	B	REG	N	HS	ENG	N	N	
25	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	HST0023	U.S. GOVERNMENT	12	18-19	S1	0.5	A	REG	N	HS	ENG	N	N	
26	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	HST0026	CIVICS	12	18-19	S2	0.5	B	REG	N	HS	ENG	N	N	
27	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	FLN1184	SPANISH II	12	18-19	Y	1	C	REG	N	HS	IMM	N	N	
28	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	CMP0400	AP COMPUTER SCIENCE	12	18-19	Y	1	A	HON	N	HS	ENG	N	N	
29	7234167	3567	World Cup Acad.	12	333190		4893345CF28 JOHN	DAVID	SMITH	ACC0019	ASSEMBLY LANGUAGE	12	18-19	Y	1	A	HON	N	CC	ENG	Y	N	
30	7235179	8888	Public Trust Acad.	12	983333		993345XY289 Jill	Beau	Ville	ENG0009	ENGLISH 9	09	15-16	Y	1	A	REG	N	HS	ENG	N	N	
31	7235179	8888	Public Trust Acad.	12	983333		993345XY290 Jill	Beau	Ville	MTH0112	ALGEBRA I	09	15-16	Y	1	A	REG	N	HS	ENG	N	N	
32	7235179	8888	Public Trust Acad.	12	983333		993345XY291 Jill	Beau	Ville	SCIO134	EARTH SCIENCE	09	15-16	Y	1	A	REG	N	HS	ENG	N	N	
33	7235179	8888	Public Trust Acad.	12	983333		993345XY292 Jill	Beau	Ville	HST0238	WORLD GEOGRAPHY	09	15-16	S1	0.5	A	REG	N	HS	ENG	N	N	

Figure C-2. Example legend (Tab 2 of Excel file)

	A	B	C
1	Variable	Term	Meaning
2	Course Term	Y	Year
3		S1	First semester
4		S2	Second semester
5		Q1	First quarter
6		Q2	Second quarter
7		Q3	Third quarter
8		Q4	Fourth quarter
9		SUM	Summer school session
10	Course level	REG	Regular
11		ADV	Advanced
12		HON	Honors
13		BSC	Basic
14	Course location	HS	At the high school
15		OHS	At another district high school
16		VE	At the district voc-ed center
17		CC	At local community college
18		ONL	Online course
19	Course language	ENG	In English
20		ESL	ESL Course taught in English and Spanish
21		SPN	In Spanish
22		IMM	Immersion course

Appendix D

2019 High School Transcript Study Course Catalog Survey

HSTS Course Catalog Survey – States and Districts

Thank you for your work supporting the 2019 NAEP High School Transcript Study (HSTS). The NAEP HSTS is conducted to provide educational policymakers with information regarding current course offerings and course-taking patterns in secondary schools. This study also permits researchers to examine the relationship between course-taking patterns and educational achievements.

This survey asks about the availability of catalogs or listings of the courses that the high schools in your jurisdiction offer. It focuses on the catalog or course listing for the 2018-19 school year. Ideally, there would be a state- or district-level catalog with course names, course ID numbers, and course descriptions. State- or district-level course listings, which include course names and course ID numbers but not course descriptions, would also suffice.

1. What is your jurisdiction name?

2. Is a 2018-19 high school course catalog or listing available?

☐ Yes (Skip to Question 3)

☐ No (Continue below)

a. Please explain why there are no catalogs or course listings available.

If the answer to Question 2 is “No,” and the user has filled in a reason for why catalogs or course listings are not available, end the survey.

3. What type of catalog or course listing is it?

☐ district-level catalog that provides course names, ID numbers, and descriptions

☐ state-level catalog that provides course names, ID numbers, and descriptions

☐ district-level course listing without course descriptions

☐ state-level course listing without course descriptions

4. Does the 2018-19 high school catalog or course listing cover all grades 9 through 12?

☐ Yes (Skip to Question 6)

☐ No (Continue to Question 5)

5. If the 2018-19 high school catalog or course listing does not cover all courses covered in grades 9 through 12, is there one or more catalogs or course listings available that include the missing courses?

☐ Yes

☐ No

6. Does the 2018-19 high school catalog(s) or course listing(s) contain the following information?
Please check the box if it contains the specified information.
- ☐ Course ID number
 - ☐ Grade level(s) course offered
 - ☐ Course term (i.e., year, semester, quarter)
 - ☐ Course level (i.e., regular, honors, remedial)
 - ☐ Credits earned for passing course
 - ☐ Special education course indicator
 - ☐ English language learner (ELL) course indicator
 - ☐ College-credit course indicator
 - ☐ Online course indicator
7. Is the 2018-19 high school catalog or course listing available publicly online, in an electronic version, or in a paper version? If there are multiple catalogs or course listings covering 2018-19 high school courses, please also indicate the formats of the additional catalogs if they differ from the main catalog or course listing.
- ☐ Electronic version
If an electronic version exists, please use the secure MyNAEP for HSTS to transmit the electronic catalog.
 - ☐ Available publicly online
If available publicly online, please list the web address below:

8. Are catalogs or course listings available for the three previous school years (2015-16, 2016-17, and 2017-18)?
- ☐ Yes (Continue to Question 9.)
 - ☐ No (End survey.)
9. Are the previous years' catalogs or course listings in the same format as the 2018-19 school catalog or course listing?
- ☐ Yes
 - ☐ No
10. Are the previous school years' high school catalogs or course listings available publicly online or in an electronic version?
- ☐ Electronic version
If an electronic version exists, please use the secure MyNAEP for HSTS to transmit the electronic catalogs or course listings.
 - ☐ Available publicly online
If available publicly online, please list the web address below:

Thank you again for taking the time to complete this catalog course survey. If you have any questions about this email, please contact the HSTS Help Desk (naephsts@westat.com).

HSTS Course Catalog Survey – Schools

Thank you for your work supporting the 2019 NAEP High School Transcript Study (HSTS). The NAEP HSTS is conducted to provide educational policymakers with information regarding current course offerings and course-taking patterns in secondary schools. This study also permits researchers to examine the relationship between course-taking patterns and educational achievements.

This survey asks about the availability of catalogs or listings of the courses that your high school offers. It focuses on the catalog or course listing for your high school's 2018-19 school year. Ideally, there would be a school-level catalog with course names and descriptions. If a school-level catalog is not available, then a district- or state-level catalog with course names and descriptions would work. School-, district-, or state-level course listings, which include course names but not course descriptions, would also suffice.

11. What is your school name?

12. Is a 2018-19 high school course catalog or listing available?

- ☐ Yes (Skip to Question 3)
- ☐ No (Continue below)

a. Please explain why there are no catalogs or course listings available.

If the answer to Question 2 is "No," and the user has filled in a reason for why catalogs or course listings are not available, end the survey.

13. What type of catalog or course listing is it?

- ☐ school-level catalog that provides course names and descriptions
- ☐ district-level catalog that provides course names and descriptions
- ☐ state-level catalog that provides course names and descriptions
- ☐ school-level course listing without course descriptions
- ☐ district-level course listing without course descriptions
- ☐ state-level course listing without course descriptions

14. Does the 2018-19 high school catalog or course listing cover all grades 9 through 12?

- ☐ Yes (Skip to Question 6)
- ☐ No (Continue to Question 5)

15. If the 2018-19 high school catalog or course listing does not cover all courses covered in grades 9 through 12, is there one or more catalogs or course listings available that include the missing courses?

- ☐ Yes
- ☐ No

16. Does the 2018-19 high school catalog(s) or course listing(s) contain the following information?
Please check the box if it contains the specified information.
- ☐ Course ID number
 - ☐ Grade level(s) course offered
 - ☐ Course term (i.e., year, semester, quarter)
 - ☐ Course level (i.e., regular, honors, remedial)
 - ☐ Credits earned for passing course
 - ☐ Special education course indicator
 - ☐ English language learner (ELL) course indicator
 - ☐ College-credit course indicator
 - ☐ Online course indicator
17. Is the 2018-19 high school catalog or course listing available publicly online, in an electronic version, or in a paper version? If there are multiple catalogs or course listings covering 2018-19 high school courses, please also indicate the formats of the additional catalogs if they differ from the main catalog or course listing.
- ☐ Electronic version
If an electronic version exists, please use the secure MyNAEP for HSTS to transmit the electronic catalog or course listing.
 - ☐ Paper version
If only a paper version exists, FedEx mailing labels will be sent to the HSTS Coordinator at the school so that the catalog or course listing can be mailed.
 - ☐ Available publicly online
If available publicly online, please list the web address below:

18. Are catalogs or course listings available for the three previous school years (2015-16, 2016-17, and 2017-18)?
- ☐ Yes (Continue to Question 9.)
 - ☐ No (End survey.)
19. Are the previous years' catalogs or course listings in the same format as the 2018-19 school catalog or course listing?
- ☐ Yes
 - ☐ No
20. Are the previous years' high school catalogs or course listings available publicly online, in an electronic version, or in a paper version?
- ☐ Electronic version
If an electronic version exists, please use the secure MyNAEP for HSTS to transmit the electronic catalogs or course listings.
 - ☐ Paper version
If only a paper version exists, FedEx mailing labels will be sent to the HSTS Coordinator at the school so that the catalogs or course listings can be mailed.
 - ☐ Available publicly online
If available publicly online, please list the web address below:

Thank you again for taking the time to complete this catalog course survey. If you have any questions about this email, please contact the NAEP Help Desk (naephelp@westat.com).

Appendix E

2019 High School Transcript Study Sample Introductory Letter to Principals

Sample Introductory Letter From NSC to Sampled High Schools

Dear [NAEP SCHOOL PRINCIPAL]:

Your school has also been selected for the 2019 High School Transcript Study (HSTS) which is conducted in conjunction with NAEP. The HSTS provides information about the courses high school graduates took during their high school years, how many credits they earned and the grades they received, and examines the relationship between these coursetaking patterns to the achievement of those graduates participating in the 2019 NAEP grade 12 assessments. HSTS involves **no** student or teacher time. However, **you will need to designate a HSTS coordinator** (usually the school registrar) to serve as the main point of contact. The HSTS coordinator should

- ✓ **know how to access course catalogs and student transcripts;** and
- ✓ **be comfortable using a computer** to upload documents and process student information.

Give the enclosed **HSTS folder** to your designated coordinator. The privacy of the information schools are asked to supply will be protected by the removal of names and other identifying information, as required by the Family Educational Rights and Privacy Act (FERPA).

I look forward to collaborating with you and your HSTS coordinator to ensure the successful collection of transcripts. Should you have questions, please contact me at [PHONE NUMBER] or [EMAIL].

Sincerely,

NAEP State Coordinator

Enclosures: HSTS folder for your HSTS school coordinator, including the following:

Letter to your HSTS coordinator
NAEP in Your School—High School Transcript Study
HSTS Registration Instructions

National Center for Education Statistics (NCES) is authorized to conduct NAEP by the National Assessment of Educational Progress Authorization Act (20 U.S.C. §9622) and to collect students' education records from education agencies or institutions for the purposes of evaluating federally supported education programs under the Family Educational Rights and Privacy Act (FERPA, 34 CFR §§ 99.31(a)(3)(iii) and 99.35). All of the information you provide may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C. §9573 and 6 U.S.C. §151). By law, every NCES employee as well as every NCES agent, such as contractors and NAEP coordinators, has taken an oath and is subject to a jail term of up to 5 years, a fine of \$250,000, or both if he or she willfully discloses ANY identifiable information about students. Electronic submission of student information will be monitored for viruses, malware, and other threats by federal employees and contractors in accordance with the Cybersecurity Enhancement Act of 2015. The collected information will be combined across respondents to produce statistical reports.


Appendix F

2019 High School Transcript Study
NAEP in Your School—HSTS Brochure

Figure F-1. HSTS brochure (front)

NAEP 2019 in Your School

High School Transcript Study



The
Nation's
Report Card

National Assessment of
Educational Progress

NAEP is an integral part of education in the United States.

- ▶ The National Assessment of Educational Progress (NAEP) is the largest continuing and nationally representative assessment of what our nation's students know and can do in a variety of academic subjects. NAEP is a congressionally mandated project administered by the National Center for Education Statistics (NCES) within the U.S. Department of Education.
- ▶ In addition to the assessments, NAEP coordinates a number of related special studies. Such studies often involve special data collection procedures in the field, in-depth analyses of NAEP results, and evaluations of various technical procedures.
- ▶ The NAEP High School Transcript Study (HSTS), sponsored by NCES, is a periodic survey of transcripts of high school graduates and the relationship between coursetaking patterns and student achievement.

The NAEP HSTS is designed to provide information about the types of courses that graduates take during high school, how many credits they earn, and their grade point averages. In addition, this study provides an opportunity to examine the relationship between coursetaking patterns and educational achievement through the link to NAEP proficiency data. The HSTS 2019 school sample includes public and private schools.


What Is the Schedule of Activities for HSTS 2019?

Preliminary Activities (September 2018–March 2019)

- Schools will be notified of their selection for HSTS and asked to identify an HSTS school coordinator.
- Course catalogs or course lists will be requested for the current school year (2018–2019) and for the preceding three years (2017–2018, 2016–2017, and 2015–2016).
- Schools will be asked to complete a School Information Form that asks about credits awarded for courses, grading policies, and graduation requirements, as well as transcript content information and transcript submission.
- A sample student transcript, with the student name redacted, will be requested at the school, district, or state level.
- Schools will be instructed to place the Family Educational Rights and Privacy Act (FERPA) disclosure notices with the files of students selected to take the NAEP 2019 mathematics and science assessments. These notices will include the FERPA provisions, which explain the disclosure safeguards that grant NCES the authority to obtain transcript information.

Transcript Collection (June–October 2019)

- NAEP will collect copies of transcripts for the sampled students. The state or district will provide transcripts directly to NAEP, or a study representative will contact the HSTS coordinator about collecting the transcripts. If the transcripts can be transmitted electronically, information will be given to the HSTS school coordinator about the information the transcripts must include and directions on how to transmit the transcripts. If the transcripts cannot be transmitted electronically, a NAEP representative will return to the school to collect copies of the requested student transcripts.



For more information about NAEP, visit nces.ed.gov/nationsreportcard

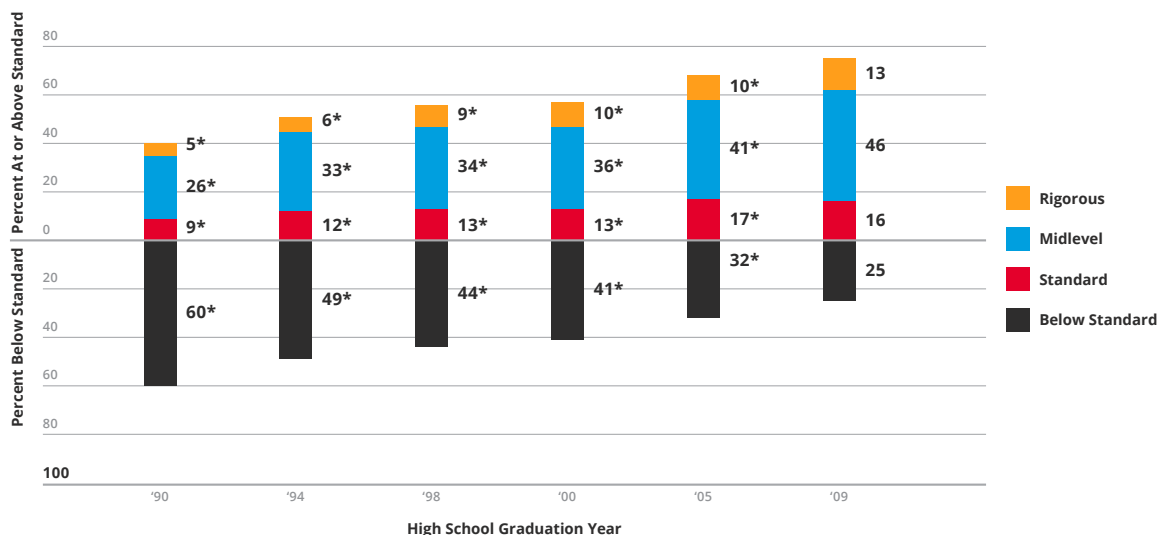
Figure F-2. HSTS brochure (back)

What Else Should You Know?

- **No student or teacher time is involved.** NAEP staff will work with school personnel to minimize burden as much as possible.
- **Privacy is a top priority.** Students' names and identifying information will be removed or masked before copies of transcripts are processed.
- **There is no cost to schools.** NCES will pay the school's usual charge for providing transcripts.
- **Parental notification is not required.** Participating schools may choose whether or not to notify parents about this study.

What Have We Learned From the HSTS?

The HSTS was first conducted in 1987 and then in 1990, 1994, 1998, 2000, 2005, and 2009. The graph below highlights the course curriculum levels graduates have completed since 1990, based on the three HSTS curriculum levels: standard, midlevel, and rigorous. Over time, students have taken more challenging courses.



*Significantly different ($p < .05$) from 2009.

NOTE: Details may not sum to total because of rounding. Curriculum levels are based on the number of credits earned (where one credit equals a year-long course) and types of courses students complete. The standard curriculum is defined as completing at least four credits of English and three credits each in mathematics, science, and social studies. The midlevel curriculum builds upon the standard curriculum by adding an algebra and geometry requirement, credits in two laboratory sciences (biology, chemistry, or physics), and a credit in foreign languages. The rigorous curriculum level builds upon the midlevel curriculum by adding a fourth credit in mathematics of precalculus or calculus, credits in all three laboratory sciences, and three credits in foreign languages.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), various years, 1990–2009

Where Can I Find More Information?

More information about the NAEP high school transcript studies can be found on the NAEP website at <http://nces.ed.gov/nationsreportcard/hsts>.

The granting of authority to the U.S. Department of Education for collection of the transcript data has been made pursuant to the provisions of the Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. 1232g), as implemented by 34 CFR 99.31 (l) (a)(3)(ii) and 99.35. A copy of the relevant FERPA regulations will be provided to you prior to the collection of any transcripts.

All of the information provided by participants may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C. §9573 and 6 U.S.C. §151). By law, every National Center for Education Statistics (NCES) employee as well as every NCES agent, such as contractors and NAEP coordinators, has taken an oath and is subject to a jail term of up to 5 years, a fine of \$250,000, or both if he or she willfully discloses ANY identifiable information about participants. Electronic submission of participant's information will be monitored for viruses, malware, and other threats by Federal employees and contractors in accordance with the Cybersecurity Enhancement Act of 2015. The collected information will be combined across respondents to produce statistical reports.

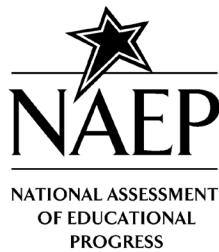


This publication was prepared for the National Assessment of Educational Progress by Hager Sharp under contract ED-IES-13-C-0025 to the National Center for Education Statistics, U.S. Department of Education.

Appendix G

2019 High School Transcript Study Summary Information Worksheet

Figure G-1. HSTS Summary Information Worksheet (page 1)



HSTS Summary Information Worksheet

I. School Information

School Name: Training High School	HSTS Coordinator Name: Jarrod Grebing
School Address: 1600 Research Blvd Rockville, MD 20850	HSTS SC Phone: (301) 251-1501
NAEP ID: 9930013	HSTS SC Email: jgrebing@training.edu
Territory/Region: H1-05	Principal Name: Lauren Byrne
School District: Montgomery County Public Schools	Principal Phone: (301) 251-1502
School Phone: (301)-251-1500	Principal Email: lbyrne@training.edu
HSTS Cooperation Status: Cooperating	NAEP School Coordinator Name: Ingrid Fichtenberg
MyNaep Reg ID: 90009999	NAEP SC Phone: (301) 251-1503

II. HSTS Activity Completion

<p>Registered for HSTS Account: Yes If no, please assist school with registration during the call</p> <p>Course Catalog/List (2018-2019): Yes If missing, please attempt to collect the 2018-2019 course catalog, or most recent available catalog/list, from the school during the visit</p>
--

Figure G-2. HSTS Summary Information Worksheet (page 2)

III. Scheduling Call

Date Transcripts will be available: 6/15/2019

Scheduled time to pick up copies of transcripts:

Date: _____ **Time:** _____

Comments:

Will copies of transcripts be prepared (printed or copied), or will you be required to pull and copy them yourself?

- ☐ Prepared
☐ Pull and copy transcripts

If Course Catalog/List (2018-2019) is missing, can the HSTS Coordinator provide the catalog during the visit?

- ☐ Yes, the 2018-2019 course catalog/list will be collected during the visit
☐ No, the 2018-2019 course catalog/list is not available

Comments: _____

Figure G-3. HSTS Summary Information Worksheet (page 3)

IV. Communication Log

DATE	TIME	SPOKE WITH/EMAILED	RESULT

Notes:

Figure G-4. HSTS Summary Information Worksheet (page 4)

V. Post Visit information:

If the HSTS Coordinator indicated that the transcripts would be prepared (printed or copied) before the visit, were the transcripts actually prepared when you arrived?

☐ Yes ☐ No ☐ HSTS Coordinator did not indicate that transcripts would be prepared

If a course catalog needed to be collected from the school, did the HSTS Coordinator have the course catalog already prepared for you when you arrive?

☐ Yes ☐ No ☐ Course catalog did not need to be collected

Did the HSTS Coordinator indicate a higher transcript reimbursement cost than the standard \$2?

☐ No ☐ Yes \$_____

How many times did you contact the school before arriving on the scheduled day to collect the student transcripts (number of lines filled out in the Communication Log)? _____

How many transcripts were collected? _____

Date Materials Sent to Transcript Receipt Department: _____

FedEx tracking number: _____

Materials included in FedEx Package:

- ☐ Student list with PII removed (cut off names, birthdays, and state student IDs)
- ☐ Labeled Transcripts with PII removed
- ☐ Missing Transcript Form (if applicable)
- ☐ Course Catalog (if applicable)
- ☐ Completed Summary Information Worksheet

Comments:

Appendix H

2019 High School Transcript Study Guidelines for Electronic Transcripts

Figure H-1. HSTS Guidelines for Submitting Electronic Transcripts (cover)

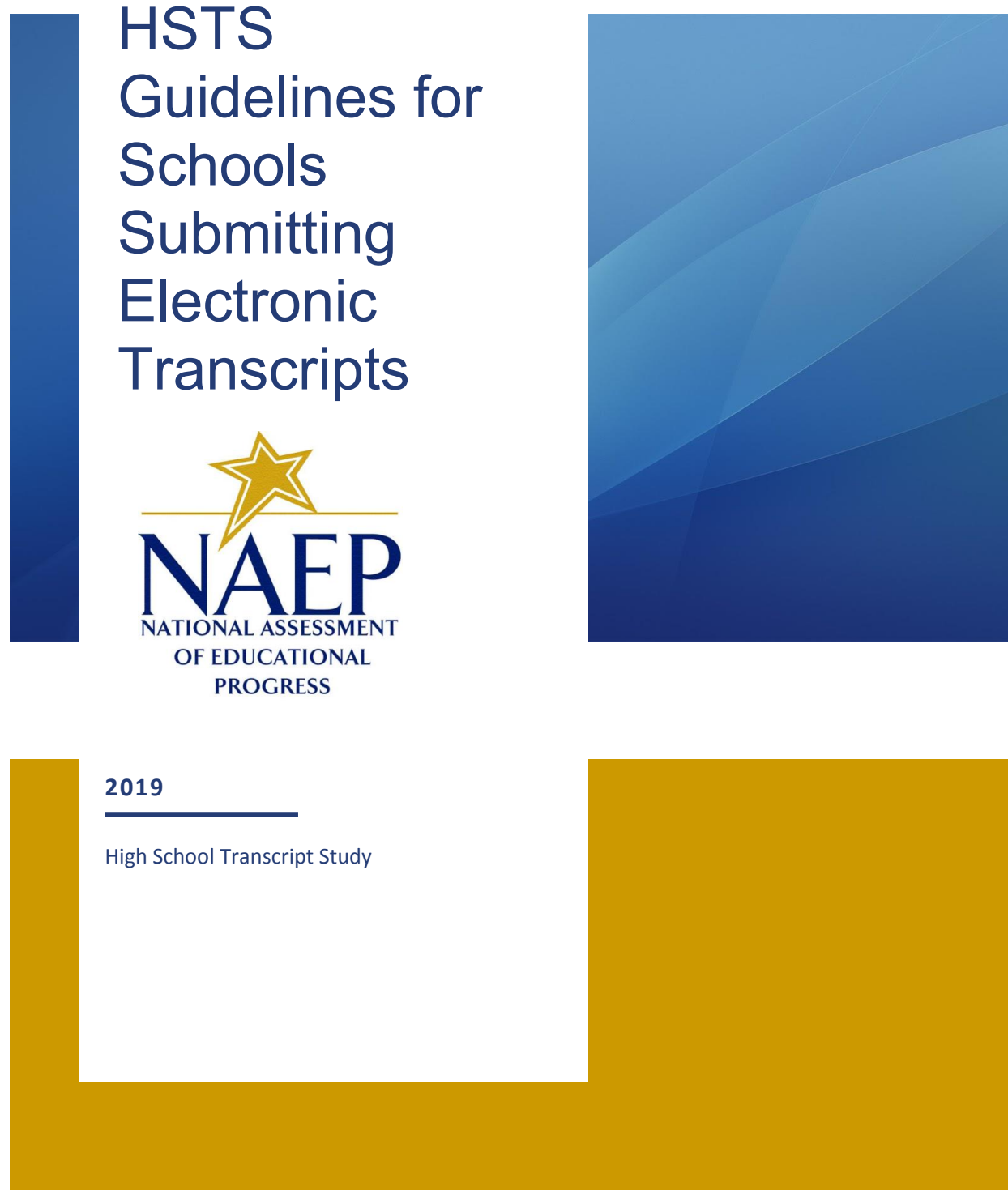


Figure H-2. HSTS Guidelines for Submitting Electronic Transcripts (introduction)

Introduction

Electronically submitting student transcripts involves obtaining records for the students participating in the 2019 NAEP High School Transcript Study, ensuring all required data fields are included in the transcript records, deleting personally identifying information from the records, and uploading your data file(s) to the HSTS website. The instructions that follow describe each of these aspects of the electronic transcript submission process.

Contents

Step 1: Download Your Student List	1
Step 2: Prepare Your Transcript Records	3
Use an Accepted File Format	3
Include All Required Fields	5
Create a Key	8
Delete Personal Identifying Information	9
Step 3: Upload Your Transcript Records	10

Figure H-3. HSTS Guidelines for Submitting Electronic Transcripts (page 1)

Step 1: Download Your Student List

To start this activity, download the **Student List** template file of E-Filed students plus new enrollees from the HSTS website.

Once you have logged into the HSTS website, select “Submit Student Transcripts” from your list of activities. Then, download your **Student List** file from Resources section.

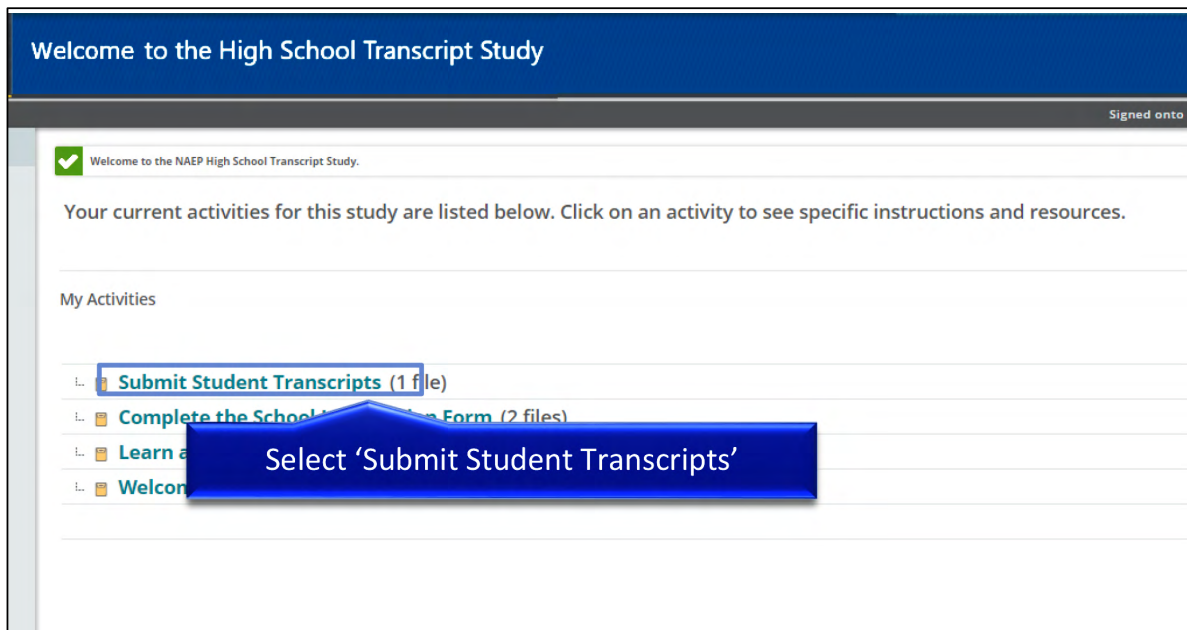


Figure H-4. HSTS Guidelines for Submitting Electronic Transcripts (page 2)

Submit Student Transcripts

The final phase of the NAEP High School Transcript Study involves collecting transcript information for students taking the grade 12 NAEP mathematics assessment. You will be reimbursed for each transcript you submit.

Step 1: Review Student List
A list of students is provided in the resources section below. Use this list to ensure you are submitting transcripts for the correct students. Additionally, use the list as a template for preparing the transcript data file(s), as it contains column headings for each type of data to be collected.

Step 2: Review Guidelines for Preparing Electronic Transcripts
The instructions for this activity, the HSTS Guidelines for Electronic Transcripts, are included in the resources section. These instructions provide information on the formats that HSTS can support and how to prepare files for upload.

Step 3: Upload Student Transcript Files
To complete this activity, upload your student transcript file(s) using the Upload button located on the left hand side of the Home screen.

1. Return to the Home screen.
2. Select the Upload button.
3. In the pop-up window that appears, either
 - drag and drop your file(s) into the large box in the center, or
 - select the Browse... link, locate the file(s) you will upload (use the Ctrl key on your keyboard to select multiple files), and select Open.
4. Select Upload.

Resources:

HSTS Guidelines for Electronic Transcripts.pdf (216.8 KB)	Download
Student List.xlsx (16.4 KB)	Download

Annotation: A blue callout box points to the 'Download' button for 'Student List.xlsx' with the text: 'Select "Download"'

Annotation: A blue callout box points to the top of the browser window with the text: 'The downloaded file appears at the bottom of your browser window'

Annotation: A blue callout box points to the upward arrow icon next to the file name 'Student List.xlsx' with the text: 'Select the arrow and "Open" to open the file'

*The Student List template will include the following information for each record: **Student Name, Student ID** (if it was included on the student list provided in the fall), **Session/Line Number**, and **NAEP Subject Assessed**. The Student List template will also include the HSTS data fields (discussed below).*

Step 2: Prepare Your Transcript Records

Use an Accepted File Format

The student transcript records can be provided in various formats. **Microsoft Excel or comma separated value (CSV) files are strongly recommended** because they provide a clear delineation of the transcript data.

Other file formats that will be acceptable include:

- Microsoft Word files,
- Microsoft Access databases,
- Extensible Markup Language (XML) files
- Formatted text files
- SPSS files, and
- SAS files.

For these file formats, please make it clear where the transcript data fields are located. This may be best written up in a separate document and uploaded with the transcript records.

Figure H-6. HSTS Guidelines for Submitting Electronic Transcripts (page 4)

The image below shows an example of an Excel-based high school transcript file.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	Session/ Line #	Subject	Course ID	Course Title	Grade Level	School Year	Course Term	Credits Earned	Grade Earned	Course Level	Special Education Course	Course Location	Course Language	College Credit	Transfer Course
2	DS0801/01	Math-Tablet	ENG0009	ENGLISH 9	09	15-16	Y	1	C	REG	N	HS	ENG	N	N
3	DS0801/01	Math-Tablet	MTH0112	ALGEBRA I	09	15-16	Y	1	B	REG	N	HS	ENG	N	N
4	DS0801/01	Math-Tablet	SCI0134	EARTH SCIENCE	09	15-16	Y	1	B	REG	N	HS	ENG	N	N
5	DS0801/01	Math-Tablet	HST0238	WORLD GEOGRAPHY	09	15-16	S1	0.5	A	REG	N	HS	ENG	N	N
6	DS0801/01	Math-Tablet	HST0029	STATE HISTORY	09	15-16	S2	0.5	B	REG	N	HS	ENG	N	N
7	DS0801/01	Math-Tablet	PHE0009	PHYS ED 9	09	15-16	Y	1	A	REG	N	HS	ENG	N	N
8	DS0801/01	Math-Tablet	CMP0088	COMPUTER APPLICA	09	15-16	Y	1	A	REG	N	HS	ENG	N	N
9	DS0801/01	Math-Tablet	ENG0010	ENGLISH 10	10	16-17	Y	1	C	REG	N	HS	ENG	N	N
10	DS0801/01	Math-Tablet	MTH0122	GEOMETRY	10	16-17	Y	1	C	REG	N	HS	ENG	N	N
11	DS0801/01	Math-Tablet	SCI0185	BIOLOGY I	10	16-17	Y	1	B	REG	N	HS	ENG	N	N
12	DS0801/01	Math-Tablet	HST0011	U.S. HISTORY	10	16-17	Y	1	B	REG	N	HS	ENG	N	N
13	DS0801/01	Math-Tablet	PHE0010	PHYS ED 10	10	16-17	S1	0.5	A	REG	N	HS	ENG	N	N
14	DS0801/01	Math-Tablet	PHE0025	HEALTH	10	16-17	Q3	0.25	B	REG	N	HS	ENG	N	N
15	DS0801/01	Math-Tablet	PHE0119	DRIVER'S ED	10	16-17	Q4	0.25	A	REG	N	HS	ENG	N	N
16	DS0801/01	Math-Tablet	CMP0316	WEB DEVELOPMENT	10	16-17	Y	1	A	REG	N	HS	ENG	N	N
17	DS0801/01	Math-Tablet	ENG0011	ENGLISH 11	11	17-18	Y	1	C	REG	N	HS	ENG	N	N
18	DS0801/01	Math-Tablet	MTH0132	ALGEBRA II	11	17-18	Y	1	B	REG	N	HS	ENG	N	N
19	DS0801/01	Math-Tablet	SCI0222	CHEMISTRY	11	17-18	Y	1	B	REG	N	HS	ENG	N	N
20	DS0801/01	Math-Tablet	HST0075	WORLD HISTORY	11	17-18	Y	1	B	REG	N	HS	ENG	N	N
21	DS0801/01	Math-Tablet	FLN1183	SPANISH I	11	17-18	Y	1	C	REG	N	HS	ENG	N	N
22	DS0801/01	Math-Tablet	CMP0334	COMPUTER PROGRA	11	17-18	Y	1	A	REG	N	HS	ENG	N	N
23	DS0801/01	Math-Tablet	ENG0012	ENGLISH 12	12	18-19	Y	1	B	REG	N	HS	ENG	N	N
24	DS0801/01	Math-Tablet	MTH0152	PRE-CALCULUS	12	18-19	Y	1	B	REG	N	HS	ENG	N	N
25	DS0801/01	Math-Tablet	HST0023	U.S. GOVERNMENT	12	18-19	S1	0.5	A	REG	N	HS	ENG	N	N
26	DS0801/01	Math-Tablet	HST0026	CIVICS	12	18-19	S2	0.5	B	REG	N	HS	ENG	N	N
27	DS0801/01	Math-Tablet	FLN1184	SPANISH II	12	18-19	Y	1	C	REG	N	HS	IMM	N	N
28	DS0801/01	Math-Tablet	CMP0400	AP COMPUTER SCIEN	12	18-19	Y	1	A	HON	N	HS	ENG	N	N
29	DS0801/01	Math-Tablet	ACC0019	ASSEMBLY LANGUAGE	12	18-19	Y	1	A	HON	N	CC	ENG	Y	N
30	DS0801/02	Science-Tablet	ENG0009	ENGLISH 9	09	15-16	Y	1	A	REG	N	HS	ENG	N	N
31	DS0801/02	Science-Tablet	MTH0112	ALGEBRA I	09	15-16	Y	1	A	REG	N	HS	ENG	N	N

Figure H-7. HSTS Guidelines for Submitting Electronic Transcripts (page 5)

Include All Required Fields

For each course record, there are two sets of information requested: required and optional data fields. Required data fields include information needed to link, process, and analyze the course records. The optional data fields provide additional data that will aid in the analysis, but may be found in other sources (such as the course catalogs that were provided). Both the required data fields and optional data fields are included as column headers on your **Student List** template.

<i>Required and Optional Data Fields</i>	
<i>Required</i>	<i>Optional</i>
<i>Session/ Line Number</i>	<i>Course Level</i>
<i>Course ID</i>	<i>Special Education Course</i>
<i>Course Title</i>	<i>Course Location</i>
<i>Grade Level</i>	<i>Course Language</i>
<i>School Year</i>	<i>College Credit</i>
<i>Course Term</i>	
<i>Credits Earned</i>	
<i>Grade Earned</i>	
<i>Transfer Course</i>	

Figure H-8. HSTS Guidelines for Submitting Electronic Transcripts (page 6)

The required data fields are as follows:

- **Session/ Line Number** – The Session/ Line Number is an identifier found on the sampled student list. **It is very important that this number be on the submitted electronic student transcript file.** This number allows the student's transcript to be linked with their NAEP assessment data without the need for any additional student personal information.
- **Course ID** – The course ID number of the course taken. It should be the same course ID number as listed in the course catalog. If the state, district, or school does not have a course ID numbering system, then the field is left blank.
- **Course Title** – The name of the course taken.
- **Grade Level** – The grade level in which the student was enrolled when the course was taken (e.g., 9th, 10th, 11th, and 12th).
- **School Year** – The school year when the course was taken.
- **Course Term** – The length of time the course was taken, relative to the school year. The values for this field can be either general (Year, Trimester, etc.) or specific (Semester 1, Quarter 4, Summer session, etc.). Please provide a key if abbreviations are used (see next section).
- **Credits Earned** – The number of credits earned by the student for the course taken.
- **Grade Earned** – The grade that was earned by the student for the course taken. It can be letter grades (A, B, C, etc.), numeric grades (53, 82, 100, etc.), proficiency levels (Exceed expectations, Meet expectations, etc.), pass/fail (P or F), or other grading codes (incomplete, withdrawn, not applicable, etc.). Please provide a key if abbreviations are used for grading codes that are non-letter or non-numeric.
- **Transfer Course** – A yes-no indicator that marks if the course was taken at a school outside of the state or school district. Use this field to indicate transfer courses of students who moved from outside the state/district into the school after the start of the 2015-2016 school year.

Figure H-9. HSTS Guidelines for Submitting Electronic Transcripts (page 7)

The optional data fields are as follows:

- **Course Level** – An indicator of the rigor of the course taken. We recommend using the levels established by the School Courses for the Exchange of Data (SCED) coding system: basic/remedial, general/regular, enriched/advanced, and honors. Please provide a key if abbreviations are used.
- **Special Education Course** – A yes-no indicator that marks if the course taken counts as a special education course for the student.
- **Course Location** – An indicator of where the student took the course. While most courses are taken at the high school, other possible locations include another high school, a vocational center, community college, or taken as an online course. Please provide a key if abbreviations are used.
- **Course Language** – The primary language in which the course was taught. This field mostly indicates the primary language in which English language learner (ELL) and foreign languages courses are taught. Please provide a key if abbreviations are used.
- **College Credit** – An indicator of whether college credit is earned for the course. The college credit could be earned immediately upon completion of the course, or it may be conditional upon taking other selected courses at specified colleges.

Figure H-10. HSTS Guidelines for Submitting Electronic Transcripts (page 8)

Create a Key

As noted in the field descriptions above, please consider whether any of your data are formatted as abbreviations that may require explanation. This information is best provided in the form of a key. The key may be another worksheet within an Excel workbook or a separate text file.

Variable	Term	Meaning
Course Term	Y	Year
	S1	First semester
	S2	Second semester
	Q1	First quarter
	Q2	Second quarter
	Q3	Third quarter
	Q4	Fourth quarter
	SUM	Summer school session
Course level	REG	Regular
	ADV	Advanced
	HON	Honors
	BSC	Basic
Course location	HS	At the high school
	OHS	At another district high school
	VE	At the district voc-ed center
	CC	At local community college
	ONL	Online course
Course language	ENG	In English
	ESL	ESL Course taught in English and Spanish
	SPN	In Spanish
	IMM	Immersion course

Example of a Key

Figure H-11. HSTS Guidelines for Submitting Electronic Transcripts (page 9)

Delete Personally Identifying Information

No personally identifying information, such as students' names or Student ID numbers should be on your transcript file when you submit it. Please delete all personally identifying information before uploading the student transcript file.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
	Student		Session										Special				
1	Name	Student ID	/ Line #	Subject	Course ID	Course Title	Grade Level	School Year	Course Term	Credits Earned	Grade Earned	Course Level	Education Course	Course Location	Course Language	College Credit	Transfer Course
2	Smith, David	4893345CF28	DS0801/01	Math-Tablet	ENG0009	ENGLISH 9	09	15-16	Y	1	C	REG	N	HS	ENG	N	N
3	Smith, David	4893345CF28	DS0801/01	Math-Tablet	MTH0112	ALGEBRA I	09	15-16	Y	1	B	REG	N	HS	ENG	N	N
4	Smith, David	4893345CF28	DS0801/01	Math-Tablet	SCIO134	EARTH SCIENCE	09	15-16	Y	1	B	REG	N	HS	ENG	N	N
5	Smith, David	4893345CF28	DS0801/01	Math-Tablet	HST0238	WORLD GEOGRAPHY	09	15-16	S1	0.5	A	REG	N	HS	ENG	N	N
6	Smith, David	4893345CF28	DS0801/01	Math-Tablet	HST0029	STATE HISTORY	09	15-16	S2	0.5	B	REG	N	HS	ENG	N	N
7	Smith, David	4893345CF28	DS0801/01	Math-Tablet	PHE0009	PHYS ED 9	09	15-16	Y	1	A	REG	N	HS	ENG	N	N
8	Smith, David	4893345CF28	DS0801/01	Math-Tablet	CMP0088	COMPUTER APPLICAT	09	15-16	Y	1	A	REG	N	HS	ENG	N	N
9	Smith, David	4893345CF28	DS0801/01	Math-Tablet	ENG0010	ENGLISH 10	10	16-17	Y	1	C	REG	N	HS	ENG	N	N
10	Smith, David	4893345CF28	DS0801/01	Math-Tablet	MTH0122	GEOMETRY	10	16-17	Y	1	C	REG	N	HS	ENG	N	N
11	Smith, David	4893345CF28	DS0801/01	Math-Tablet	SCIO185	BIOLOGY I	10	16-17	Y	1	B	REG	N	HS	ENG	N	N
12	Smith, David	4893345CF28	DS0801/01	Math-Tablet	HST0011	U.S. HISTORY	10	16-17	Y	1	B	REG	N	HS	ENG	N	N
13	Smith, David	4893345CF28	DS0801/01	Math-Tablet	PHE0010	PHYS ED 10	10	16-17	S1	0.5	A	REG	N	HS	ENG	N	N
14	Smith, David	4893345CF28	DS0801/01	Math-Tablet	PHE0009	PHYS ED 9	10	16-17	Q3	0.25	B	REG	N	HS	ENG	N	N
15	Smith, David	4893345CF28	DS0801/01	Math-Tablet	PHE0010	PHYS ED 10	10	16-17	Q4	0.25	A	REG	N	HS	ENG	N	N
16	Smith, David	4893345CF28	DS0801/01	Math-Tablet	PHE0010	PHYS ED 10	10	16-17	Y	1	A	REG	N	HS	ENG	N	N
17	Smith, David	4893345CF28	DS0801/01	Math-Tablet	PHE0010	PHYS ED 10	11	17-18	Y	1	C	REG	N	HS	ENG	N	N
18	Smith, David	4893345CF28	DS0801/01	Math-Tablet	PHE0010	PHYS ED 10	11	17-18	Y	1	B	REG	N	HS	ENG	N	N
19	Smith, David	4893345CF28	DS0801/01	Math-Tablet	PHE0010	PHYS ED 10	11	17-18	Y	1	B	REG	N	HS	ENG	N	N
20	Smith, David	4893345CF28	DS0801/01	Math-Tablet	PHE0010	PHYS ED 10	11	17-18	Y	1	B	REG	N	HS	ENG	N	N
21	Smith, David	4893345CF28	DS0801/01	Math-Tablet	PHE0010	PHYS ED 10	11	17-18	Y	1	C	REG	N	HS	ENG	N	N
22	Smith, David	4893345CF28	DS0801/01	Math-Tablet	PHE0010	PHYS ED 10	11	17-18	Y	1	A	REG	N	HS	ENG	N	N
23	Smith, David	4893345CF28	DS0801/01	Math-Tablet	PHE0010	PHYS ED 10	12	18-19	Y	1	B	REG	N	HS	ENG	N	N
24	Smith, David	4893345CF28	DS0801/01	Math-Tablet	MTH0132	PREF-CALCULUS	12	18-19	Y	1	B	REG	N	HS	ENG	N	N
25	Smith, David	4893345CF28	DS0801/01	Math-Tablet	HST0023	U.S. GOVERNMENT	12	18-19	S1	0.5	A	REG	N	HS	ENG	N	N
26	Smith, David	4893345CF28	DS0801/01	Math-Tablet	HST0026	CIVICS	12	18-19	S2	0.5	B	REG	N	HS	ENG	N	N
27	Smith, David	4893345CF28	DS0801/01	Math-Tablet	FLN1184	SPANISH II	12	18-19	Y	1	C	REG	N	HS	IMM	N	N
28	Smith, David	4893345CF28	DS0801/01	Math-Tablet	CMP0400	AP COMPUTER SCIEN	12	18-19	Y	1	A	HON	N	HS	ENG	N	N
29	Smith, David	4893345CF28	DS0801/01	Math-Tablet	ACCD019	ASSEMBLY LANGUAGE	12	18-19	Y	1	A	HON	N	CC	ENG	Y	N
30	Ville, Beau	993345XY290	DS0801/02	Science-Tablet	ENG0009	ENGLISH 9	09	15-16	Y	1	A	REG	N	HS	ENG	N	N
31	Ville, Beau	993345XY290	DS0801/02	Science-Tablet	MTH0112	ALGEBRA I	09	15-16	Y	1	A	REG	N	HS	ENG	N	N
32	Ville, Beau	993345XY290	DS0801/02	Science-Tablet	SCIO134	EARTH SCIENCE	09	15-16	Y	1	A	REG	N	HS	ENG	N	N
33	Ville, Beau	993345XY290	DS0801/02	Science-Tablet	HST0238	WORLD GEOGRAPHY	09	15-16	S1	0.5	A	REG	N	HS	ENG	N	N
34	Ville, Beau	993345XY290	DS0801/02	Science-Tablet	HST0029	STATE HISTORY	09	15-16	S2	0.5	A	REG	N	HS	ENG	N	N
35	Ville, Beau	993345XY290	DS0801/02	Science-Tablet	PHE0009	PHYS ED 9	09	15-16	Y	1	A	REG	N	HS	ENG	N	N

Delete fields with personally identifying information

Figure H-12. HSTS Guidelines for Submitting Electronic Transcripts (page 10)

Step 3: Upload Your Transcript Records

When you have finished preparing your transcript records, please upload your file(s) to the HSTS website.

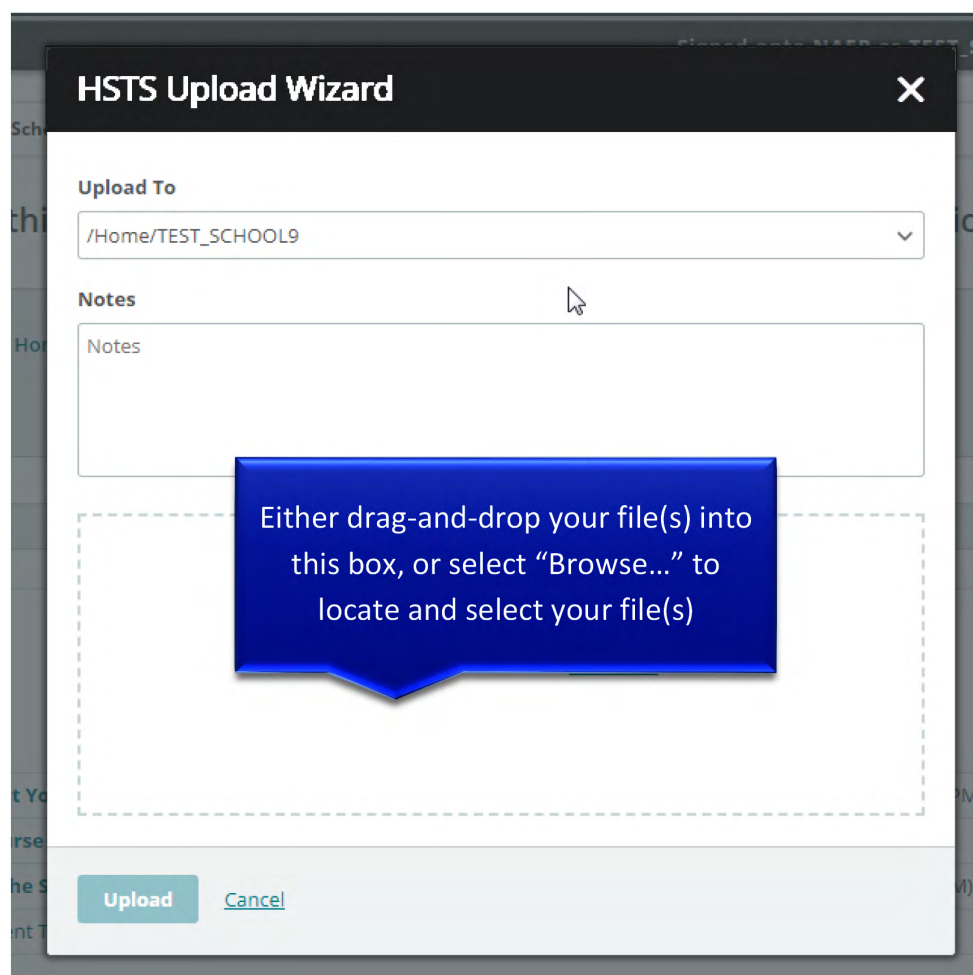


Figure H-13. HSTS Guidelines for Submitting Electronic Transcripts (page 11)

The screenshot displays the 'HSTS Upload Wizard' window. At the top, the title bar reads 'HSTS Upload Wizard' with a close button (X). Below the title bar, there is a section labeled 'Upload To' with a dropdown menu currently showing '/Home/TEST_SCHOOL9'. Underneath this is a 'Notes' section with a text area containing the word 'Notes'. The main area of the wizard is a file upload interface. It features a light blue bar with a hand icon and the text 'Drop files to add or [Browse...](#)'. Below this bar, a file named 'Student List.xlsx' is listed, accompanied by a file icon and a close button (X). A blue callout box with white text is overlaid on the bottom left of the file list, stating: 'When all of your files are listed in this window, select "Upload"'. At the bottom of the wizard, there are two buttons: a green 'Upload' button and a blue 'Cancel' button.

Figure H-14. HSTS Guidelines for Submitting Electronic Transcripts (page 12)

The screenshot displays the 'HSTS Upload Wizard' window. At the top, the title bar reads 'HSTS Upload Wizard' with a close button (X) on the right. Below the title bar, there is a section labeled 'Upload To' with a dropdown menu showing '/Home/TEST_SCHOOL9'. Underneath this is a 'Notes' section with a text area labeled 'Notes'. Below the notes is a list of uploaded files, showing a green checkmark icon next to the filename 'Student List.xlsx'. A blue callout box with white text points to the green checkmark, stating: 'A green check mark indicates a file was uploaded successfully'. At the bottom of the window is a 'Close' button.

Thank you for submitting transcripts electronically. If you need further assistance, please contact the NAEP Help Desk by email (naephelp@westat.com) or by phone (1-800-283-6237).

Appendix I

2019 High School Transcript Study Codebook for Catalog File

2019 NAEP HSTS Catalog Data Codebook

Variable Number: 1

Variable Name: CATLOGID

Variable Description: Catalog Course ID Number

Variable Type: Character, length 6

Value	Description	Frequency
000247-442048	All catalog ID values	343,962

Variable Number: 2

Variable Name: SCHOOLID

Variable Description: School ID Number

Variable Type: Character, length 7

Value	Description	Frequency
0130013-5630043	All school ID values	342,225
9999999	Generic catalog	1,737

Variable Number: 3

Variable Name: CATSRCE

Variable Description: Catalog Source

Variable Type: Character, length 1

Value	Description	Frequency
0	Not applicable	1,737
1	School provided	317,210
2	Generated from transcripts	25,015

Variable Number: 4

Variable Name: CATTYPE

Variable Description: Catalog Type Provided for School

Variable Type: Character, length 1

Value	Description	Frequency
0	Not applicable	1,737
1	Catalog - School level	160,891
2	Catalog - District level	37,343
3	Catalog - State level	25,773
4	Catalog - TUDA level	13,452
5	Course list - School level	29,855
6	Course list - District level	7,922
7	Course list - State level	16,362
8	Course list - TUDA level	25,612
9	Generated from transcripts	25,015

Variable Number: 5

Variable Name: CRSENAME

Variable Description: Catalog Course Title

Variable Type: Character, length 120

Value	Description	Frequency
All values	All catalog course titles	343,962

Variable Number: 6

Variable Name: CRSGLVL

Variable Description: Grade Levels Course Offered

Variable Type: Character, length 5

Value	Description	Frequency
00-00	PreK to Kindergarten	42
00-08	PreK to Grade 8	15
01-01	Grade 1	14
01-05	Grade 1 to Grade 5	1
01-08	Grade 1 to Grade 8	39
01-12	Grade 1 to Grade 12	1
02-02	Grade 2	14
03-03	Grade 3	14
04-04	Grade 4	14
05-05	Grade 5	15
05-08	Grade 5 to Grade 8	4
05-12	Grade 5 to Grade 12	1
06-06	Grade 6	28
06-08	Grade 6 to Grade 8	89
06-10	Grade 6 to Grade 10	27
06-12	Grade 6 to Grade 12	313
07-07	Grade 7	137
07-08	Grade 7 to Grade 8	36
07-12	Grade 7 to Grade 12	21
08-08	Grade 8	332
08-09	Grade 8 to Grade 9	2
08-10	Grade 8 to Grade 10	2
08-12	Grade 8 to Grade 12	21
09-09	Grade 9	9,877
09-10	Grade 9 to Grade 10	3,336
09-11	Grade 9 to Grade 11	1,278
09-12	Grade 9 to Grade 12	220,318
10-10	Grade 10	7,689
10-11	Grade 10 to Grade 11	1,583
10-12	Grade 10 to Grade 12	36,629
11-11	Grade 11	7,563
11-12	Grade 11 to Grade 12	36,526
12-12	Grade 12	17,981

Variable Number: 7

Variable Name: FULLSCED

Variable Description: Full SCED Code

Variable Type: Character, length 14

Value	Description	Frequency
All values	All full SCED codes	343,962

Variable Number: 8

Variable Name: SCEDCODE

Variable Description: Base SCED Code

Variable Type: Character, length 5

Value	Description	Frequency
All values	01001-24999	343,962

Variable Number: 9

Variable Name: CRSELVL

Variable Description: Course Level

Variable Type: Character, length 1

Value	Description	Frequency
B	Basic/remedial	3,155
C	College credit	27,054
E	Enhanced/advanced	9,524
G	General/regular	232,029
H	Honors	49,601
X	Unclassified	22,599

Variable Number: 10

Variable Name: CRSECREd

Variable Description: Carnegie Credits Earned for Course

Variable Type: Numeric, length 5 with up to 3 decimal places

Value	Description	Frequency
0.000-8.000	0 - 8	343,962

Variable Number: 11

Variable Name: CRSESEQ

Variable Description: Course Sequence Number

Variable Type: Numeric, Integer length 2

Value	Description	Frequency
1-24	1 - 24	343,962

Variable Number: 12

Variable Name: CRSESEQT

Variable Description: Total Number of Courses in Sequence

Variable Type: Numeric, Integer length 2

Value	Description	Frequency
1-40	1 - 40	343,962

Variable Number: 13

Variable Name: SPEDFLAG

Variable Description: Special Education Course?

Variable Type: Character, length 1

Value	Description	Frequency
0	No	326,501
1	Yes	17,461

Variable Number: 14

Variable Name: OTHLANG

Variable Description: Taught in Language Other than English?

Variable Type: Character, length 1

Value	Description	Frequency
0	Taught in English	334,614
1	English as a Second Language	7,072
2	Dual language course	251
3	Foreign language immersion	2,025

Variable Number: 15

Variable Name: ONLNFLAG

Variable Description: Course Available Only Online?

Variable Type: Character, length 1

Value	Description	Frequency
0	No	334,437
1	Yes	9,525

Appendix J

2019 High School Transcript Study
Codebook for NAEP Mathematics File

2019 NAEP HSTS NAEP Mathematics Data Codebook

Variable Number: 1

Variable Name: SCHOOLID

Variable Description: School ID

Variable Type: Character, length 7

Value	Description	Frequency
0130013-5630043	All school ID values	19,474

Variable Number: 2

Variable Name: STUDENTI

Variable Description: Student ID

Variable Type: Character, length 10

Value	Description	Frequency
1016004661-2556028810	All student ID values	19,474

Variable Number: 3

Variable Name: DBAPBA

Variable Description: Digital or Paper-Based Assessment

Variable Type: Character, length 1

Value	Description	Frequency
1	Digital	10,057
2	Paper	9,417

Variable Number: 4

Variable Name: PARED

Variable Description: Highest parental education level (from 2 questions)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	4
1	Did not finish high school	1,829
2	Graduated high school	3,063
3	Some education after high school	3,757
4	Graduated college	9,299
7	I don't know	796
8	Omitted	409
9	Missing	317

Variable Number: 5

Variable Name: COLLED

Variable Description: Collapsed highest parental education level

Variable Type: Character, length 1

Value	Description	Frequency
1	Did not graduate college	8,649
2	Graduated college	9,299
9	Multiple responses/Don't know/Omitted/Missing	1,526

During this school year, which of the following have you done? Applied to a 2-year college

Variable Number: 6

Variable Name: B035703

Variable Description: Student applied to two-year college

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	3
1	Yes	5,890
2	No	11,804
8	Omitted	1,421
9	Missing	356

During this school year, which of the following have you done? Applied to a 4-year college

Variable Number: 7

Variable Name: B035705

Variable Description: Student applied to four-year college

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	1
1	Yes	10,683
2	No	6,972
8	Omitted	1,462
9	Missing	356

During this school year, which of the following have you done? Applied to a certificate or diploma program at a school that provides occupational training (such as electrician, beautician, mechanic, computer programmer, etc.)

Variable Number: 8

Variable Name: B035707

Variable Description: Student applied to school that provides occupational training

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	2,208
2	No	15,138
8	Omitted	1,772
9	Missing	356

During this school year, which of the following have you done? Talked with a military recruiter

Variable Number: 9

Variable Name: B035709

Variable Description: Student talked with military recruiter

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	2
1	Yes	4,702
2	No	12,636
8	Omitted	1,778
9	Missing	356

During this school year, which of the following have you done? Applied for a full-time job

Variable Number: 10

Variable Name: B035711

Variable Description: Student applied for full-time job

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	1
1	Yes	3,025
2	No	14,225
8	Omitted	1,867
9	Missing	356

Variable Number: 11

Variable Name: FINLNKWT

Variable Description: Final Usable Mathematics-Linked Student Weight

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
7.29475328-1265.07715513	All values	19,474

Variable Number: 12

Variable Name: LREPWT1

Variable Description: Mathematics-Linked Jackknife Replication Weight 1

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.23411124-1270.36028667	All values	19,474

Variable Number: 13

Variable Name: LREPWT2

Variable Description: Mathematics-Linked Jackknife Replication Weight 2

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.07598633-1274.24068566	All values	19,474

Variable Number: 14

Variable Name: LREPWT3

Variable Description: Mathematics-Linked Jackknife Replication Weight 3

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.60452607-1333.00756422	All values	19,474

Variable Number: 15

Variable Name: LREPWT4

Variable Description: Mathematics-Linked Jackknife Replication Weight 4

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.20171768-1440.36118024	All values	19,474

Variable Number: 16

Variable Name: LREPWT5

Variable Description: Mathematics-Linked Jackknife Replication Weight 5

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1417.89205363	All values	19,474

Variable Number: 17

Variable Name: LREPWT6

Variable Description: Mathematics-Linked Jackknife Replication Weight 6

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.26666558-1262.28246802	All values	19,474

Variable Number: 18

Variable Name: LREPWT7

Variable Description: Mathematics-Linked Jackknife Replication Weight 7

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1262.52449104	All values	19,474

Variable Number: 19

Variable Name: LREPWT8

Variable Description: Mathematics-Linked Jackknife Replication Weight 8

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1254.44145838	All values	19,474

Variable Number: 20

Variable Name: LREPWT9

Variable Description: Mathematics-Linked Jackknife Replication Weight 9

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1316.83030196	All values	19,474

Variable Number: 21

Variable Name: LREPWT10

Variable Description: Mathematics-Linked Jackknife Replication Weight 10

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1264.83329998	All values	19,474

Variable Number: 22

Variable Name: LREPWT11

Variable Description: Mathematics-Linked Jackknife Replication Weight 11

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.59007581-1295.20352562	All values	19,474

Variable Number: 23

Variable Name: LREPWT12

Variable Description: Mathematics-Linked Jackknife Replication Weight 12

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.94643898-1265.16818142	All values	19,474

Variable Number: 24

Variable Name: LREPWT13

Variable Description: Mathematics-Linked Jackknife Replication Weight 13

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.97698484-1251.98813431	All values	19,474

Variable Number: 25

Variable Name: LREPWT14

Variable Description: Mathematics-Linked Jackknife Replication Weight 14

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.19149335-1219.30813203	All values	19,474

Variable Number: 26

Variable Name: LREPWT15

Variable Description: Mathematics-Linked Jackknife Replication Weight 15

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.69949502-1265.07594549	All values	19,474

Variable Number: 27

Variable Name: LREPWT16

Variable Description: Mathematics-Linked Jackknife Replication Weight 16

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.68301698-1302.75459515	All values	19,474

Variable Number: 28

Variable Name: LREPWT17

Variable Description: Mathematics-Linked Jackknife Replication Weight 17

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.39378947-2466.69577704	All values	19,474

Variable Number: 29

Variable Name: LREPWT18

Variable Description: Mathematics-Linked Jackknife Replication Weight 18

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.69377472-1236.22470140	All values	19,474

Variable Number: 30

Variable Name: LREPWT19

Variable Description: Mathematics-Linked Jackknife Replication Weight 19

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.63864560-2370.13726052	All values	19,474

Variable Number: 31

Variable Name: LREPWT20

Variable Description: Mathematics-Linked Jackknife Replication Weight 20

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.24313842-2239.89847621	All values	19,474

Variable Number: 32

Variable Name: LREPWT21

Variable Description: Mathematics-Linked Jackknife Replication Weight 21

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.77760153-1247.44810607	All values	19,474

Variable Number: 33

Variable Name: LREPWT22

Variable Description: Mathematics-Linked Jackknife Replication Weight 22

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.83538868-1268.58327558	All values	19,474

Variable Number: 34

Variable Name: LREPWT23

Variable Description: Mathematics-Linked Jackknife Replication Weight 23

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1253.47028481	All values	19,474

Variable Number: 35

Variable Name: LREPWT24

Variable Description: Mathematics-Linked Jackknife Replication Weight 24

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1265.30317217	All values	19,474

Variable Number: 36

Variable Name: LREPWT25

Variable Description: Mathematics-Linked Jackknife Replication Weight 25

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.07890679-1265.61801253	All values	19,474

Variable Number: 37

Variable Name: LREPWT26

Variable Description: Mathematics-Linked Jackknife Replication Weight 26

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1283.15299381	All values	19,474

Variable Number: 38

Variable Name: LREPWT27

Variable Description: Mathematics-Linked Jackknife Replication Weight 27

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1256.21217563	All values	19,474

Variable Number: 39

Variable Name: LREPWT28

Variable Description: Mathematics-Linked Jackknife Replication Weight 28

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1259.44370260	All values	19,474

Variable Number: 40

Variable Name: LREPWT29

Variable Description: Mathematics-Linked Jackknife Replication Weight 29

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1274.14081022	All values	19,474

Variable Number: 41

Variable Name: LREPWT30

Variable Description: Mathematics-Linked Jackknife Replication Weight 30

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.24079216-1271.24433017	All values	19,474

Variable Number: 42

Variable Name: LREPWT31

Variable Description: Mathematics-Linked Jackknife Replication Weight 31

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.80375220-1296.58143890	All values	19,474

Variable Number: 43

Variable Name: LREPWT32

Variable Description: Mathematics-Linked Jackknife Replication Weight 32

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.72727268-1386.42960041	All values	19,474

Variable Number: 44

Variable Name: LREPWT33

Variable Description: Mathematics-Linked Jackknife Replication Weight 33

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.10439251-1184.17311014	All values	19,474

Variable Number: 45

Variable Name: LREPWT34

Variable Description: Mathematics-Linked Jackknife Replication Weight 34

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.68485722-1253.36124520	All values	19,474

Variable Number: 46

Variable Name: LREPWT35

Variable Description: Mathematics-Linked Jackknife Replication Weight 35

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.71700765-1306.58026175	All values	19,474

Variable Number: 47

Variable Name: LREPWT36

Variable Description: Mathematics-Linked Jackknife Replication Weight 36

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.57114173-1288.65729045	All values	19,474

Variable Number: 48

Variable Name: LREPWT37

Variable Description: Mathematics-Linked Jackknife Replication Weight 37

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.55963857-1270.57299986	All values	19,474

Variable Number: 49

Variable Name: LREPWT38

Variable Description: Mathematics-Linked Jackknife Replication Weight 38

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.99560198-1261.63737434	All values	19,474

Variable Number: 50

Variable Name: LREPWT39

Variable Description: Mathematics-Linked Jackknife Replication Weight 39

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.70527128-1288.88852504	All values	19,474

Variable Number: 51

Variable Name: LREPWT40

Variable Description: Mathematics-Linked Jackknife Replication Weight 40

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.47510188-1499.66432586	All values	19,474

Variable Number: 52

Variable Name: LREPWT41

Variable Description: Mathematics-Linked Jackknife Replication Weight 41

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.24111576-1264.25382986	All values	19,474

Variable Number: 53

Variable Name: LREPWT42

Variable Description: Mathematics-Linked Jackknife Replication Weight 42

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.58429982-1255.57619269	All values	19,474

Variable Number: 54

Variable Name: LREPWT43

Variable Description: Mathematics-Linked Jackknife Replication Weight 43

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.41621427-1662.20934684	All values	19,474

Variable Number: 55

Variable Name: LREPWT44

Variable Description: Mathematics-Linked Jackknife Replication Weight 44

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1259.95036396	All values	19,474

Variable Number: 56

Variable Name: LREPWT45

Variable Description: Mathematics-Linked Jackknife Replication Weight 45

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1268.38077362	All values	19,474

Variable Number: 57

Variable Name: LREPWT46

Variable Description: Mathematics-Linked Jackknife Replication Weight 46

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.89882837-1633.71082040	All values	19,474

Variable Number: 58

Variable Name: LREPWT47

Variable Description: Mathematics-Linked Jackknife Replication Weight 47

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.87454331-1261.84230383	All values	19,474

Variable Number: 59

Variable Name: LREPWT48

Variable Description: Mathematics-Linked Jackknife Replication Weight 48

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.97806108-1267.94396340	All values	19,474

Variable Number: 60

Variable Name: LREPWT49

Variable Description: Mathematics-Linked Jackknife Replication Weight 49

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
3.56468335-1264.18581553	All values	19,474

Variable Number: 61

Variable Name: LREPWT50

Variable Description: Mathematics-Linked Jackknife Replication Weight 50

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.93612897-1345.52402777	All values	19,474

Variable Number: 62

Variable Name: LREPWT51

Variable Description: Mathematics-Linked Jackknife Replication Weight 51

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.17391706-1280.99800885	All values	19,474

Variable Number: 63

Variable Name: LREPWT52

Variable Description: Mathematics-Linked Jackknife Replication Weight 52

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.06479194-1262.30721210	All values	19,474

Variable Number: 64

Variable Name: LREPWT53

Variable Description: Mathematics-Linked Jackknife Replication Weight 53

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.42319021-1265.60103292	All values	19,474

Variable Number: 65

Variable Name: LREPWT54

Variable Description: Mathematics-Linked Jackknife Replication Weight 54

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.89873094-1211.96248853	All values	19,474

Variable Number: 66

Variable Name: LREPWT55

Variable Description: Mathematics-Linked Jackknife Replication Weight 55

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.17790564-1283.50667946	All values	19,474

Variable Number: 67

Variable Name: LREPWT56

Variable Description: Mathematics-Linked Jackknife Replication Weight 56

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.80619024-1264.17206103	All values	19,474

Variable Number: 68

Variable Name: LREPWT57

Variable Description: Mathematics-Linked Jackknife Replication Weight 57

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.98282594-1259.94406130	All values	19,474

Variable Number: 69

Variable Name: LREPWT58

Variable Description: Mathematics-Linked Jackknife Replication Weight 58

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.63648153-1285.37483667	All values	19,474

Variable Number: 70

Variable Name: LREPWT59

Variable Description: Mathematics-Linked Jackknife Replication Weight 59

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.60800870-1321.10635068	All values	19,474

Variable Number: 71

Variable Name: LREPWT60

Variable Description: Mathematics-Linked Jackknife Replication Weight 60

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.19312001-1295.39643757	All values	19,474

Variable Number: 72

Variable Name: LREPWT61

Variable Description: Mathematics-Linked Jackknife Replication Weight 61

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.13464984-1264.01214554	All values	19,474

Variable Number: 73

Variable Name: LREPWT62

Variable Description: Mathematics-Linked Jackknife Replication Weight 62

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.52784441-1275.06307398	All values	19,474

Variable Number: 74

Variable Name: PV101

Variable Description: Numbers and operations plausible value 1

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-296.34	0 - 296.34	19,474

Variable Number: 75

Variable Name: PV102

Variable Description: Numbers and operations plausible value 2

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-291.91	0 - 291.91	19,474

Variable Number: 76

Variable Name: PV103

Variable Description: Numbers and operations plausible value 3

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-297.53	0 - 297.53	19,474

Variable Number: 77

Variable Name: PV104

Variable Description: Numbers and operations plausible value 4

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-280.06	0 - 280.06	19,474

Variable Number: 78

Variable Name: PV105

Variable Description: Numbers and operations plausible value 5

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-291.16	0 - 291.16	19,474

Variable Number: 79

Variable Name: PV106

Variable Description: Numbers and operations plausible value 6

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
15.91-291.24	15.91 - 291.24	19,474

Variable Number: 80

Variable Name: PV107

Variable Description: Numbers and operations plausible value 7

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.38-286.30	0.38 - 286.30	19,474

Variable Number: 81

Variable Name: PV108

Variable Description: Numbers and operations plausible value 8

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-278.59	0 - 278.59	19,474

Variable Number: 82

Variable Name: PV109

Variable Description: Numbers and operations plausible value 9

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-300.00	0 - 300	19,474

Variable Number: 83

Variable Name: PV110

Variable Description: Numbers and operations plausible value 10

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
4.93-287.17	4.93 - 287.17	19,474

Variable Number: 84

Variable Name: PV111

Variable Description: Numbers and operations plausible value 11

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
11.59-289.34	11.59 - 289.34	19,474

Variable Number: 85

Variable Name: PV112

Variable Description: Numbers and operations plausible value 12

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-282.14	0 - 282.14	19,474

Variable Number: 86

Variable Name: PV113

Variable Description: Numbers and operations plausible value 13

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-288.43	0 - 288.43	19,474

Variable Number: 87

Variable Name: PV114

Variable Description: Numbers and operations plausible value 14

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-291.38	0 - 291.38	19,474

Variable Number: 88

Variable Name: PV115

Variable Description: Numbers and operations plausible value 15

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-300.00	0 - 300	19,474

Variable Number: 89

Variable Name: PV116

Variable Description: Numbers and operations plausible value 16

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
4.63-298.19	4.63 - 298.19	19,474

Variable Number: 90

Variable Name: PV117

Variable Description: Numbers and operations plausible value 17

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
2.76-276.85	2.76 - 276.85	19,474

Variable Number: 91

Variable Name: PV118

Variable Description: Numbers and operations plausible value 18

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
6.00-300.00	6 - 300	19,474

Variable Number: 92

Variable Name: PV119

Variable Description: Numbers and operations plausible value 19

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-300.00	0 - 300	19,474

Variable Number: 93

Variable Name: PV120

Variable Description: Numbers and operations plausible value 20

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-297.85	0 - 297.85	19,474

Variable Number: 94

Variable Name: PV201

Variable Description: Measures and geometry plausible value 1

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
21.24-270.90	21.24 - 270.90	19,474

Variable Number: 95

Variable Name: PV202

Variable Description: Measures and geometry plausible value 2

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
26.48-279.76	26.48 - 279.76	19,474

Variable Number: 96

Variable Name: PV203

Variable Description: Measures and geometry plausible value 3

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
32.84-280.08	32.84 - 280.08	19,474

Variable Number: 97

Variable Name: PV204

Variable Description: Measures and geometry plausible value 4

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
23.24-263.79	23.24 - 263.79	19,474

Variable Number: 98

Variable Name: PV205

Variable Description: Measures and geometry plausible value 5

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
20.45-273.94	20.45 - 273.94	19,474

Variable Number: 99

Variable Name: PV206

Variable Description: Measures and geometry plausible value 6

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
20.74-269.84	20.74 - 269.84	19,474

Variable Number: 100

Variable Name: PV207

Variable Description: Measures and geometry plausible value 7

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
6.86-276.82	6.86 - 276.82	19,474

Variable Number: 101

Variable Name: PV208

Variable Description: Measures and geometry plausible value 8

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
23.24-275.47	23.24 - 275.47	19,474

Variable Number: 102

Variable Name: PV209

Variable Description: Measures and geometry plausible value 9

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
3.51-270.12	3.51 - 270.12	19,474

Variable Number: 103

Variable Name: PV210

Variable Description: Measures and geometry plausible value 10

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
6.78-264.89	6.78 - 264.89	19,474

Variable Number: 104

Variable Name: PV211

Variable Description: Measures and geometry plausible value 11

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
31.93-267.15	31.93 - 267.15	19,474

Variable Number: 105

Variable Name: PV212

Variable Description: Measures and geometry plausible value 12

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
18.70-268.46	18.70 - 268.46	19,474

Variable Number: 106

Variable Name: PV213

Variable Description: Measures and geometry plausible value 13

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
8.79-269.40	8.79 - 269.40	19,474

Variable Number: 107

Variable Name: PV214

Variable Description: Measures and geometry plausible value 14

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
20.98-272.05	20.98 - 272.05	19,474

Variable Number: 108

Variable Name: PV215

Variable Description: Measures and geometry plausible value 15

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
23.96-270.60	23.96 - 270.60	19,474

Variable Number: 109

Variable Name: PV216

Variable Description: Measures and geometry plausible value 16

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
21.91-271.65	21.91 - 271.65	19,474

Variable Number: 110

Variable Name: PV217

Variable Description: Measures and geometry plausible value 17

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
28.87-285.77	28.87 - 285.77	19,474

Variable Number: 111

Variable Name: PV218

Variable Description: Measures and geometry plausible value 18

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
23.23-270.07	23.23 - 270.07	19,474

Variable Number: 112

Variable Name: PV219

Variable Description: Measures and geometry plausible value 19

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-275.76	0 - 275.76	19,474

Variable Number: 113

Variable Name: PV220

Variable Description: Measures and geometry plausible value 20

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
24.15-277.19	24.15 - 277.19	19,474

Variable Number: 114

Variable Name: PV301

Variable Description: Data analysis plausible value 1

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.14-292.05	0.14 - 292.05	19,474

Variable Number: 115

Variable Name: PV302

Variable Description: Data analysis plausible value 2

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-300.00	0 - 300	19,474

Variable Number: 116

Variable Name: PV303

Variable Description: Data analysis plausible value 3

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-287.43	0 - 287.43	19,474

Variable Number: 117

Variable Name: PV304

Variable Description: Data analysis plausible value 4

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.65-298.06	0.65 - 298.06	19,474

Variable Number: 118

Variable Name: PV305

Variable Description: Data analysis plausible value 5

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
3.42-294.48	3.42 - 294.48	19,474

Variable Number: 119

Variable Name: PV306

Variable Description: Data analysis plausible value 6

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-300.00	0 - 300	19,474

Variable Number: 120

Variable Name: PV307

Variable Description: Data analysis plausible value 7

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-300.00	0 - 300	19,474

Variable Number: 121

Variable Name: PV308

Variable Description: Data analysis plausible value 8

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-300.00	0 - 300	19,474

Variable Number: 122

Variable Name: PV309

Variable Description: Data analysis plausible value 9

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-295.66	0 - 295.66	19,474

Variable Number: 123

Variable Name: PV310

Variable Description: Data analysis plausible value 10

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-300.00	0 - 300	19,474

Variable Number: 124

Variable Name: PV311

Variable Description: Data analysis plausible value 11

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-300.00	0 - 300	19,474

Variable Number: 125

Variable Name: PV312

Variable Description: Data analysis plausible value 12

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
4.63-300.00	4.63 - 300	19,474

Variable Number: 126

Variable Name: PV313

Variable Description: Data analysis plausible value 13

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-296.14	0 - 296.14	19,474

Variable Number: 127

Variable Name: PV314

Variable Description: Data analysis plausible value 14

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
11.16-300.00	11.16 - 300	19,474

Variable Number: 128

Variable Name: PV315

Variable Description: Data analysis plausible value 15

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-300.00	0 - 300	19,474

Variable Number: 129

Variable Name: PV316

Variable Description: Data analysis plausible value 16

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-300.00	0 - 300	19,474

Variable Number: 130

Variable Name: PV317

Variable Description: Data analysis plausible value 17

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-292.21	0 - 292.21	19,474

Variable Number: 131

Variable Name: PV318

Variable Description: Data analysis plausible value 18

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-300.00	0 - 300	19,474

Variable Number: 132

Variable Name: PV319

Variable Description: Data analysis plausible value 19

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-300.00	0 - 300	19,474

Variable Number: 133

Variable Name: PV320

Variable Description: Data analysis plausible value 20

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
2.47-300.00	2.47 - 300	19,474

Variable Number: 134

Variable Name: PV401

Variable Description: Algebra plausible value 1

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
6.50-277.98	6.50 - 277.98	19,474

Variable Number: 135

Variable Name: PV402

Variable Description: Algebra plausible value 2

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
15.05-271.13	15.05 - 271.13	19,474

Variable Number: 136

Variable Name: PV403

Variable Description: Algebra plausible value 3

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
13.12-273.15	13.12 - 273.15	19,474

Variable Number: 137

Variable Name: PV404

Variable Description: Algebra plausible value 4

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
7.66-280.56	7.66 - 280.56	19,474

Variable Number: 138

Variable Name: PV405

Variable Description: Algebra plausible value 5

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
10.21-285.42	10.21 - 285.42	19,474

Variable Number: 139

Variable Name: PV406

Variable Description: Algebra plausible value 6

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
25.39-281.97	25.39 - 281.97	19,474

Variable Number: 140

Variable Name: PV407

Variable Description: Algebra plausible value 7

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
18.03-282.29	18.03 - 282.29	19,474

Variable Number: 141

Variable Name: PV408

Variable Description: Algebra plausible value 8

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
20.66-281.07	20.66 - 281.07	19,474

Variable Number: 142

Variable Name: PV409

Variable Description: Algebra plausible value 9

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
21.99-280.01	21.99 - 280.01	19,474

Variable Number: 143

Variable Name: PV410

Variable Description: Algebra plausible value 10

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
20.31-280.61	20.31 - 280.61	19,474

Variable Number: 144

Variable Name: PV411

Variable Description: Algebra plausible value 11

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
28.30-272.66	28.30 - 272.66	19,474

Variable Number: 145

Variable Name: PV412

Variable Description: Algebra plausible value 12

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
16.38-274.89	16.38 - 274.89	19,474

Variable Number: 146

Variable Name: PV413

Variable Description: Algebra plausible value 13

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-282.19	0 - 282.19	19,474

Variable Number: 147

Variable Name: PV414

Variable Description: Algebra plausible value 14

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-297.73	0 - 297.73	19,474

Variable Number: 148

Variable Name: PV415

Variable Description: Algebra plausible value 15

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
20.25-290.65	20.25 - 290.65	19,474

Variable Number: 149

Variable Name: PV416

Variable Description: Algebra plausible value 16

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
16.12-276.45	16.12 - 276.45	19,474

Variable Number: 150

Variable Name: PV417

Variable Description: Algebra plausible value 17

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
30.34-285.57	30.34 - 285.57	19,474

Variable Number: 151

Variable Name: PV418

Variable Description: Algebra plausible value 18

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
14.43-279.40	14.43 - 279.40	19,474

Variable Number: 152

Variable Name: PV419

Variable Description: Algebra plausible value 19

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
15.47-279.86	15.47 - 279.86	19,474

Variable Number: 153

Variable Name: PV420

Variable Description: Algebra plausible value 20

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
6.12-279.60	6.12 - 279.60	19,474

Variable Number: 154

Variable Name: PVC01

Variable Description: Composite mathematics assessment plausible value 1

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
18.57-273.22	18.57 - 273.22	19,474

Variable Number: 155

Variable Name: PVC02

Variable Description: Composite mathematics assessment plausible value 2

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
18.57-280.67	18.57 - 280.67	19,474

Variable Number: 156

Variable Name: PVC03

Variable Description: Composite mathematics assessment plausible value 3

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
26.92-277.02	26.92 - 277.02	19,474

Variable Number: 157

Variable Name: PVC04

Variable Description: Composite mathematics assessment plausible value 4

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
14.13-269.92	14.13 - 269.92	19,474

Variable Number: 158

Variable Name: PVC05

Variable Description: Composite mathematics assessment plausible value 5

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
22.91-271.97	22.91 - 271.97	19,474

Variable Number: 159

Variable Name: PVC06

Variable Description: Composite mathematics assessment plausible value 6

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
30.23-278.78	30.23 - 278.78	19,474

Variable Number: 160

Variable Name: PVC07

Variable Description: Composite mathematics assessment plausible value 7

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
12.09-272.41	12.09 - 272.41	19,474

Variable Number: 161

Variable Name: PVC08

Variable Description: Composite mathematics assessment plausible value 8

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
19.80-276.09	19.80 - 276.09	19,474

Variable Number: 162

Variable Name: PVC09

Variable Description: Composite mathematics assessment plausible value 9

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
12.49-271.40	12.49 - 271.40	19,474

Variable Number: 163

Variable Name: PVC10

Variable Description: Composite mathematics assessment plausible value 10

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
14.67-272.53	14.67 - 272.53	19,474

Variable Number: 164

Variable Name: PVC11

Variable Description: Composite mathematics assessment plausible value 11

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
35.38-271.45	35.38 - 271.45	19,474

Variable Number: 165

Variable Name: PVC12

Variable Description: Composite mathematics assessment plausible value 12

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
23.94-273.50	23.94 - 273.50	19,474

Variable Number: 166

Variable Name: PVC13

Variable Description: Composite mathematics assessment plausible value 13

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
7.77-278.10	7.77 - 278.10	19,474

Variable Number: 167

Variable Name: PVC14

Variable Description: Composite mathematics assessment plausible value 14

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
16.36-279.28	16.36 - 279.28	19,474

Variable Number: 168

Variable Name: PVC15

Variable Description: Composite mathematics assessment plausible value 15

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
21.40-272.59	21.40 - 272.59	19,474

Variable Number: 169

Variable Name: PVC16

Variable Description: Composite mathematics assessment plausible value 16

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
21.83-274.06	21.83 - 274.06	19,474

Variable Number: 170

Variable Name: PVC17

Variable Description: Composite mathematics assessment plausible value 17

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
32.42-285.46	32.42 - 285.46	19,474

Variable Number: 171

Variable Name: PVC18

Variable Description: Composite mathematics assessment plausible value 18

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
26.35-276.19	26.35 - 276.19	19,474

Variable Number: 172

Variable Name: PVC19

Variable Description: Composite mathematics assessment plausible value 19

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
5.45-285.66	5.45 - 285.66	19,474

Variable Number: 173

Variable Name: PVC20

Variable Description: Composite mathematics assessment plausible value 20

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
10.22-273.42	10.22 - 273.42	19,474

Appendix K

2019 High School Transcript Study Codebook for NAEP Science File

2019 NAEP HSTS NAEP Science Data Codebook

Variable Number: 1

Variable Name: SCHOOLID

Variable Description: School ID

Variable Type: Character, length 7

Value	Description	Frequency
0130013-5630043	All school ID values	20,243

Variable Number: 2

Variable Name: STUDENTI

Variable Description: Student ID

Variable Type: Character, length 10

Value	Description	Frequency
3016000040-5266009327	All student ID values	20,243

Variable Number: 3

Variable Name: DBAPBA

Variable Description: Digital or Paper-Based Assessment

Variable Type: Character, length 1

Value	Description	Frequency
1	Digital	13,271
2	Paper	6,972

Variable Number: 4

Variable Name: PARED

Variable Description: Highest parental education level (from 2 questions)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	1
1	Did not finish high school	1,911
2	Graduated high school	3,303
3	Some education after high school	3,892
4	Graduated college	9,739
7	I don't know	814
8	Omitted	371
9	Missing	212

Variable Number: 5

Variable Name: COLLED

Variable Description: Collapsed highest parental education level

Variable Type: Character, length 1

Value	Description	Frequency
1	Did not graduate college	9,106
2	Graduated college	9,739
9	Multiple responses/Don't know/Omitted/Missing	1,398

During this school year, which of the following have you done? Applied to a 2-year college

Variable Number: 6

Variable Name: B035703

Variable Description: Student applied to two-year college

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	6,294
2	No	12,636
8	Omitted	1,066
9	Missing	247

During this school year, which of the following have you done? Applied to a 4-year college

Variable Number: 7

Variable Name: B035705

Variable Description: Student applied to four-year college

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	1
1	Yes	11,384
2	No	7,524
8	Omitted	1,087
9	Missing	247

During this school year, which of the following have you done? Applied to a certificate or diploma program at a school that provides occupational training (such as electrician, beautician, mechanic, computer programmer, etc.)

Variable Number: 8

Variable Name: B035707

Variable Description: Student applied to school that provides occupational training

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	2,415
2	No	16,246
8	Omitted	1,335
9	Missing	247

During this school year, which of the following have you done? Talked with a military recruiter

Variable Number: 9

Variable Name: B035709

Variable Description: Student talked with military recruiter

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	1
1	Yes	5,081
2	No	13,572
8	Omitted	1,342
9	Missing	247

During this school year, which of the following have you done? Applied for a full-time job

Variable Number: 10

Variable Name: B035711

Variable Description: Student applied for full-time job

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	1
1	Yes	3,411
2	No	15,212
8	Omitted	1,372
9	Missing	247

Variable Number: 11

Variable Name: FINLNKWT

Variable Description: Final Usable Science-Linked Student Weight

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
7.07162775-1210.07714602	All values	20,243

Variable Number: 12

Variable Name: LREPWT1

Variable Description: Science-Linked Jackknife Replication Weight 1

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.88202220-1215.13059017	All values	20,243

Variable Number: 13

Variable Name: LREPWT2

Variable Description: Science-Linked Jackknife Replication Weight 2

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.05777286-1218.74450372	All values	20,243

Variable Number: 14

Variable Name: LREPWT3

Variable Description: Science-Linked Jackknife Replication Weight 3

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.59931402-1200.45959074	All values	20,243

Variable Number: 15

Variable Name: LREPWT4

Variable Description: Science-Linked Jackknife Replication Weight 4

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.98170166-1214.87647608	All values	20,243

Variable Number: 16

Variable Name: LREPWT5

Variable Description: Science-Linked Jackknife Replication Weight 5

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.04536962-1241.62893982	All values	20,243

Variable Number: 17

Variable Name: LREPWT6

Variable Description: Science-Linked Jackknife Replication Weight 6

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.28589914-1175.23767107	All values	20,243

Variable Number: 18

Variable Name: LREPWT7

Variable Description: Science-Linked Jackknife Replication Weight 7

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.33883037-1207.74724185	All values	20,243

Variable Number: 19

Variable Name: LREPWT8

Variable Description: Science-Linked Jackknife Replication Weight 8

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.32860515-1199.52070453	All values	20,243

Variable Number: 20

Variable Name: LREPWT9

Variable Description: Science-Linked Jackknife Replication Weight 9

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.14722040-1431.84649878	All values	20,243

Variable Number: 21

Variable Name: LREPWT10

Variable Description: Science-Linked Jackknife Replication Weight 10

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.31005305-1384.73742542	All values	20,243

Variable Number: 22

Variable Name: LREPWT11

Variable Description: Science-Linked Jackknife Replication Weight 11

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.63850273-1268.90824800	All values	20,243

Variable Number: 23

Variable Name: LREPWT12

Variable Description: Science-Linked Jackknife Replication Weight 12

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.90487168-1296.76699585	All values	20,243

Variable Number: 24

Variable Name: LREPWT13

Variable Description: Science-Linked Jackknife Replication Weight 13

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.88946697-1200.10263016	All values	20,243

Variable Number: 25

Variable Name: LREPWT14

Variable Description: Science-Linked Jackknife Replication Weight 14

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.76247396-1166.29795941	All values	20,243

Variable Number: 26

Variable Name: LREPWT15

Variable Description: Science-Linked Jackknife Replication Weight 15

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.68546224-1210.07598897	All values	20,243

Variable Number: 27

Variable Name: LREPWT16

Variable Description: Science-Linked Jackknife Replication Weight 16

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.62404160-1246.11653611	All values	20,243

Variable Number: 28

Variable Name: LREPWT17

Variable Description: Science-Linked Jackknife Replication Weight 17

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.78970638-2359.89267580	All values	20,243

Variable Number: 29

Variable Name: LREPWT18

Variable Description: Science-Linked Jackknife Replication Weight 18

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1182.47907050	All values	20,243

Variable Number: 30

Variable Name: LREPWT19

Variable Description: Science-Linked Jackknife Replication Weight 19

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.33470657-2267.09408217	All values	20,243

Variable Number: 31

Variable Name: LREPWT20

Variable Description: Science-Linked Jackknife Replication Weight 20

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-2097.34457644	All values	20,243

Variable Number: 32

Variable Name: LREPWT21

Variable Description: Science-Linked Jackknife Replication Weight 21

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.88049419-1193.21453074	All values	20,243

Variable Number: 33

Variable Name: LREPWT22

Variable Description: Science-Linked Jackknife Replication Weight 22

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1213.43083572	All values	20,243

Variable Number: 34

Variable Name: LREPWT23

Variable Description: Science-Linked Jackknife Replication Weight 23

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1198.97489155	All values	20,243

Variable Number: 35

Variable Name: LREPWT24

Variable Description: Science-Linked Jackknife Replication Weight 24

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.58073343-1210.08352929	All values	20,243

Variable Number: 36

Variable Name: LREPWT25

Variable Description: Science-Linked Jackknife Replication Weight 25

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.78370308-1210.59448931	All values	20,243

Variable Number: 37

Variable Name: LREPWT26

Variable Description: Science-Linked Jackknife Replication Weight 26

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.85415312-1227.36712647	All values	20,243

Variable Number: 38

Variable Name: LREPWT27

Variable Description: Science-Linked Jackknife Replication Weight 27

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.81030010-1195.36775937	All values	20,243

Variable Number: 39

Variable Name: LREPWT28

Variable Description: Science-Linked Jackknife Replication Weight 28

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.75078829-1204.88256602	All values	20,243

Variable Number: 40

Variable Name: LREPWT29

Variable Description: Science-Linked Jackknife Replication Weight 29

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.55002464-1218.74675312	All values	20,243

Variable Number: 41

Variable Name: LREPWT30

Variable Description: Science-Linked Jackknife Replication Weight 30

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.20119838-1215.97619933	All values	20,243

Variable Number: 42

Variable Name: LREPWT31

Variable Description: Science-Linked Jackknife Replication Weight 31

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.22382602-1240.21176163	All values	20,243

Variable Number: 43

Variable Name: LREPWT32

Variable Description: Science-Linked Jackknife Replication Weight 32

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.90981299-1326.15371894	All values	20,243

Variable Number: 44

Variable Name: LREPWT33

Variable Description: Science-Linked Jackknife Replication Weight 33

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.99430663-1132.69045426	All values	20,243

Variable Number: 45

Variable Name: LREPWT34

Variable Description: Science-Linked Jackknife Replication Weight 34

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.60671316-1198.66497307	All values	20,243

Variable Number: 46

Variable Name: LREPWT35

Variable Description: Science-Linked Jackknife Replication Weight 35

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.56830045-1249.77587950	All values	20,243

Variable Number: 47

Variable Name: LREPWT36

Variable Description: Science-Linked Jackknife Replication Weight 36

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.79389442-1234.89604730	All values	20,243

Variable Number: 48

Variable Name: LREPWT37

Variable Description: Science-Linked Jackknife Replication Weight 37

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1215.33405551	All values	20,243

Variable Number: 49

Variable Name: LREPWT38

Variable Description: Science-Linked Jackknife Replication Weight 38

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.78804370-1207.15914001	All values	20,243

Variable Number: 50

Variable Name: LREPWT39

Variable Description: Science-Linked Jackknife Replication Weight 39

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1232.85330195	All values	20,243

Variable Number: 51

Variable Name: LREPWT40

Variable Description: Science-Linked Jackknife Replication Weight 40

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1219.70512232	All values	20,243

Variable Number: 52

Variable Name: LREPWT41

Variable Description: Science-Linked Jackknife Replication Weight 41

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1209.28961533	All values	20,243

Variable Number: 53

Variable Name: LREPWT42

Variable Description: Science-Linked Jackknife Replication Weight 42

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1200.98924378	All values	20,243

Variable Number: 54

Variable Name: LREPWT43

Variable Description: Science-Linked Jackknife Replication Weight 43

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1584.36173030	All values	20,243

Variable Number: 55

Variable Name: LREPWT44

Variable Description: Science-Linked Jackknife Replication Weight 44

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.96575205-1364.74079396	All values	20,243

Variable Number: 56

Variable Name: LREPWT45

Variable Description: Science-Linked Jackknife Replication Weight 45

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.81666135-1218.50423347	All values	20,243

Variable Number: 57

Variable Name: LREPWT46

Variable Description: Science-Linked Jackknife Replication Weight 46

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.91137929-1505.37692695	All values	20,243

Variable Number: 58

Variable Name: LREPWT47

Variable Description: Science-Linked Jackknife Replication Weight 47

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.08750323-1207.16748701	All values	20,243

Variable Number: 59

Variable Name: LREPWT48

Variable Description: Science-Linked Jackknife Replication Weight 48

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.86889059-1212.81931803	All values	20,243

Variable Number: 60

Variable Name: LREPWT49

Variable Description: Science-Linked Jackknife Replication Weight 49

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
3.92592567-1209.22455796	All values	20,243

Variable Number: 61

Variable Name: LREPWT50

Variable Description: Science-Linked Jackknife Replication Weight 50

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.22921437-1287.02654129	All values	20,243

Variable Number: 62

Variable Name: LREPWT51

Variable Description: Science-Linked Jackknife Replication Weight 51

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.14526500-1225.30583082	All values	20,243

Variable Number: 63

Variable Name: LREPWT52

Variable Description: Science-Linked Jackknife Replication Weight 52

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
2.04788234-1207.04554496	All values	20,243

Variable Number: 64

Variable Name: LREPWT53

Variable Description: Science-Linked Jackknife Replication Weight 53

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.86718879-1210.84008171	All values	20,243

Variable Number: 65

Variable Name: LREPWT54

Variable Description: Science-Linked Jackknife Replication Weight 54

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.80847561-1165.15963252	All values	20,243

Variable Number: 66

Variable Name: LREPWT55

Variable Description: Science-Linked Jackknife Replication Weight 55

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.08371688-1227.70543542	All values	20,243

Variable Number: 67

Variable Name: LREPWT56

Variable Description: Science-Linked Jackknife Replication Weight 56

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.00000000-1209.56859140	All values	20,243

Variable Number: 68

Variable Name: LREPWT57

Variable Description: Science-Linked Jackknife Replication Weight 57

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.88143363-1206.47467632	All values	20,243

Variable Number: 69

Variable Name: LREPWT58

Variable Description: Science-Linked Jackknife Replication Weight 58

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.70884743-1229.49237335	All values	20,243

Variable Number: 70

Variable Name: LREPWT59

Variable Description: Science-Linked Jackknife Replication Weight 59

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.69598499-1262.96964220	All values	20,243

Variable Number: 71

Variable Name: LREPWT60

Variable Description: Science-Linked Jackknife Replication Weight 60

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.86367410-1239.54768702	All values	20,243

Variable Number: 72

Variable Name: LREPWT61

Variable Description: Science-Linked Jackknife Replication Weight 61

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
1.96465227-1208.36900690	All values	20,243

Variable Number: 73

Variable Name: LREPWT62

Variable Description: Science-Linked Jackknife Replication Weight 62

Variable Type: Numeric, length 13 with up to 8 decimal places

Value	Description	Frequency
0.98968837-1219.62892090	All values	20,243

Variable Number: 74

Variable Name: PVUN1

Variable Description: Univariate science assessment plausible value 1

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-281.96	0 - 281.96	20,243

Variable Number: 75

Variable Name: PVUN2

Variable Description: Univariate science assessment plausible value 2

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-286.44	0 - 286.44	20,243

Variable Number: 76

Variable Name: PVUN3

Variable Description: Univariate science assessment plausible value 3

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.76-271.98	0.76 - 271.98	20,243

Variable Number: 77

Variable Name: PVUN4

Variable Description: Univariate science assessment plausible value 4

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-281.05	0 - 281.05	20,243

Variable Number: 78

Variable Name: PVUN5

Variable Description: Univariate science assessment plausible value 5

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-276.23	0 - 276.23	20,243

Variable Number: 79

Variable Name: PVUN6

Variable Description: Univariate science assessment plausible value 6

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-272.32	0 - 272.32	20,243

Variable Number: 80

Variable Name: PVUN7

Variable Description: Univariate science assessment plausible value 7

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
3.33-267.78	3.33 - 267.78	20,243

Variable Number: 81

Variable Name: PVUN8

Variable Description: Univariate science assessment plausible value 8

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
4.97-279.89	4.97 - 279.89	20,243

Variable Number: 82

Variable Name: PVUN9

Variable Description: Univariate science assessment plausible value 9

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
1.98-265.76	1.98 - 265.76	20,243

Variable Number: 83

Variable Name: PVUN10

Variable Description: Univariate science assessment plausible value 10

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
9.28-275.21	9.28 - 275.21	20,243

Variable Number: 84

Variable Name: PVUN11

Variable Description: Univariate science assessment plausible value 11

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
14.35-263.90	14.35 - 263.90	20,243

Variable Number: 85

Variable Name: PVUN12

Variable Description: Univariate science assessment plausible value 12

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
1.57-269.16	1.57 - 269.16	20,243

Variable Number: 86

Variable Name: PVUN13

Variable Description: Univariate science assessment plausible value 13

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-284.96	0 - 284.96	20,243

Variable Number: 87

Variable Name: PVUN14

Variable Description: Univariate science assessment plausible value 14

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-268.83	0 - 268.83	20,243

Variable Number: 88

Variable Name: PVUN15

Variable Description: Univariate science assessment plausible value 15

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
9.75-289.90	9.75 - 289.90	20,243

Variable Number: 89

Variable Name: PVUN16

Variable Description: Univariate science assessment plausible value 16

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-269.77	0 - 269.77	20,243

Variable Number: 90

Variable Name: PVUN17

Variable Description: Univariate science assessment plausible value 17

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
4.36-269.81	4.36 - 269.81	20,243

Variable Number: 91

Variable Name: PVUN18

Variable Description: Univariate science assessment plausible value 18

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
8.74-268.31	8.74 - 268.31	20,243

Variable Number: 92

Variable Name: PVUN19

Variable Description: Univariate science assessment plausible value 19

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-272.56	0 - 272.56	20,243

Variable Number: 93

Variable Name: PVUN20

Variable Description: Univariate science assessment plausible value 20

Variable Type: Numeric, length 6 with up to 2 decimal places

Value	Description	Frequency
0.00-284.20	0 - 284.20	20,243

Appendix L

2019 High School Transcript Study Codebook for School File

2019 NAEP HSTS School Data Codebook

Variable Number: 1

Variable Name: SCHOOLID

Variable Description: School ID Number

Variable Type: Character, length 7

Value	Description	Frequency
0130013 - 5630043	All school ID values	1,409

Variable Number: 2

Variable Name: SCHREFFI

Variable Description: School Reference File

Variable Type: Character, length 1

Value	Description	Frequency
1	Common Core of Data	1,333
2	Private School Survey	76

Variable Number: 3

Variable Name: SCHREFID

Variable Description: School Reference File ID Number

Variable Type: Character, length 12

Value	Description	Frequency
All values	All School Reference File ID Numbers	1,409

Variable Number: 4

Variable Name: CATSRCE

Variable Description: Source of Catalog Titles

Variable Type: Character, length 1

Value	Description	Frequency
0	Not Applicable	0
1	School Provided	1,333
2	Generic Catalog	76

Variable Number: 5

Variable Name: CATTYPER

Variable Description: Type of Catalog Provided

Variable Type: Character, length 1

Value	Description	Frequency
0	Not Applicable	0
1	Catalog - School Level	579
2	Catalog - District Level	131
3	Catalog - State Level	119
4	Catalog - TUDA Level	30
5	Course List - School Level	88
6	Course List - District Level	17
7	Course List - State Level	306
8	Course List - TUDA Level	63
9	No materials provided	76

Variable Number: 6

Variable Name: LINKED

Variable Description: Sample Type

Variable Type: Character, length 1

Value	Description	Frequency
1	NAEP, Linked	1,409
2	HSTS Only	0
3	NAEP, Not Linked	0

Variable Number: 7

Variable Name: STATE

Variable Description: FIPS State Code

Variable Type: Character, length 2

Value	Description	Frequency
01	Alabama	38
02	Alaska	13
04	Arizona	49
05	Arkansas	13
06	California	137
08	Colorado	2
09	Connecticut	22
10	Delaware	3
11	District of Columbia	1
12	Florida	112
13	Georgia	61
15	Hawaii	0
16	Idaho	14
17	Illinois	58

Value	Description	Frequency
18	Indiana	17
19	Iowa	13
20	Kansas	15
21	Kentucky	17
22	Louisiana	23
23	Maine	4
24	Maryland	18
25	Massachusetts	17
26	Michigan	56
27	Minnesota	21
28	Mississippi	12
29	Missouri	27
30	Montana	0
31	Nebraska	10
32	Nevada	19
33	New Hampshire	5
34	New Jersey	34
35	New Mexico	10
36	New York	75
37	North Carolina	64
38	North Dakota	6
39	Ohio	1
40	Oklahoma	45
41	Oregon	23
42	Pennsylvania	44
44	Rhode Island	1
45	South Carolina	20
46	South Dakota	0
47	Tennessee	19
48	Texas	147
49	Utah	17
50	Vermont	0
51	Virginia	47
53	Washington	30
54	West Virginia	5
55	Wisconsin	20
56	Wyoming	4
59	Bureau of Indian Affairs schools	0
61	Department of Defense schools	0

Variable Number: 8

Variable Name: STYPE

Variable Description: School Type

Variable Type: Character, length 1

Value	Description	Frequency
1	Public/State Run	1,333
2	Religious/Nonpublic	44
3	Catholic	32
4	Bureau of Indian Affairs	0
5	Department of Defense	0

Variable Number: 9

Variable Name: PUBPRIV

Variable Description: Public or Private School?

Variable Type: Character, length 1

Value	Description	Frequency
1	Public school	1,333
2	Private school	76

Variable Number: 10

Variable Name: ULOCALE

Variable Description: Urbancentric Locale (Full)

Variable Type: Character, length 2

Value	Description	Frequency
11	City, Large	215
12	City, Midsize	88
13	City, Small	118
21	Suburb, Large	468
22	Suburb, Midsize	39
23	Suburb, Small	26
31	Town, Fringe	42
32	Town, Distant	64
33	Town, Remote	48
41	Rural, Fringe	178
42	Rural, Distant	73
43	Rural, Remote	50

Variable Number: 11

Variable Name: ULOCTYPE

Variable Description: Urbancentric Locale (4 levels)

Variable Type: Character, length 1

Value	Description	Frequency
1	City	421
2	Suburb	533
3	Town	154
4	Rural	301

Variable Number: 12

Variable Name: CENSREG

Variable Description: Census Region

Variable Type: Character, length 1

Value	Description	Frequency
1	Northeast	202
2	Midwest	244
3	South	645
4	West	318

Variable Number: 13

Variable Name: ENROLL

Variable Description: School Enrollment

Variable Type: Character, length 1

Value	Description	Frequency
1	0 - 499 students	283
2	500 - 999 students	222
3	1000 - 1499 students	259
4	1500 - 1999 students	273
5	2000+ students	372
9	Missing	0

Variable Number: 14

Variable Name: MINSTAT

Variable Description: School Minority Status

Variable Type: Character, length 1

Value	Description	Frequency
0	Missing	0
1	Low minority	130
2	Normal	783
3	High minority	496

Variable Number: 15

Variable Name: MNGRDC

Variable Description: Carnegie Units Required to Graduate

Variable Type: Numeric, length 5 with up to 2 decimal places

Value	Description	Frequency
14.00-40.00	14 - 40	1,236
Missing	Not reported	173

Variable Number: 16

Variable Name: MNGRDCC

Variable Description: Carnegie Units Required to Graduate (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	<= 24.0	936
2	24.1 - 26.0	193
3	26.1 - 28.0	78
4	>= 28.1	29
9	Not reported	173

Variable Number: 17

Variable Name: MNENGG

Variable Description: English Credits for Graduation

Variable Type: Numeric, length 5 with up to 2 decimal places

Value	Description	Frequency
3.00-6.00	3 - 6	1,235
Missing	Not reported	174

Variable Number: 18

Variable Name: MNENGGC

Variable Description: English Credits for Graduation (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	<= 3.9	3
2	4.0	1,217
3	>= 4.1	15
9	Not reported	174

Variable Number: 19

Variable Name: MNMATG

Variable Description: Mathematics Credits for Graduation

Variable Type: Numeric, length 5 with up to 2 decimal places

Value	Description	Frequency
0.00-6.00	0 - 6	1,235
Missing	Not reported	174

Variable Number: 20

Variable Name: MNMATGC

Variable Description: Mathematics Credits for Graduation (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	<= 2.0	41
2	2.1 - 3.0	589
3	>= 3.1	605
9	Not reported	174

Variable Number: 21

Variable Name: MNCMPSC

Variable Description: Computer Science Credits for Graduation

Variable Type: Numeric, length 5 with up to 2 decimal places

Value	Description	Frequency
0.00-5.00	0 - 5	1,235
Missing	Not reported	174

Variable Number: 22

Variable Name: MNCMPSC

Variable Description: Computer Science Credits for Graduation (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0	1,008
2	0.1 - 1.0	189
3	>= 1.1	38
9	Not reported	174

Variable Number: 23

Variable Name: MNSOST

Variable Description: Social Studies Credits for Graduation

Variable Type: Numeric, length 5 with up to 2 decimal places

Value	Description	Frequency
0.00-6.00	0 - 6	1,235
Missing	Not reported	174

Variable Number: 24

Variable Name: MNSOSTC

Variable Description: Social Studies Credits for Graduation (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	<= 2.0	37
2	2.1 - 3.0	782
3	>= 3.1	416
9	Not reported	174

Variable Number: 25

Variable Name: MNSCGR

Variable Description: Science Credits for Graduation

Variable Type: Numeric, length 5 with up to 2 decimal places

Value	Description	Frequency
0.00-5.00	0 - 5	1,235
Missing	Not reported	174

Variable Number: 26

Variable Name: MNSCGRC

Variable Description: Science Credits for Graduation (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	<= 2.0	145
2	2.1 - 3.0	850
3	>= 3.1	240
9	Not reported	174

Variable Number: 27

Variable Name: MNFLAN

Variable Description: Foreign Language Credits for Graduation

Variable Type: Numeric, length 5 with up to 2 decimal places

Value	Description	Frequency
0.00-6.00	0 - 6	1,235
Missing	Not reported	174

Variable Number: 28

Variable Name: MNFLANC

Variable Description: Foreign Language Credits for Graduation (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	<= 1.0	867
2	1.1 - 2.0	345
3	>= 2.1	23
9	Not reported	174

Variable Number: 29

Variable Name: MNPEDE

Variable Description: Physical Education Credits for Graduation

Variable Type: Numeric, length 5 with up to 2 decimal places

Value	Description	Frequency
0.00-5.00	0 - 5	1,235
Missing	Not reported	174

Variable Number: 30

Variable Name: MNPEDEC

Variable Description: Physical Education Credits for Graduation (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	<= 2.0	1,049
2	2.1 - 3.0	109
3	>= 3.1	77
9	Not reported	174

Variable Number: 31

Variable Name: MNOTCR

Variable Description: Other Credits Required for Graduation

Variable Type: Numeric, length 5 with up to 2 decimal places

Value	Description	Frequency
0.00-23.50	0 - 23.5	1,235
Missing	Not reported	174

Variable Number: 32

Variable Name: MNOTCRC

Variable Description: Other Credits Required for Graduation (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0	5
2	0.1 - 1.0	3
3	>= 1.1	1,227
9	Not reported	174

Variable Number: 33

Variable Name: NONELCR

Variable Description: Number of Nonelective Credits

Variable Type: Numeric, length 5 with up to 2 decimal places

Value	Description	Frequency
4.00-30.00	4 - 30	1,235
Missing	Not reported	174

Variable Number: 34

Variable Name: COMPTST

Variable Description: Competency Test Required

Variable Type: Character, length 1

Value	Description	Frequency
1	Yes	779
2	No	437
9	Not reported	193

Variable Number: 35

Variable Name: SGRSPAN

Variable Description: Grade Span Code

Variable Type: Character, length 4

Value	Description	Frequency
0112	1st to 12th	5
0212	2nd to 12th	0
0312	3rd to 12th	0
0412	4th to 12th	0
0512	5th to 12th	3
0612	6th to 12th	42
0712	7th to 12th	65
0812	8th to 12th	11
0911	9th to 11th	1
0912	9th to 12th	1,138
1012	10th to 12th	47
1112	11th to 12th	8
1212	12th grade only	15
KG12	Kindergarten to 12th	15
PK12	Preschool to 12th	59
UNKN	Not reported	0

Variable Number: 36

Variable Name: DFCRHON

Variable Description: Credits differ for honors courses?

Variable Type: Character, length 1

Value	Description	Frequency
0	No differences in credits earned	1,063
1	Differences in credits earned	129
9	Not reported	217

Variable Number: 37

Variable Name: DFCRHONX

Variable Description: Credits differ for honors courses (write-in)

Variable Type: Character, length 60

Value	Description	Frequency
All responses	All credit difference explanations	129
Missing	Not applicable	1,280

Variable Number: 38

Variable Name: DFCRSPD

Variable Description: Credits differ for special education courses?

Variable Type: Character, length 1

Value	Description	Frequency
0	No differences in credits earned	1,072
1	Differences in credits earned	118
9	Not reported	219

Variable Number: 39

Variable Name: DFCRSPDX

Variable Description: Credits differ for special education courses (write-in)

Variable Type: Character, length 60

Value	Description	Frequency
All responses	All credit difference explanations	118
Missing	Not applicable	1,291

Variable Number: 40

Variable Name: DFCRELL

Variable Description: Credits differ for English language learner courses?

Variable Type: Character, length 1

Value	Description	Frequency
0	No differences in credits earned	1,151
1	Differences in credits earned	38
9	Not reported	220

Variable Number: 41

Variable Name: DFCRELLX

Variable Description: Credits differ for English language learner courses (write-in)

Variable Type: Character, length 60

Value	Description	Frequency
All responses	All credit difference explanations	38
Missing	Not applicable	1,371

Variable Number: 42

Variable Name: INSTHRS

Variable Description: Number instructional hours for year-long course

Variable Type: Numeric, length 8 with up to 2 decimal places

Value	Description	Frequency
0.00-23400.00	0 - 23,400	1,127
Missing	Not reported	282

Variable Number: 43

Variable Name: HSMNGPA

Variable Description: Minimum GPA required for graduation?

Variable Type: Character, length 1

Value	Description	Frequency
0	No minimum GPA required	977
1	Minimum GPA required	210
9	Not reported	222

Variable Number: 44

Variable Name: HSMNGPAD

Variable Description: Minimum GPA required for graduation (write-in)

Variable Type: Character, length 40

Value	Description	Frequency
All values	All minimum GPA explanations	210
Missing	Not applicable	1,199

Variable Number: 45

Variable Name: MNPSGRD

Variable Description: Lowest score/grade to pass course

Variable Type: Character, length 40

Value	Description	Frequency
All values	All passing grade explanations	1,151
Missing	Not applicable	258

What is your sex?

Variable Number: 46

Variable Name: C105301

Variable Description: What is your sex

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Male	845
2	Female	505
8	Omitted	9
9	Missing	50

What grades are taught in your school? Pre-kindergarten**Variable Number: 47****Variable Name: CX46201****Variable Description:** Grade taught at this school - Pre-kindergarten**Variable Type:** Character, length 1

Value	Description	Frequency
1	Yes	59
8	Omitted	1,300
9	Missing	50

What grades are taught in your school? Kindergarten**Variable Number: 48****Variable Name: CX46202****Variable Description:** Grade taught at this school - Kindergarten**Variable Type:** Character, length 1

Value	Description	Frequency
1	Yes	66
8	Omitted	1,293
9	Missing	50

What grades are taught in your school? 1st grade**Variable Number: 49****Variable Name: CX46203****Variable Description:** Grade taught at this school - 1st grade**Variable Type:** Character, length 1

Value	Description	Frequency
1	Yes	66
8	Omitted	1,293
9	Missing	50

What grades are taught in your school? 2nd grade**Variable Number: 50****Variable Name: CX46204****Variable Description:** Grade taught at this school - 2nd grade**Variable Type:** Character, length 1

Value	Description	Frequency
1	Yes	66
8	Omitted	1,293
9	Missing	50

What grades are taught in your school? 3rd grade**Variable Number: 51****Variable Name: CX46205****Variable Description:** Grade taught at this school - 3rd grade**Variable Type:** Character, length 1

Value	Description	Frequency
1	Yes	66
8	Omitted	1,293
9	Missing	50

What grades are taught in your school? 4th grade**Variable Number: 52****Variable Name: CX46206****Variable Description:** Grade taught at this school - 4th grade**Variable Type:** Character, length 1

Value	Description	Frequency
1	Yes	66
8	Omitted	1,293
9	Missing	50

What grades are taught in your school? 5th grade**Variable Number: 53****Variable Name: CX46207****Variable Description:** Grade taught at this school - 5th grade**Variable Type:** Character, length 1

Value	Description	Frequency
1	Yes	69
8	Omitted	1,290
9	Missing	50

What grades are taught in your school? 6th grade**Variable Number: 54****Variable Name: CX46208****Variable Description:** Grade taught at this school - 6th grade**Variable Type:** Character, length 1

Value	Description	Frequency
1	Yes	111
8	Omitted	1,248
9	Missing	50

What grades are taught in your school? 7th grade**Variable Number: 55****Variable Name: CX46209****Variable Description:** Grade taught at this school - 7th grade**Variable Type:** Character, length 1

Value	Description	Frequency
1	Yes	174
8	Omitted	1,185
9	Missing	50

What grades are taught in your school? 8th grade**Variable Number: 56****Variable Name: CX46210****Variable Description:** Grade taught at this school - 8th grade**Variable Type:** Character, length 1

Value	Description	Frequency
1	Yes	184
8	Omitted	1,175
9	Missing	50

What grades are taught in your school? 9th grade**Variable Number: 57****Variable Name: CX46211****Variable Description:** Grade taught at this school - 9th grade**Variable Type:** Character, length 1

Value	Description	Frequency
1	Yes	1,289
8	Omitted	70
9	Missing	50

What grades are taught in your school? 10th grade**Variable Number: 58****Variable Name: CX46212****Variable Description:** Grade taught at this school - 10th grade**Variable Type:** Character, length 1

Value	Description	Frequency
1	Yes	1,335
8	Omitted	24
9	Missing	50

What grades are taught in your school? 11th grade

Variable Number: 59

Variable Name: CX46213

Variable Description: Grade taught at this school - 11th grade

Variable Type: Character, length 1

Value	Description	Frequency
1	Yes	1,342
8	Omitted	17
9	Missing	50

What grades are taught in your school? 12th grade

Variable Number: 60

Variable Name: CX46214

Variable Description: Grade taught at this school - 12th grade

Variable Type: Character, length 1

Value	Description	Frequency
1	Yes	1,359
8	Omitted	0
9	Missing	50

Can your school be described by any of the following? Elementary school

Variable Number: 61

Variable Name: C0863A1

Variable Description: Type of school: Elementary

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	53
8	Omitted	1,306
9	Missing	50

Can your school be described by any of the following? Middle or junior high school

Variable Number: 62

Variable Name: C0863B1

Variable Description: Type of school: Middle or junior high

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	145
8	Omitted	1,214
9	Missing	50

Can your school be described by any of the following? Secondary school

Variable Number: 63

Variable Name: C0863C1

Variable Description: Type of school: Secondary

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,270
8	Omitted	89
9	Missing	50

Can your school be described by any of the following? Regular school with a magnet program

Variable Number: 64

Variable Name: C0863D1

Variable Description: Type of school: Regular with magnet program

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	96
8	Omitted	1,263
9	Missing	50

Can your school be described by any of the following? A magnet school or a school with a special program emphasis, e.g., science/mathematics school, performing arts school, talented/gifted school, foreign language immersion school

Variable Number: 65

Variable Name: C0863E1

Variable Description: Type of school: Magnet or special emphasis

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	62
8	Omitted	1,297
9	Missing	50

Can your school be described by any of the following? Special education school: primarily serves students with disabilities

Variable Number: 66

Variable Name: C0863F1

Variable Description: Type of school: Special ed

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	8
8	Omitted	1,351
9	Missing	50

Can your school be described by any of the following? Alternative school: offers a curriculum designed to provide alternative or nontraditional education, not clearly categorized as regular, special, or vocational education

Variable Number: 67

Variable Name: C0863G1

Variable Description: Type of school: Alternative

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	52
8	Omitted	1,307
9	Missing	50

Can your school be described by any of the following? Private independent school

Variable Number: 68

Variable Name: C0863H1

Variable Description: Type of school: Private independent

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	21
8	Omitted	1,338
9	Missing	50

Can your school be described by any of the following? Private religiously affiliated school

Variable Number: 69

Variable Name: C0863I1

Variable Description: Type of school: Private religious

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	60
8	Omitted	1,299
9	Missing	50

Can your school be described by any of the following? Independent charter school

Variable Number: 70

Variable Name: C0863J1

Variable Description: Type of school: Independent charter

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	32
8	Omitted	1,327
9	Missing	50

Can your school be described by any of the following? Charter school administered by local school district

Variable Number: 71

Variable Name: C0863K1

Variable Description: Type of school: Charter admin by local district

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	15
8	Omitted	1,344
9	Missing	50

Please identify the organization(s) listed below to which your school is most closely affiliated.

American Association of Christian Schools

Variable Number: 72

Variable Name: C101001

Variable Description: Schl affil - American Assoc of Christian Schools

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1
8	Omitted	101
9	Missing	1,307

Please identify the organization(s) listed below to which your school is most closely affiliated.

Association of Christian Schools International

Variable Number: 73

Variable Name: C101002

Variable Description: Schl affil - Association of Christian Schools Intl

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	15
8	Omitted	87
9	Missing	1,307

Please identify the organization(s) listed below to which your school is most closely affiliated.

Christian Schools International

Variable Number: 74

Variable Name: C101003

Variable Description: Schl affil - Christian Schools International

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1
8	Omitted	101
9	Missing	1,307

Please identify the organization(s) listed below to which your school is most closely affiliated.

National Association of Episcopal Schools

Variable Number: 75

Variable Name: C101004

Variable Description: Schl affil - Natl Association of Episcopal Schools

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	0
8	Omitted	102
9	Missing	1,307

Please identify the organization(s) listed below to which your school is most closely affiliated.

National Association of Independent Schools

Variable Number: 76

Variable Name: C101005

Variable Description: Schl affil - Natl Association of Independent Schls

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	9
8	Omitted	93
9	Missing	1,307

Please identify the organization(s) listed below to which your school is most closely affiliated.

National Catholic Educational Association

Variable Number: 77

Variable Name: C101006

Variable Description: Schl affil - Natl Catholic Educational Association

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	28
8	Omitted	74
9	Missing	1,307

Please identify the organization(s) listed below to which your school is most closely affiliated.

National Society of Hebrew Day Schools

Variable Number: 78

Variable Name: C101007

Variable Description: Schl affil - National Society of Hebrew Day Schls

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1
8	Omitted	101
9	Missing	1,307

Please identify the organization(s) listed below to which your school is most closely affiliated. The Association of Boarding Schools

Variable Number: 79

Variable Name: C101008

Variable Description: Schl affil - The Association of Boarding Schools

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1
8	Omitted	101
9	Missing	1,307

Please identify the organization(s) listed below to which your school is most closely affiliated. Not affiliated with any organization

Variable Number: 80

Variable Name: C101010

Variable Description: Schl affil - None of the above

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	49
8	Omitted	53
9	Missing	1,307

What is the current enrollment in your school?

Variable Number: 81

Variable Name: C038101

Variable Description: Current enrollment in school

Variable Type: Numeric, length 4

Value	Description	Frequency
23-5076	23 - 5076	1,355
Missing	Missing	54

Of the students currently enrolled in your school, what percentage has been identified as limited-English proficient?

Variable Number: 82

Variable Name: C046501

Variable Description: Percent enrollment identified as LEP

Variable Type: Character, length 2

Value	Description	Frequency
00	Multiple responses	0
01	0%	157
02	1 - 5%	636
03	6 - 10%	259
04	11 - 25%	211
05	26 - 50%	62
06	51 - 75%	17
07	76 - 90%	3
08	Over 90%	3
88	Omitted	11
99	Missing	50

Approximately what percentage of twelfth-graders in your school is new this year?

Variable Number: 83

Variable Name: C081001

Variable Description: Approx what percent of twelfth-graders are new

Variable Type: Numeric, length 3

Value	Description	Frequency
0-100	0 - 100	1,341
Missing	Missing	68

Last school year, approximately what percentage of students at your school enrolled after the first day of school?

Variable Number: 84

Variable Name: C087001

Variable Description: Last schl yr, approx stud pct enrolled after day 1

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0%	33
2	1 - 3%	490
3	4 - 6%	352
4	7 - 10%	263
5	11 - 20%	119
6	Over 20%	82
8	Omitted	20
9	Missing	50

Last school year, approximately what percentage of students at your school left before the end of the school year?

Variable Number: 85

Variable Name: C087101

Variable Description: Last schl yr, approx stud pct left before end of yr

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0%	18
2	1 - 3%	509
3	4 - 6%	369
4	7 - 10%	226
5	11 - 20%	154
6	Over 20%	50
8	Omitted	33
9	Missing	50

About what percentage of your teachers is absent on an average day? (Include all absences in calculating this rate.)

Variable Number: 86

Variable Name: C036501

Variable Description: Percent of teachers absent on average day

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0 - 2%	509
2	3 - 5%	582
3	6 - 10%	237
4	More than 10%	19
8	Omitted	12
9	Missing	50

Does your school participate in the National School Lunch Program?

Variable Number: 87

Variable Name: C038301

Variable Description: School in National School Lunch Program

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,178
2	No	177
8	Omitted	4
9	Missing	50

How does the school operate the program?

Variable Number: 88

Variable Name: C051401

Variable Description: Operation of National School Lunch Program

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Student eligibility determined individually	899
2	All students under special provisions	278
8	Omitted	5
9	Missing	227

During this school year, about what percentage of students in your school was eligible to receive a free or reduced-price lunch through the National School Lunch Program?

Variable Number: 89

Variable Name: C051651

Variable Description: Percent eligible National School Lunch Program

Variable Type: Character, length 2

Value	Description	Frequency
00	Multiple responses	0
01	0%	0
02	1 - 5%	19
03	6 - 10%	46
04	11 - 25%	148
05	26 - 34%	132
06	35 - 50%	223
07	51 - 75%	230
08	76 - 99%	90
09	100%	5
88	Omitted	11
99	Missing	505

Does your school receive Title I funding? (Title I is a federally funded program that provides educational services, such as remedial reading or remedial math, to children who live in areas with high concentrations of low-income families.)

Variable Number: 90

Variable Name: C051701

Variable Description: Receive Title I funding

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	No	768
2	Yes, targeted to eligible students	170
3	Yes, used for schoolwide purposes	414
8	Omitted	7
9	Missing	50

Approximately what percentage of students in your school receives the following services?

Targeted Title I services

Variable Number: 91

Variable Name: C051801

Variable Description: Percent receiving targeted Title I services

Variable Type: Character, length 2

Value	Description	Frequency
00	Multiple responses	0
01	0%	845
02	1 - 5%	57
03	6 - 10%	58
04	11 - 25%	68
05	26 - 50%	61
06	51 - 75%	62
07	76 - 90%	50
08	Over 90%	129
88	Omitted	29
99	Missing	50

Approximately what percentage of students in your school receives the following services? Gifted and talented program

Variable Number: 92

Variable Name: C044004

Variable Description: Percent in gifted and talented program

Variable Type: Character, length 2

Value	Description	Frequency
00	Multiple responses	0
01	0%	499
02	1 - 5%	268
03	6 - 10%	260
04	11 - 25%	210
05	26 - 50%	69
06	51 - 75%	17
07	76 - 90%	4
08	Over 90%	9
88	Omitted	23
99	Missing	50

**Approximately what percentage of students in your school receives the following services?
English-as-a second-language (not in a bilingual education program)**

Variable Number: 93

Variable Name: C044006

Variable Description: Percent receiving ESL instruction

Variable Type: Character, length 2

Value	Description	Frequency
00	Multiple responses	0
01	0%	221
02	1 - 5%	623
03	6 - 10%	251
04	11 - 25%	179
05	26 - 50%	48
06	51 - 75%	14
07	76 - 90%	2
08	Over 90%	6
88	Omitted	15
99	Missing	50

Approximately what percentage of students in your school receives the following services? Special education

Variable Number: 94

Variable Name: C044007

Variable Description: Percent in special education

Variable Type: Character, length 2

Value	Description	Frequency
00	Multiple responses	0
01	0%	50
02	1 - 5%	99
03	6 - 10%	401
04	11 - 25%	717
05	26 - 50%	72
06	51 - 75%	1
07	76 - 90%	0
08	Over 90%	4
88	Omitted	15
99	Missing	50

Of the students in last year's graduating class, approximately what percentage is doing each of the following? Attending a two-year college

Variable Number: 95

Variable Name: C087601

Variable Description: Pct last yr's grads: 2-year college

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0 - 5%	134
2	6 - 10%	137
3	11 - 25%	401
4	26 - 50%	422
5	51 - 75%	82
6	Over 75%	6
7	I don't know	149
8	Omitted	28
9	Missing	50

Of the students in last year's graduating class, approximately what percentage is doing each of the following? Attending a four-year college

Variable Number: 96

Variable Name: C087602

Variable Description: Pct last yr's grads: 4-year college

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0 - 5%	61
2	6 - 10%	69
3	11 - 25%	261
4	26 - 50%	408
5	51 - 75%	246
6	Over 75%	157
7	I don't know	127
8	Omitted	30
9	Missing	50

Of the students in last year's graduating class, approximately what percentage is doing each of the following? Attending a vocational-technical or business school

Variable Number: 97

Variable Name: C087603

Variable Description: Pct last yr's grads: Voc-technical/business school

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0 - 5%	472
2	6 - 10%	363
3	11 - 25%	235
4	26 - 50%	38
5	51 - 75%	5
6	Over 75%	1
7	I don't know	209
8	Omitted	36
9	Missing	50

Of the students in last year's graduating class, approximately what percentage is doing each of the following? Working for pay

Variable Number: 98

Variable Name: C087604

Variable Description: Pct last yr's grads: Working for pay

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0 - 5%	333
2	6 - 10%	245
3	11 - 25%	276
4	26 - 50%	145
5	51 - 75%	69
6	Over 75%	27
7	I don't know	235
8	Omitted	29
9	Missing	50

Of the students in last year's graduating class, approximately what percentage is doing each of the following? Serving in the military (excluding ROTC and military academies)

Variable Number: 99

Variable Name: C087605

Variable Description: Pct last yr's grads: Military(not ROTC,mil. acad)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0 - 5%	909
2	6 - 10%	236
3	11 - 25%	38
4	26 - 50%	1
5	51 - 75%	0
6	Over 75%	0
7	I don't know	144
8	Omitted	31
9	Missing	50

Does your school offer any of the following services to students on a regular basis? Career and technical education workshops

Variable Number: 100

Variable Name: C107001

Variable Description: School offers career and technical education workshops

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	999
2	No	350
8	Omitted	10
9	Missing	50

Does your school offer any of the following services to students on a regular basis? Career counseling services or programs

Variable Number: 101

Variable Name: C107002

Variable Description: School offers career counseling services or programs

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,268
2	No	84
8	Omitted	7
9	Missing	50

Does your school offer any of the following services to students on a regular basis? Job placement services

Variable Number: 102

Variable Name: C107003

Variable Description: School offers job placement services

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	573
2	No	774
8	Omitted	12
9	Missing	50

Does your school offer any of the following services to students on a regular basis? Career days or job fairs

Variable Number: 103

Variable Name: C107004

Variable Description: School offers career days or job fairs

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,131
2	No	220
8	Omitted	8
9	Missing	50

Does your school offer any of the following services to students on a regular basis? Career or employment readiness workshops

Variable Number: 104

Variable Name: C107005

Variable Description: School offers career or employment readiness workshops

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	835
2	No	513
8	Omitted	11
9	Missing	50

During a typical week of school, what is the total number of regularly scheduled volunteers, including parents, working in the school?

Variable Number: 105

Variable Name: C087201

Variable Description: During typ wk, total # reg scheduled volunteers

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0	356
2	1 - 5	667
3	6 - 10	179
4	11 - 15	72
5	16 - 25	40
6	More than 25	37
8	Omitted	8
9	Missing	50

Approximately what percentage of students in your school have parents or guardians who do each of the following activities? Volunteer regularly to help in the classroom or another part of the school

Variable Number: 106

Variable Name: C087301

Variable Description: Pct of parents volunteer to help in class/other

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not applicable	282
2	0 - 10%	920
3	11 - 25%	100
4	26 - 50%	32
5	Over 50%	17
8	Omitted	8
9	Missing	50

Approximately what percentage of students in your school have parents or guardians who do each of the following activities? Attend teacher–parent conferences

Variable Number: 107

Variable Name: C087302

Variable Description: Pct of parents attend teacher-parent conferences

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not applicable	94
2	0 - 10%	230
3	11 - 25%	387
4	26 - 50%	367
5	Over 50%	271
8	Omitted	10
9	Missing	50

Around the first of October, how many TEACHERS held full-time or part-time positions or assignments in this school? Full-time teachers

Variable Number: 108

Variable Name: C078501

Variable Description: Number of full-time teachers in October

Variable Type: Numeric, length 3

Value	Description	Frequency
0-845	0 - 845	1,337
Missing	Missing	72

Around the first of October, how many TEACHERS held full-time or part-time positions or assignments in this school? Part-time teachers

Variable Number: 109

Variable Name: C078502

Variable Description: Number of part-time teachers in October

Variable Type: Numeric, length 3

Value	Description	Frequency
0-77	0 - 77	1,227
Missing	Missing	182

Does your school, district, or diocese offer tenure to teachers?

Variable Number: 110

Variable Name: C105401

Variable Description: School/district/diocese offers tenure to teachers

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	802
2	No	548
8	Omitted	9
9	Missing	50

In this school year, which of the following types of computers or other digital devices are available in your school for student use? Desktop computers

Variable Number: 111

Variable Name: C101201

Variable Description: In schl, PC/oth.dig.dev avail - Desktop computers

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,176
8	Omitted	183
9	Missing	50

In this school year, which of the following types of computers or other digital devices are available in your school for student use? Laptop computers (including Chromebooks)

Variable Number: 112

Variable Name: C101202

Variable Description: In schl, PC/oth.dig.dev avail - Laptop computers

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,310
8	Omitted	49
9	Missing	50

In this school year, which of the following types of computers or other digital devices are available in your school for student use? Tablets (for example, Surface Pro, iPad, Kindle Fire)

Variable Number: 113

Variable Name: C101203

Variable Description: In schl, PC/oth.dig.dev avail - Tablets

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	737
8	Omitted	622
9	Missing	50

What is the average age of the desktop computers in your school?

Variable Number: 114

Variable Name: C101351

Variable Description: Average age of desktop computers in your school

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Up to 2 years old	99
2	> 2 but < 4 years old	486
3	> 4 but < 6 years old	353
4	6 years old or more	160
5	I don't know	74
8	Omitted	4
9	Missing	233

In your school, where are desktop computers available for students to work? In some classrooms

Variable Number: 115

Variable Name: C101451

Variable Description: In schl, desktops avail - In some classrooms

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	811
8	Omitted	365
9	Missing	233

In your school, where are desktop computers available for students to work? In all classrooms

Variable Number: 116

Variable Name: C101452

Variable Description: In schl, desktops avail - In all classrooms

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	135
8	Omitted	1,041
9	Missing	233

In your school, where are desktop computers available for students to work? In a media center

Variable Number: 117

Variable Name: C101453

Variable Description: In schl, desktops avail - In a media center

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	651
8	Omitted	525
9	Missing	233

In your school, where are desktop computers available for students to work? In a computer lab

Variable Number: 118

Variable Name: C101454

Variable Description: In schl, desktops avail - In a computer lab

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,011
8	Omitted	165
9	Missing	233

In your school, where are desktop computers available for students to work? In the school library

Variable Number: 119

Variable Name: C101455

Variable Description: In schl, desktops avail - In the school library

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	817
8	Omitted	359
9	Missing	233

What is the total number of laptop computers (including Chromebooks) available for students in your school?

Variable Number: 120

Variable Name: C101551

Variable Description: Total number of laptops available for stud in schl

Variable Type: Numeric, length 4

Value	Description	Frequency
0-4680	0 - 4,680	1,287
Missing	Missing	122

What is the average age of the laptop computers (including Chromebooks) in your school?

Variable Number: 121

Variable Name: C101651

Variable Description: Average age of laptop computers in your school

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Up to 2 years old	411
2	> 2 but < 4 years old	663
3	> 4 but < 6 years old	140
4	6 years old or more	33
5	I don't know	50
8	Omitted	8
9	Missing	104

In your school, where are laptop computers (including Chromebooks) available for students to work? In some classrooms

Variable Number: 122

Variable Name: C101751

Variable Description: In schl, laptops avail - In some classrooms

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	630
8	Omitted	675
9	Missing	104

In your school, where are laptop computers (including Chromebooks) available for students to work? In all classrooms

Variable Number: 123

Variable Name: C101752

Variable Description: In schl, laptops avail - In all classrooms

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	493
8	Omitted	812
9	Missing	104

In your school, where are laptop computers (including Chromebooks) available for students to work? In a media center

Variable Number: 124

Variable Name: C101753

Variable Description: In schl, laptops avail - In a media center

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	509
8	Omitted	796
9	Missing	104

In your school, where are laptop computers (including Chromebooks) available for students to work? In a computer lab

Variable Number: 125

Variable Name: C101754

Variable Description: In schl, laptops avail - In a computer lab

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	440
8	Omitted	865
9	Missing	104

In your school, where are laptop computers (including Chromebooks) available for students to work? In the school library

Variable Number: 126

Variable Name: C101755

Variable Description: In schl, laptops avail - In the school library

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	567
8	Omitted	738
9	Missing	104

In your school, where are laptop computers (including Chromebooks) available for students to work? On mobile carts

Variable Number: 127

Variable Name: C101756

Variable Description: In schl, laptops avail - On mobile carts

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	948
8	Omitted	357
9	Missing	104

What is the total number of tablets (for example, Surface Pro, iPad, Kindle Fire) available for students in your school?

Variable Number: 128

Variable Name: C101851

Variable Description: Total number of tablets available for stud in schl

Variable Type: Numeric, length 4

Value	Description	Frequency
0-4500	0 - 4,500	718
Missing	Missing	691

What is the average age of the tablets (for example, Surface Pro, iPad, Kindle Fire) in your school?

Variable Number: 129

Variable Name: C101951

Variable Description: Average age of tablets in your school

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Up to 2 years old	130
2	> 2 but < 4 years old	323
3	> 4 but < 6 years old	181
4	6 years old or more	46
5	I don't know	28
8	Omitted	3
9	Missing	698

In your school, where are tablets (for example, Surface Pro, iPad, Kindle Fire) available for students to work? In some classrooms

Variable Number: 130

Variable Name: C102051

Variable Description: In schl, tablets avail - In some classrooms

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	445
8	Omitted	266
9	Missing	698

In your school, where are tablets (for example, Surface Pro, iPad, Kindle Fire) available for students to work? In all classrooms

Variable Number: 131

Variable Name: C102052

Variable Description: In schl, tablets avail - In all classrooms

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	79
8	Omitted	632
9	Missing	698

In your school, where are tablets (for example, Surface Pro, iPad, Kindle Fire) available for students to work? In a media center

Variable Number: 132

Variable Name: C102053

Variable Description: In schl, tablets avail - In a media center

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	195
8	Omitted	516
9	Missing	698

In your school, where are tablets (for example, Surface Pro, iPad, Kindle Fire) available for students to work? In a computer lab

Variable Number: 133

Variable Name: C102054

Variable Description: In schl, tablets avail - In a computer lab

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	98
8	Omitted	613
9	Missing	698

In your school, where are tablets (for example, Surface Pro, iPad, Kindle Fire) available for students to work? In the school library

Variable Number: 134

Variable Name: C102055

Variable Description: In schl, tablets avail - In the school library

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	205
8	Omitted	506
9	Missing	698

In your school, where are tablets (for example, Surface Pro, iPad, Kindle Fire) available for students to work? On mobile carts

Variable Number: 135

Variable Name: C102056

Variable Description: In schl, tablets avail - On mobile carts

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	368
8	Omitted	343
9	Missing	698

In your school, is there a wireless Internet connection that students can use for schoolwork?

Variable Number: 136

Variable Name: C102101

Variable Description: In schl, is wireless Internet connection available

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes, everywhere	1,278
2	Yes, in some areas	44
3	No	25
8	Omitted	12
9	Missing	50

Is there a reading specialist available (full- or part-time) to twelfth-grade students at your school?

Variable Number: 137

Variable Name: C088301

Variable Description: Full-/pt-time reading specialist available-Gr 12

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes, available full-time	150
2	Yes, available part-time	176
3	No	1,020
8	Omitted	13
9	Missing	50

To what extent are each of the following a responsibility of the reading specialist(s) available to twelfth-grade students at your school? Provide one-on-one help to students with various reading strategies (e.g., basic comprehension, making inferences, building vocabulary)

Variable Number: 138

Variable Name: C107101

Variable Description: G12 Read spec provide 1-on-1 help w/rd strategies

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	30
2	Small extent	132
3	Moderate extent	91
4	Large extent	77
8	Omitted	9
9	Missing	1,070

To what extent are each of the following a responsibility of the reading specialist(s) available to twelfth-grade students at your school? Provide one-on-one help to students at various achievement levels

Variable Number: 139

Variable Name: C107102

Variable Description: G12 Read spec provide one-on-one help var ach levls

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	35
2	Small extent	134
3	Moderate extent	95
4	Large extent	64
8	Omitted	11
9	Missing	1,070

Is there a literacy coach available (full- or part-time) to twelfth-grade teachers at your school?

Variable Number: 140

Variable Name: C088401

Variable Description: Full-/pt-time literacy coach avail-Gr 12 teachers

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes, available full-time	141
2	Yes, available part-time	178
3	No	1,026
8	Omitted	14
9	Missing	50

To what extent are each of the following a responsibility of the literacy coach(es) available to twelfth-grade teachers at your school? Provide assistance/support to individual teachers about English/language arts content or the teaching of English/language arts

Variable Number: 141

Variable Name: C084701

Variable Description: Provide assistance/support to individual teachers

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	17
2	Small extent	83
3	Moderate extent	95
4	Large extent	132
8	Omitted	6
9	Missing	1,076

To what extent are each of the following a responsibility of the literacy coach(es) available to twelfth-grade teachers at your school? Conduct professional development for groups of teachers about English/language arts content or the teaching of English/language arts

Variable Number: 142

Variable Name: C084702

Variable Description: Conduct professional dev for groups of teachers

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	20
2	Small extent	80
3	Moderate extent	111
4	Large extent	114
8	Omitted	8
9	Missing	1,076

To what extent is your school's English/language arts program structured according to the following resources? District curriculum standards or curriculum guides

Variable Number: 143

Variable Name: C063202

Variable Description: E/LA prog structured per district standards/guides

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	89
2	Small extent	119
3	Moderate extent	265
4	Large extent	870
8	Omitted	16
9	Missing	50

To what extent is your school's English/language arts program structured according to the following resources? State curriculum standards or frameworks

Variable Number: 144

Variable Name: C063201

Variable Description: E/LA prog structured per state standards/frameworks

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	21
2	Small extent	29
3	Moderate extent	206
4	Large extent	1,088
8	Omitted	15
9	Missing	50

To what extent is your school's English/language arts program structured according to the following resources? In-school curriculum frameworks and standards for learning

Variable Number: 145

Variable Name: C063204

Variable Description: E/LA prog structured per in-schl standards/frameworks

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	110
2	Small extent	226
3	Moderate extent	355
4	Large extent	643
8	Omitted	25
9	Missing	50

To what extent does your school's twelfth-grade English/language arts curriculum focus on preparation for the following types of assessments? District assessments

Variable Number: 146

Variable Name: C074103

Variable Description: Prep for district assessments in Eng/lang arts

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	339
2	Small extent	248
3	Moderate extent	339
4	Large extent	414
8	Omitted	19
9	Missing	50

To what extent does your school's twelfth-grade English/language arts curriculum focus on preparation for the following types of assessments? State assessments

Variable Number: 147

Variable Name: C074102

Variable Description: Prep for state assessments in Eng/lang arts

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	300
2	Small extent	195
3	Moderate extent	335
4	Large extent	509
8	Omitted	20
9	Missing	50

To what extent does your school's twelfth-grade English/language arts curriculum focus on preparation for the following types of assessments? School assessments (e.g., quizzes or tests created by teachers)

Variable Number: 148

Variable Name: C074104

Variable Description: Prep for school assessments in Eng/lang arts

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	13
2	Small extent	45
3	Moderate extent	327
4	Large extent	958
8	Omitted	16
9	Missing	50

In addition to English/language arts teachers, does your school have the following personnel to assist with English/language arts class instruction for twelfth-grade students with disabilities (SD)? Special Education teachers (and related service providers)

Variable Number: 149

Variable Name: C084801

Variable Description: SD - Special Ed teachers (& related svc providers)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,286
2	No	64
8	Omitted	9
9	Missing	50

In addition to English/language arts teachers, does your school have the following personnel to assist with English/language arts class instruction for twelfth-grade students with disabilities (SD)? Reading specialists or literacy coaches

Variable Number: 150

Variable Name: C084802

Variable Description: SD - Reading specialists or literacy coaches

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	455
2	No	885
8	Omitted	19
9	Missing	50

In addition to English/language arts teachers, does your school have the following personnel to assist with English/language arts class instruction for twelfth-grade students with disabilities (SD)? Speech pathologists

Variable Number: 151

Variable Name: C084803

Variable Description: SD - Speech pathologists

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,107
2	No	242
8	Omitted	10
9	Missing	50

In addition to English/language arts teachers, does your school have the following personnel to assist with English/language arts class instruction for twelfth-grade students with disabilities (SD)? Paraprofessionals or teacher aides who are trained to work with students with disabilities

Variable Number: 152

Variable Name: C084804

Variable Description: SD - Paraprofessionals/teacher aides-trained

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,148
2	No	200
8	Omitted	11
9	Missing	50

In addition to English/language arts teachers, does your school have the following personnel to assist with English/language arts class instruction for twelfth-grade students with disabilities (SD)? Parent volunteers

Variable Number: 153

Variable Name: C084807

Variable Description: SD - Parent volunteers

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	156
2	No	1,185
8	Omitted	18
9	Missing	50

In addition to English/language arts teachers, does your school have the following personnel to assist with English/language arts class instruction for twelfth-grade English-language learners (ELLs)? Certified ELL/bilingual education teachers

Variable Number: 154

Variable Name: C088503

Variable Description: EL - Certified EL/bilingual education teachers

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,011
2	No	331
8	Omitted	17
9	Missing	50

In addition to English/language arts teachers, does your school have the following personnel to assist with English/language arts class instruction for twelfth-grade English-language learners (ELLs)? Reading specialists or literacy coaches

Variable Number: 155

Variable Name: C088501

Variable Description: EL - Reading specialists or literacy coaches

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	424
2	No	914
8	Omitted	21
9	Missing	50

In addition to English/language arts teachers, does your school have the following personnel to assist with English/language arts class instruction for twelfth-grade English-language learners (ELLs)? Speech pathologists

Variable Number: 156

Variable Name: C088502

Variable Description: EL - Speech pathologists

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	893
2	No	449
8	Omitted	17
9	Missing	50

In addition to English/language arts teachers, does your school have the following personnel to assist with English/language arts class instruction for twelfth-grade English-language learners (ELLs)? Paraprofessionals or teacher aides who are trained to work with students who are ELLs

Variable Number: 157

Variable Name: C088504

Variable Description: EL- Paraprofessionals/teacher aides-trained

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	793
2	No	551
8	Omitted	15
9	Missing	50

In addition to English/language arts teachers, does your school have the following personnel to assist with English/language arts class instruction for twelfth-grade English-language learners (ELLs)? Parent volunteers

Variable Number: 158

Variable Name: C088507

Variable Description: EL - Parent volunteers

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	125
2	No	1,214
8	Omitted	20
9	Missing	50

How much is your school's ability to provide instruction affected by a lack of the following resources? Teachers with a specialization in English/language arts

Variable Number: 159

Variable Name: C102501

Variable Description: Schl affected by lack of E/LA teacher specialists

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	912
2	A little	192
3	Some	133
4	A lot	111
8	Omitted	11
9	Missing	50

How much is your school's ability to provide instruction affected by a lack of the following resources? Computer software for English/language arts instruction

Variable Number: 160

Variable Name: C102502

Variable Description: Schl affected by lack of software for E/LA instruction

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	779
2	A little	304
3	Some	190
4	A lot	74
8	Omitted	12
9	Missing	50

How much is your school's ability to provide instruction affected by a lack of the following resources? Library books

Variable Number: 161

Variable Name: C102503

Variable Description: Schl affected by lack of library books

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	904
2	A little	226
3	Some	121
4	A lot	95
8	Omitted	13
9	Missing	50

Does your school offer online English/language arts courses for credit?

Variable Number: 162

Variable Name: C066701

Variable Description: Schl has online Eng/lang arts courses for credit

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	926
2	No	419
8	Omitted	14
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement English Language and Composition

Variable Number: 163

Variable Name: C074301

Variable Description: AP English language and composition

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,027
2	No	322
8	Omitted	10
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement English Literature and Composition

Variable Number: 164

Variable Name: C074303

Variable Description: AP English literature and composition

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,056
2	No	290
8	Omitted	13
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? English language and composition (beyond an introductory course)

Variable Number: 165

Variable Name: C074305

Variable Description: English language & composition (beyond intro)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	985
2	No	360
8	Omitted	14
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? English literature and composition (beyond an introductory course)

Variable Number: 166

Variable Name: C074306

Variable Description: English literature & composition (beyond intro)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	971
2	No	375
8	Omitted	13
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? International Baccalaureate Language A1

Variable Number: 167

Variable Name: C074307

Variable Description: International Baccalaureate Language A1

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	117
2	No	1,220
8	Omitted	22
9	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in an English/language arts academic course for dual credit taught at the following locations? On your high school campus

Variable Number: 168

Variable Name: C088601

Variable Description: % enrolled E/LA dual credit: HS campus

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0%	512
2	1 - 5%	246
3	6 - 10%	155
4	11 - 25%	185
5	26 - 50%	113
6	51 - 75%	30
7	Over 75%	92
8	Omitted	26
9	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in an English/language arts academic course for dual credit taught at the following locations? On a postsecondary campus

Variable Number: 169

Variable Name: C088602

Variable Description: % enrolled E/LA dual credit: Postsecondary campus

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0%	592
2	1 - 5%	464
3	6 - 10%	142
4	11 - 25%	90
5	26 - 50%	23
6	51 - 75%	5
7	Over 75%	13
8	Omitted	30
9	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in an English/language arts academic course for dual credit taught at the following locations? Through distance learning

Variable Number: 170

Variable Name: C088605

Variable Description: % enrolled E/LA dual credit: Distance learning

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0%	905
2	1 - 5%	321
3	6 - 10%	43
4	11 - 25%	37
5	26 - 50%	11
6	51 - 75%	4
7	Over 75%	0
8	Omitted	38
9	Missing	50

Beginning with ninth grade, how many years (or Carnegie-unit equivalents) of course work in mathematics does your school or district require for graduation?

Variable Number: 171

Variable Name: C091201

Variable Description: Years of math coursework required for graduation

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Less than two years	9
2	Two years	59
3	Three years	599
4	Four years	675
5	More than four years	3
8	Omitted	14
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Pre-calculus or introductory analysis

Variable Number: 172

Variable Name: C083501

Variable Description: Pre-calculus or introductory analysis

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,236
2	No	107
8	Omitted	16
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Integrated mathematics 3 (third year of a multi-year course)

Variable Number: 173

Variable Name: C083514

Variable Description: Integrated math 3 (3rd year of multi-year course)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	509
2	No	817
8	Omitted	33
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Integrated mathematics 4 (fourth year of a multi-year course)

Variable Number: 174

Variable Name: C083515

Variable Description: Integrated math 4 (4th year of multi-year course)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	336
2	No	987
8	Omitted	36
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Trigonometry

Variable Number: 175

Variable Name: C045805

Variable Description: Trigonometry

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	726
2	No	600
8	Omitted	33
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? International Baccalaureate (IB) Mathematics

Variable Number: 176

Variable Name: C083504

Variable Description: International Baccalaureate Mathematics

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	123
2	No	1,189
8	Omitted	47
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement (AP) Calculus AB

Variable Number: 177

Variable Name: C083505

Variable Description: Advanced Placement (AP) Calculus AB

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,004
2	No	333
8	Omitted	22
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement (AP) Calculus BC

Variable Number: 178

Variable Name: C083506

Variable Description: Advanced Placement (AP) Calculus BC

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	673
2	No	645
8	Omitted	41
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Calculus (other than Advanced Placement [AP] Calculus)

Variable Number: 179

Variable Name: C083507

Variable Description: Calculus (other than AP Calculus)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	649
2	No	672
8	Omitted	38
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement (AP) Statistics

Variable Number: 180

Variable Name: C083508

Variable Description: Advanced Placement (AP) Statistics

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	809
2	No	522
8	Omitted	28
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Probability and/or statistics (other than Advanced Placement [AP] Statistics)

Variable Number: 181

Variable Name: C083509

Variable Description: Probability and/or statistics(other than AP Stats)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	585
2	No	737
8	Omitted	37
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement (AP) Computer Science Principles

Variable Number: 182

Variable Name: C083516

Variable Description: Courses taught in Advanced Placement Computer Science Principles

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	489
2	No	836
8	Omitted	34
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement (AP) Computer Science A

Variable Number: 183

Variable Name: C083510

Variable Description: Advanced Placement (AP) Computer Science A

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	406
2	No	912
8	Omitted	41
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Computer science (other than Advanced Placement [AP] Computer Science)

Variable Number: 184

Variable Name: C083511

Variable Description: Computer science (other than AP Computer Science)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	612
2	No	713
8	Omitted	34
9	Missing	50

Which of the following mathematics courses are required for high school graduation? Algebra I

Variable Number: 185

Variable Name: C067301

Variable Description: Graduation requirement of algebra I

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,178
2	No	153
8	Omitted	28
9	Missing	50

Which of the following mathematics courses are required for high school graduation? Geometry

Variable Number: 186

Variable Name: C067302

Variable Description: Graduation requirement of geometry

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,099
2	No	228
8	Omitted	32
9	Missing	50

Which of the following mathematics courses are required for high school graduation? Algebra II

Variable Number: 187

Variable Name: C067303

Variable Description: Graduation requirement of algebra II

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	879
2	No	439
8	Omitted	41
9	Missing	50

Which of the following mathematics courses are required for high school graduation?

Statistics/Probability

Variable Number: 188

Variable Name: C067304

Variable Description: Graduation requirement of statistics/probability

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	149
2	No	1,107
8	Omitted	103
9	Missing	50

Which of the following mathematics courses are required for high school graduation? Integrated mathematics 1 (first year of a multi-year course)

Variable Number: 189

Variable Name: C067311

Variable Description: Integrated math 1 (1st year of multi-year course)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	238
2	No	1,024
8	Omitted	97
9	Missing	50

Which of the following mathematics courses are required for high school graduation? Integrated mathematics 2 (second year of a multi-year course)

Variable Number: 190

Variable Name: C067312

Variable Description: Integrated math 2 (2nd year of multi-year course)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	206
2	No	1,057
8	Omitted	96
9	Missing	50

Which of the following mathematics courses are required for high school graduation? Integrated mathematics 3 (third year of a multi-year course)

Variable Number: 191

Variable Name: C067313

Variable Description: Integrated math 3 (3rd year of multi-year course)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	159
2	No	1,095
8	Omitted	105
9	Missing	50

Which of the following mathematics courses are required for high school graduation? Integrated mathematics 4 (fourth year of a multi-year course)

Variable Number: 192

Variable Name: C067314

Variable Description: Integrated math 4 (4th year of multi-year course)

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	84
2	No	1,174
8	Omitted	101
9	Missing	50

Which of the following mathematics courses are required for high school graduation? Other mathematics course

Variable Number: 193

Variable Name: C067310

Variable Description: Is other math course required for graduation

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	429
2	No	703
8	Omitted	227
9	Missing	50

Which of the following mathematics courses are required for high school graduation? Other mathematics course (write-in)

Variable Number: 194

Variable Name: CW6731A

Variable Description: Other mathematics course (specify): write-in

Variable Type: Character, length 50

Value	Description	Frequency
All values	All other mathematics course write-ins	428
Missing	Not applicable	981

Does your school offer online mathematics courses for credit?

Variable Number: 195

Variable Name: C054801

Variable Description: School offers online math courses for credit

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	871
2	No	473
8	Omitted	15
9	Missing	50

In your school, approximately what percentage of twelfth-grade students enroll in more than one mathematics class in a year (including summer school or two-block classes) for remediation or to catch up a grade level? Do not include students who receive additional mathematics instruction as part of special education or because of IEP provisions.

Variable Number: 196

Variable Name: C106801

Variable Description: Pct of gr 12 students enrolled in more than one math class/yr for remediation

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0 - 10%	958
2	11 - 20%	201
3	21 - 30%	66
4	31 - 40%	33
5	41 - 50%	18
6	More than 50%	67
8	Omitted	16
9	Missing	50

In this school year, what percentage of students have gone to other schools (a neighboring high school or college) to receive mathematics instruction?

Variable Number: 197

Variable Name: C106901

Variable Description: Percent of grade 12 students gone to other schools for math instruction

Variable Type: Character, length 2

Value	Description	Frequency
00	Multiple responses	0
01	0%	802
02	1 - 5%	427
03	6 - 10%	74
04	11 - 20%	18
05	21 - 30%	7
06	31 - 40%	2
07	41 - 50%	3
08	More than 50%	11
88	Omitted	15
99	Missing	50

This year, how many teachers are teaching mathematics in your school?

Variable Number: 198

Variable Name: C103701

Variable Description: This yr, num of teachers teaching math in school

Variable Type: Numeric, length 3

Value	Description	Frequency
1-60	1 - 60	1,343
Missing	Missing	66

Is there a mathematics coach available (full- or part-time) to twelfth-grade teachers at your school?

Variable Number: 199

Variable Name: C088201

Variable Description: Full-/part-time math coach avail-Grade 12 teachers

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes, available full-time	126
2	Yes, available part-time	216
3	No	1,004
8	Omitted	13
9	Missing	50

To what extent are each of the following a responsibility of the mathematics coach(es) available to twelfth-grade teachers at your school? Provide support or assistance about mathematics content

Variable Number: 200

Variable Name: C083904

Variable Description: Math coach provides support about 12th grade math content

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	13
2	Small extent	65
3	Moderate extent	113
4	Large extent	148
8	Omitted	16
9	Missing	1,054

To what extent are each of the following a responsibility of the mathematics coach(es) available to twelfth-grade teachers at your school? Provide support or assistance about the teaching of mathematics to individual teachers

Variable Number: 201

Variable Name: C083905

Variable Description: Math coach provides individual support to 12th grade teachers

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	19
2	Small extent	67
3	Moderate extent	113
4	Large extent	140
8	Omitted	16
9	Missing	1,054

To what extent are each of the following a responsibility of the mathematics coach(es) available to twelfth-grade teachers at your school? Conduct professional development about mathematics or the teaching of mathematics for groups of teachers

Variable Number: 202

Variable Name: C083903

Variable Description: Conduct professional development about mathematics

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	33
2	Small extent	69
3	Moderate extent	115
4	Large extent	122
8	Omitted	16
9	Missing	1,054

To what extent is your school's mathematics program structured according to the following resources? District curriculum standards or curriculum guides

Variable Number: 203

Variable Name: C060902

Variable Description: Math program structured per district standards

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	93
2	Small extent	108
3	Moderate extent	285
4	Large extent	854
8	Omitted	19
9	Missing	50

To what extent is your school's mathematics program structured according to the following resources? State curriculum standards or frameworks

Variable Number: 204

Variable Name: C060901

Variable Description: Math program structured per state standards

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	20
2	Small extent	40
3	Moderate extent	210
4	Large extent	1,069
8	Omitted	20
9	Missing	50

To what extent is your school's mathematics program structured according to the following resources? In-school curriculum frameworks and standards for learning

Variable Number: 205

Variable Name: C060904

Variable Description: Math program structured per in-school standards

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	103
2	Small extent	201
3	Moderate extent	342
4	Large extent	685
8	Omitted	28
9	Missing	50

To what extent does your school's twelfth-grade mathematics curriculum focus on preparation for the following types of assessments? District assessments

Variable Number: 206

Variable Name: C107201

Variable Description: Prepare for district assessments in math

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	342
2	Small extent	220
3	Moderate extent	318
4	Large extent	456
8	Omitted	23
9	Missing	50

To what extent does your school's twelfth-grade mathematics curriculum focus on preparation for the following types of assessments? State assessments

Variable Number: 207

Variable Name: C107202

Variable Description: Prepare for state assessments in math

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	271
2	Small extent	161
3	Moderate extent	328
4	Large extent	579
8	Omitted	20
9	Missing	50

To what extent does your school's twelfth-grade mathematics curriculum focus on preparation for the following types of assessments? School assessments (e.g., quizzes or tests created by teachers)

Variable Number: 208

Variable Name: C107203

Variable Description: Prepare for school assessments in math

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	16
2	Small extent	53
3	Moderate extent	304
4	Large extent	965
8	Omitted	21
9	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in a distance learning course for the following subjects? English/language arts

Variable Number: 209

Variable Name: C107301

Variable Description: Pct of students enrolled in distance learning course for English/lang arts

Variable Type: Character, length 2

Value	Description	Frequency
00	Multiple responses	0
01	Not offered	530
02	0%	113
03	1 - 5%	532
04	6 - 10%	91
05	11 - 25%	45
06	26 - 50%	10
07	51 - 75%	3
08	Over 75%	6
88	Omitted	29
99	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in a distance learning course for the following subjects? Mathematics

Variable Number: 210

Variable Name: C107302

Variable Description: Percent of students enrolled in distance learning course for math

Variable Type: Character, length 2

Value	Description	Frequency
00	Multiple responses	0
01	Not offered	526
02	0%	136
03	1 - 5%	522
04	6 - 10%	84
05	11 - 25%	39
06	26 - 50%	13
07	51 - 75%	3
08	Over 75%	5
88	Omitted	31
99	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in a distance learning course for the following subjects? Social studies

Variable Number: 211

Variable Name: C107303

Variable Description: Percent of students enrolled in distance learning course for social studies

Variable Type: Character, length 2

Value	Description	Frequency
00	Multiple responses	0
01	Not offered	539
02	0%	131
03	1 - 5%	503
04	6 - 10%	85
05	11 - 25%	39
06	26 - 50%	16
07	51 - 75%	6
08	Over 75%	9
88	Omitted	31
99	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in a distance learning course for the following subjects? Science

Variable Number: 212

Variable Name: C107304

Variable Description: Percent of students enrolled in distance learning course for science

Variable Type: Character, length 2

Value	Description	Frequency
00	Multiple responses	0
01	Not offered	579
02	0%	169
03	1 - 5%	478
04	6 - 10%	58
05	11 - 25%	26
06	26 - 50%	9
07	51 - 75%	6
08	Over 75%	4
88	Omitted	30
99	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in a distance learning course for the following subjects? Computer science

Variable Number: 213

Variable Name: C107305

Variable Description: Percent of students enrolled in distance learning course for computer science

Variable Type: Character, length 2

Value	Description	Frequency
00	Multiple responses	0
01	Not offered	727
02	0%	303
03	1 - 5%	264
04	6 - 10%	19
05	11 - 25%	12
06	26 - 50%	2
07	51 - 75%	0
08	Over 75%	3
88	Omitted	29
99	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in a distance learning course for the following subjects? Foreign languages

Variable Number: 214

Variable Name: C107306

Variable Description: Percent of students enrolled in distance learning course for foreign languages

Variable Type: Character, length 2

Value	Description	Frequency
00	Multiple responses	0
01	Not offered	619
02	0%	248
03	1 - 5%	387
04	6 - 10%	37
05	11 - 25%	20
06	26 - 50%	9
07	51 - 75%	2
08	Over 75%	7
88	Omitted	30
99	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in a distance learning course for the following subjects? Career and technical/vocational

Variable Number: 215

Variable Name: C107307

Variable Description: Pct of students enrolled in distance learning career and tech/voc course

Variable Type: Character, length 2

Value	Description	Frequency
00	Multiple responses	0
01	Not offered	709
02	0%	244
03	1 - 5%	280
04	6 - 10%	42
05	11 - 25%	32
06	26 - 50%	12
07	51 - 75%	4
08	Over 75%	4
88	Omitted	32
99	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in a mathematics academic course for dual credit taught at the following locations? On your high school campus

Variable Number: 216

Variable Name: C084201

Variable Description: % in dual credit math: On your hs campus

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0%	674
2	1 - 5%	281
3	6 - 10%	163
4	11 - 25%	129
5	26 - 50%	46
6	51 - 75%	17
7	Over 75%	19
8	Omitted	30
9	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in a mathematics academic course for dual credit taught at the following locations? On a postsecondary campus

Variable Number: 217

Variable Name: C084202

Variable Description: % in dual credit math: On postsecondary campus

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0%	656
2	1 - 5%	503
3	6 - 10%	102
4	11 - 25%	43
5	26 - 50%	7
6	51 - 75%	3
7	Over 75%	7
8	Omitted	38
9	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in a mathematics academic course for dual credit taught at the following locations? Through distance learning

Variable Number: 218

Variable Name: C084205

Variable Description: % in dual credit math: Through distance learning

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0%	962
2	1 - 5%	282
3	6 - 10%	45
4	11 - 25%	15
5	26 - 50%	6
6	51 - 75%	3
7	Over 75%	1
8	Omitted	45
9	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in a career and technical/vocational course for dual credit taught at the following locations? On your high school campus

Variable Number: 219

Variable Name: C084301

Variable Description: % in dual credit career: On your hs campus

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0%	735
2	1 - 5%	279
3	6 - 10%	130
4	11 - 25%	90
5	26 - 50%	56
6	51 - 75%	21
7	Over 75%	11
8	Omitted	37
9	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in a career and technical/vocational course for dual credit taught at the following locations? On a postsecondary campus

Variable Number: 220

Variable Name: C084302

Variable Description: % in dual credit career: On postsecondary campus

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0%	867
2	1 - 5%	336
3	6 - 10%	62
4	11 - 25%	34
5	26 - 50%	7
6	51 - 75%	2
7	Over 75%	2
8	Omitted	49
9	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in a career and technical/vocational course for dual credit taught at the following locations? On a career and technical/vocational school campus

Variable Number: 221

Variable Name: C084306

Variable Description: % in dual credit career: Tech/voc course at career-tech/voc campus

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0%	775
2	1 - 5%	302
3	6 - 10%	117
4	11 - 25%	91
5	26 - 50%	23
6	51 - 75%	3
7	Over 75%	2
8	Omitted	46
9	Missing	50

Approximately what percentage of students in this year's graduating class has enrolled in a career and technical/vocational course for dual credit taught at the following locations? Through distance learning

Variable Number: 222

Variable Name: C084305

Variable Description: % in dual credit career: Through distance learning

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	0%	1,144
2	1 - 5%	138
3	6 - 10%	16
4	11 - 25%	9
5	26 - 50%	3
6	51 - 75%	1
7	Over 75%	0
8	Omitted	48
9	Missing	50

In this school year, did your school offer any of the following activities? Peer tutoring in mathematics

Variable Number: 223

Variable Name: C102802

Variable Description: Schl offers: Peer tutoring in mathematics

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,037
2	No	305
8	Omitted	17
9	Missing	50

In this school year, did your school offer any of the following activities? Mathematics competitions

Variable Number: 224

Variable Name: C102803

Variable Description: Schl offers: Mathematics competitions

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	748
2	No	589
8	Omitted	22
9	Missing	50

In this school year, did your school offer any of the following activities? Chess clubs

Variable Number: 225

Variable Name: C102804

Variable Description: Schl offers: Chess clubs

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	635
2	No	704
8	Omitted	20
9	Missing	50

In this school year, did your school offer any of the following activities? Programming classes

Variable Number: 226

Variable Name: C102805

Variable Description: Schl offers: Programming classes

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	852
2	No	483
8	Omitted	24
9	Missing	50

In this school year, did your school offer any of the following activities? Mathematics clubs

Variable Number: 227

Variable Name: C102806

Variable Description: Schl offers: Mathematics clubs

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	707
2	No	631
8	Omitted	21
9	Missing	50

In this school year, did your school offer any of the following activities? Teacher-led tutoring sessions in mathematics for groups of students

Variable Number: 228

Variable Name: C102807

Variable Description: Schl offers: Tchr-led tutoring in math for groups

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,239
2	No	105
8	Omitted	15
9	Missing	50

Beginning with ninth grade, how many years (or Carnegie-unit equivalents) of course work in science does your school or district require for graduation?

Variable Number: 229

Variable Name: C097901

Variable Description: Yrs/Carnegie-units sci course work req'd for grad

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Less than two years	9
2	Two years	182
3	Three years	839
4	Four years	307
5	More than four years	1
8	Omitted	21
9	Missing	50

Does your school offer online science courses for credit?

Variable Number: 230

Variable Name: C068101

Variable Description: School offers online science courses for credit

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	787
2	No	554
8	Omitted	18
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement Biology

Variable Number: 231

Variable Name: C068001

Variable Description: Courses taught in AP biology

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	934
2	No	398
8	Omitted	27
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced physics (beyond an introductory course)

Variable Number: 232

Variable Name: C045803

Variable Description: Courses taught in advanced physics

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	711
2	No	611
8	Omitted	37
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced biology (beyond an introductory course)

Variable Number: 233

Variable Name: C045801

Variable Description: Courses taught in advanced biology

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	765
2	No	558
8	Omitted	36
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced chemistry (beyond an introductory course)

Variable Number: 234

Variable Name: C045802

Variable Description: Courses taught in advanced chemistry

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	775
2	No	551
8	Omitted	33
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? International Baccalaureate Design Technology

Variable Number: 235

Variable Name: C068010

Variable Description: Courses taught in IB design technology

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	29
2	No	1,280
8	Omitted	50
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced technology (beyond an introductory course)

Variable Number: 236

Variable Name: C068011

Variable Description: Courses taught in advanced technology

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	365
2	No	947
8	Omitted	47
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? International Baccalaureate Chemistry

Variable Number: 237

Variable Name: C068007

Variable Description: Courses taught in IB chemistry

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	95
2	No	1,221
8	Omitted	43
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? International Baccalaureate Physics

Variable Number: 238

Variable Name: C068009

Variable Description: Courses taught in IB physics

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	101
2	No	1,215
8	Omitted	43
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? International Baccalaureate Biology

Variable Number: 239

Variable Name: C068002

Variable Description: Courses taught in IB biology

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	111
2	No	1,207
8	Omitted	41
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced environmental science (beyond an introductory course)

Variable Number: 240

Variable Name: C068005

Variable Description: Courses taught in advanced environmental science

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	432
2	No	889
8	Omitted	38
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? International Baccalaureate Environmental Systems and Societies

Variable Number: 241

Variable Name: C068004

Variable Description: Courses taught in IB environmental science

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	51
2	No	1,261
8	Omitted	47
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement Environmental Science

Variable Number: 242

Variable Name: C068003

Variable Description: Courses taught in AP environmental science

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	621
2	No	705
8	Omitted	33
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement Chemistry

Variable Number: 243

Variable Name: C068006

Variable Description: Courses taught in AP chemistry

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	806
2	No	521
8	Omitted	32
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement Physics C

Variable Number: 244

Variable Name: C083517

Variable Description: AP Physics C taught at least one semester

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	351
2	No	962
8	Omitted	46
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement Physics 1

Variable Number: 245

Variable Name: C083518

Variable Description: AP Physics 1 taught at least one semester

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	634
2	No	687
8	Omitted	38
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement Physics 2

Variable Number: 246

Variable Name: C083519

Variable Description: AP Physics 2 taught at least one semester

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	327
2	No	984
8	Omitted	48
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement Computer Science A

Variable Number: 247

Variable Name: C068012

Variable Description: AP Computer Science A taught at least 1 semester

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	409
2	No	908
8	Omitted	42
9	Missing	50

Are courses of at least one semester in length taught in your school in each of the following subjects? Advanced Placement Computer Science Principles

Variable Number: 248

Variable Name: C068013

Variable Description: AP Comp Sci principles taught at least 1 semester

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	433
2	No	886
8	Omitted	40
9	Missing	50

In addition to their regular classroom teacher, are there any additional full- or part-time science staff (e.g., a science specialist, science lead teacher, science supervisor, or science department head) available to twelfth-grade students at your school?

Variable Number: 249

Variable Name: C107401

Variable Description: Additional science staff available to G12 students

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes, available full-time	146
2	Yes, available part-time	142
3	No	1,053
8	Omitted	18
9	Missing	50

To what extent is each of the following a responsibility of the additional science staff available to twelfth-grade students at your school? Provide science course-related support, remediation, or intervention to individual students

Variable Number: 250

Variable Name: C107501

Variable Description: Science staff provides support to individuals

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	51
2	Small extent	117
3	Moderate extent	75
4	Large extent	48
8	Omitted	15
9	Missing	1,103

To what extent is each of the following a responsibility of the additional science staff available to twelfth-grade students at your school? Provide science course-related support, remediation, or intervention to groups of students

Variable Number: 251

Variable Name: C107502

Variable Description: Science staff provides support to groups of students

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	57
2	Small extent	109
3	Moderate extent	77
4	Large extent	48
8	Omitted	15
9	Missing	1,103

To what extent is each of the following a responsibility of the additional science staff available to twelfth-grade students at your school? Provide science enrichment to individual students

Variable Number: 252

Variable Name: C107503

Variable Description: Science staff provides enrichment to individuals

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	85
2	Small extent	114
3	Moderate extent	55
4	Large extent	37
8	Omitted	15
9	Missing	1,103

To what extent is each of the following a responsibility of the additional science staff available to twelfth-grade students at your school? Provide science enrichment to groups of students

Variable Number: 253

Variable Name: C107504

Variable Description: Science staff provides enrichment to groups of students

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	81
2	Small extent	111
3	Moderate extent	54
4	Large extent	45
8	Omitted	15
9	Missing	1,103

Are there any additional full- or part-time science staff (e.g., a science coach, science lead teacher, science supervisor, or science department head) available to twelfth-grade teachers at your school?

Variable Number: 254

Variable Name: C107601

Variable Description: Additional science staff available to G12 teachers

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes, available full-time	160
2	Yes, available part-time	174
3	No	1,004
8	Omitted	21
9	Missing	50

To what extent is each of the following a responsibility of the additional science staff available to twelfth-grade teachers at your school? Provide support/assistance with science content or the teaching of science to individual teachers

Variable Number: 255

Variable Name: C107701

Variable Description: Science staff provides content support to individuals

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	19
2	Small extent	93
3	Moderate extent	113
4	Large extent	113
8	Omitted	17
9	Missing	1,054

To what extent is each of the following a responsibility of the additional science staff available to twelfth-grade teachers at your school? Provide technical support/assistance with lab equipment to individual teachers

Variable Number: 256

Variable Name: C107702

Variable Description: Science staff provides technical support to individuals

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	34
2	Small extent	114
3	Moderate extent	106
4	Large extent	82
8	Omitted	19
9	Missing	1,054

To what extent is each of the following a responsibility of the additional science staff available to twelfth-grade teachers at your school? Conduct professional development about science or the teaching of science for groups of teachers

Variable Number: 257

Variable Name: C107703

Variable Description: Science staff provides professional development

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	27
2	Small extent	95
3	Moderate extent	116
4	Large extent	99
8	Omitted	18
9	Missing	1,054

To what extent is your school's science program structured according to the following resources?

District curriculum standards or curriculum guides

Variable Number: 258

Variable Name: C061802

Variable Description: Sci prog structured per district standards

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	99
2	Small extent	130
3	Moderate extent	322
4	Large extent	784
8	Omitted	24
9	Missing	50

To what extent is your school's science program structured according to the following resources?

State curriculum standards or frameworks

Variable Number: 259

Variable Name: C061801

Variable Description: Sci prog structured per state standards

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	24
2	Small extent	50
3	Moderate extent	268
4	Large extent	1,000
8	Omitted	17
9	Missing	50

To what extent is your school's science program structured according to the following resources?

In-school curriculum frameworks and standards for learning

Variable Number: 260

Variable Name: C061804

Variable Description: Sci prog structured per in-school standards

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	83
2	Small extent	205
3	Moderate extent	378
4	Large extent	668
8	Omitted	25
9	Missing	50

To what extent is your school's science program structured according to the following resources?

Recommendations from school science department

Variable Number: 261

Variable Name: C061806

Variable Description: Sci prog structured per science department

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	114
2	Small extent	265
3	Moderate extent	448
4	Large extent	500
8	Omitted	32
9	Missing	50

To what extent does your school provide up-to-date technology resources for science teaching and learning?

Variable Number: 262

Variable Name: C105801

Variable Description: Schl provides up-to-date tech resources for sci T&L

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	12
2	Small extent	202
3	Moderate extent	714
4	Large extent	409
8	Omitted	22
9	Missing	50

Does your school have laboratory facilities for twelfth-grade science instruction?

Variable Number: 263

Variable Name: C098501

Variable Description: School has labs for grade 12 science

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	1,252
2	No	88
8	Omitted	19
9	Missing	50

To what extent do your school's science laboratories that are available for twelfth-grade instruction have the following features? Demonstration stations

Variable Number: 264

Variable Name: C098601

Variable Description: Lab - Demonstration stations

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	20
2	Small extent	112
3	Moderate extent	378
4	Large extent	734
8	Omitted	27
9	Missing	138

To what extent do your school's science laboratories that are available for twelfth-grade instruction have the following features? Student lab stations

Variable Number: 265

Variable Name: C098602

Variable Description: Lab - Student lab stations

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	7
2	Small extent	60
3	Moderate extent	324
4	Large extent	857
8	Omitted	23
9	Missing	138

To what extent do your school's science laboratories that are available for twelfth-grade instruction have the following features? Storage areas for chemicals and other supplies

Variable Number: 266

Variable Name: C098603

Variable Description: Lab - Storage areas for chemicals, other supplies

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	5
2	Small extent	43
3	Moderate extent	292
4	Large extent	907
8	Omitted	24
9	Missing	138

To what extent do your school's science laboratories that are available for twelfth-grade instruction have the following features? Electricity (e.g., power outlets for using lab equipment)

Variable Number: 267

Variable Name: C098604

Variable Description: Lab - Electricity

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	7
2	Small extent	43
3	Moderate extent	233
4	Large extent	962
8	Omitted	26
9	Missing	138

To what extent do your school's science laboratories that are available for twelfth-grade instruction have the following features? Running water

Variable Number: 268

Variable Name: C098605

Variable Description: Lab - Running water

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	6
2	Small extent	32
3	Moderate extent	237
4	Large extent	972
8	Omitted	24
9	Missing	138

To what extent do your school's science laboratories that are available for twelfth-grade instruction have the following features? Gas for burners

Variable Number: 269

Variable Name: C098606

Variable Description: Lab - Gas for burners

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	56
2	Small extent	77
3	Moderate extent	269
4	Large extent	844
8	Omitted	25
9	Missing	138

To what extent do your school's science laboratories that are available for twelfth-grade instruction have the following features? Hoods or air hoses

Variable Number: 270

Variable Name: C098607

Variable Description: Lab - Hoods or air hoses

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	73
2	Small extent	136
3	Moderate extent	308
4	Large extent	729
8	Omitted	25
9	Missing	138

To what extent do your school's science laboratories that are available for twelfth-grade instruction have the following features? Safety equipment (e.g., goggles, fire extinguishers, or eye wash stations)

Variable Number: 271

Variable Name: C098608

Variable Description: Lab - Safety equipment

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	6
2	Small extent	26
3	Moderate extent	188
4	Large extent	1,025
8	Omitted	26
9	Missing	138

To what extent do your school's science laboratories that are available for twelfth-grade instruction have the following features? Computers and other digital devices

Variable Number: 272

Variable Name: C098609

Variable Description: Lab - Computers

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	10
2	Small extent	106
3	Moderate extent	339
4	Large extent	790
8	Omitted	26
9	Missing	138

To what extent do your school's science laboratories that are available for twelfth-grade instruction have the following features? Internet connection

Variable Number: 273

Variable Name: C098610

Variable Description: Lab - Internet connection

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	1
2	Small extent	14
3	Moderate extent	153
4	Large extent	1,079
8	Omitted	24
9	Missing	138

In this school year, are any of the following types of science clubs offered to twelfth-grade students in your school? Teacher volunteered (initiated and run by individual teachers)

Variable Number: 274

Variable Name: C097301

Variable Description: This year, sci club: Teacher volunteered

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	844
2	No	492
8	Omitted	23
9	Missing	50

In this school year, are any of the following types of science clubs offered to twelfth-grade students in your school? School sponsored (initiated by school and run by school designated personnel)

Variable Number: 275

Variable Name: C097302

Variable Description: This year, sci club: School sponsored

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	741
2	No	594
8	Omitted	24
9	Missing	50

In this school year, are any of the following types of science clubs offered to twelfth-grade students in your school? Partnered with external agencies (e.g., universities, science museums, or companies)

Variable Number: 276

Variable Name: C097303

Variable Description: This year, sci club: External agency partnered

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	462
2	No	870
8	Omitted	27
9	Missing	50

To what extent does your school provide twelfth-grade students with the following learning experiences? Science fairs

Variable Number: 277

Variable Name: C098701

Variable Description: School provides: Science fairs

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	799
2	1-2 times per year	503
3	3 or more times per year	34
8	Omitted	23
9	Missing	50

To what extent does your school provide twelfth-grade students with the following learning experiences? Science competitions

Variable Number: 278

Variable Name: C098702

Variable Description: School provides: Science competitions

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	537
2	1-2 times per year	662
3	3 or more times per year	139
8	Omitted	21
9	Missing	50

To what extent does your school provide twelfth-grade students with the following learning experiences? Science-related field trips (e.g., museums, zoos, aquariums, science centers, or other similar sites)

Variable Number: 279

Variable Name: C098703

Variable Description: School provides: Science-related field trips

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Not at all	170
2	1-2 times per year	779
3	3 or more times per year	389
8	Omitted	21
9	Missing	50

Is your school a public charter school? (A charter school is a public school that, in accordance with an enabling state statute, has been granted a charter exempting it from selected state or local rules and regulations. A charter school may be a newly created school, or it may previously have been a public or private school.)

Variable Number: 280

Variable Name: CS03001

Variable Description: School is a public charter school

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	49
2	No	1,276
8	Omitted	34
9	Missing	50

In which year did your school start providing instruction as a charter school?**Variable Number: 281****Variable Name: CS00302****Variable Description:** Year your school started providing instruction**Variable Type:** Numeric, length 4

Value	Description	Frequency
0-2016	0000 - 2016	50
Missing	Missing	1,359

Variable Number: 282**Variable Name: CS01101****Variable Description:** Number of years since charter was granted**Variable Type:** Character, length 2

Value	Description	Frequency
00	< 1 year	0
01	1 year	2
02	2 years	0
03	3 years	2
04	4 years	1
05	5 years	4
06	6 years	7
07	7 years	2
08	8 years	2
09	9 years	4
10	10 years	1
11	11 years	0
12	12 years or more	24
88	Omitted	1,309
99	Missing	51

Who granted your school's current charter?**Variable Number: 283****Variable Name: CS04101****Variable Description:** Who granted your school's charter**Variable Type:** Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	School district	21
2	State Board of Education	14
3	Postsecondary institution	3
4	State charter/grantor	10
5	City or state board	2
8	Omitted	1,309
9	Missing	50

What is the legal status of your school?

Variable Number: 284

Variable Name: CS02801

Variable Description: Legal status of school

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Part of LEA	25
2	Independent from LEA	15
3	Separate LEA	12
8	Omitted	1,307
9	Missing	50

Is this school operated by a company or organization that also operates other charter schools?

Variable Number: 285

Variable Name: C085201

Variable Description: Schl run by comp/org that runs other charter schools

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	20
2	No	32
8	Omitted	1,307
9	Missing	50

Which one of the following best describes your charter school's primary focus in terms of program content?

Variable Number: 286

Variable Name: CS02701

Variable Description: Charter school's primary program content

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	No special focus	31
2	Curricular focus	16
3	Educational theory	1
4	Moral philosophy	4
8	Omitted	1,307
9	Missing	50

Does your school provide a written contract for parents?

Variable Number: 287

Variable Name: C085401

Variable Description: Does school provide written contract for parents

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes, required	17
2	Yes, voluntary	9
3	No	26
8	Omitted	1,307
9	Missing	50

Are the following elements addressed in your charter–parent contract? Dress code

Variable Number: 288

Variable Name: C085501

Variable Description: Addressed in contract: Dress code

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	26
2	No	1
8	Omitted	1,306
9	Missing	76

Are the following elements addressed in your charter–parent contract? Home learning environment

Variable Number: 289

Variable Name: C085502

Variable Description: Addressed in contract: Home learning environment

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	17
2	No	9
8	Omitted	1,307
9	Missing	76

Are the following elements addressed in your charter–parent contract? Homework

Variable Number: 290

Variable Name: C085503

Variable Description: Addressed in contract: Homework

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	21
2	No	5
8	Omitted	1,307
9	Missing	76

Are the following elements addressed in your charter–parent contract? Parent–teacher communication

Variable Number: 291

Variable Name: C085504

Variable Description: Addressed in contract: Parent-teacher communication

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	26
2	No	1
8	Omitted	1,306
9	Missing	76

Are the following elements addressed in your charter–parent contract? Parent volunteering

Variable Number: 292

Variable Name: C085505

Variable Description: Addressed in contract: Parent volunteering

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	18
2	No	8
8	Omitted	1,307
9	Missing	76

Are the following elements addressed in your charter–parent contract? School discipline policy

Variable Number: 293

Variable Name: C085506

Variable Description: Addressed in contract: School discipline policy

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	25
2	No	2
8	Omitted	1,306
9	Missing	76

Are the following elements addressed in your charter–parent contract? Student attendance

Variable Number: 294

Variable Name: C085507

Variable Description: Addressed in contract: Student attendance

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	26
2	No	1
8	Omitted	1,306
9	Missing	76

Are the following elements addressed in your charter–parent contract? Student promotion policy

Variable Number: 295

Variable Name: C085508

Variable Description: Addressed in contract: Student promotion policy

Variable Type: Character, length 1

Value	Description	Frequency
0	Multiple responses	0
1	Yes	21
2	No	5
8	Omitted	1,307
9	Missing	76

Appendix M

2019 High School Transcript Study Codebook for Student File

2019 NAEP HSTS Student Data Codebook

Variable Number: 1

Variable Name: SCHOOLID

Variable Description: School ID

Variable Type: Character, length 7

Value	Description	Frequency
0130013 - 5630043	All school ID values	47,274

Variable Number: 2

Variable Name: STUDENTI

Variable Description: Student ID

Variable Type: Character, length 10

Value	Description	Frequency
1016004661-6946012793	All student ID values	47,274

Variable Number: 3

Variable Name: EXITSTS

Variable Description: Student Exit Status

Variable Type: Character, length 1

Value	Description	Frequency
1	Standard diploma	43,101
2	Honors diploma	4,173

Variable Number: 4

Variable Name: SEX

Variable Description: Student Gender

Variable Type: Character, length 1

Value	Description	Frequency
1	Male	23,794
2	Female	23,473
9	Missing	7

Variable Number: 5

Variable Name: RACE

Variable Description: Student Race/Ethnicity (pre-2011 categories)

Variable Type: Character, length 1

Value	Description	Frequency
1	White	21,636
2	Black	7,684
3	Hispanic	13,080
4	Asian	2,647
5	American Indian/Alaska Native	808
6	Other	1,409
9	Missing	10

Variable Number: 6

Variable Name: RACE8

Variable Description: Student Race/Ethnicity (2011 categories)

Variable Type: Character, length 1

Value	Description	Frequency
1	White	21,636
2	Black	7,684
3	Hispanic	13,080
4	Asian	2,521
5	American Indian/Alaska Native	808
6	Native Hawaiian/Other Pacific Islander	126
7	Two or more races	1,409
8	Not reported	3
9	Missing	7

Variable Number: 7

Variable Name: MOB

Variable Description: Student Month of Birth

Variable Type: Character, length 2

Value	Description	Frequency
01	January	3,904
02	February	3,537
03	March	3,950
04	April	3,871
05	May	3,964
06	June	3,895
07	July	4,063
08	August	4,336
09	September	4,039
10	October	3,962
11	November	3,807
12	December	3,946
99	Missing	0

Variable Number: 8

Variable Name: YOB

Variable Description: Student Year of Birth

Variable Type: Character, length 4

Value	Description	Frequency
1997	1997	59
1998	1998	137
1999	1999	1,158
2000	2000	16,426
2001	2001	29,242
2002	2002	244
2003	2003	8

Variable Number: 9

Variable Name: SD

Variable Description: Student Disability Status

Variable Type: Character, length 1

Value	Description	Frequency
1	Yes, IEP	4,354
2	Yes, 504 Plan	719
3	No	42,192
9	Missing	9

Variable Number: 10

Variable Name: ELL

Variable Description: English Learner Status

Variable Type: Character, length 1

Value	Description	Frequency
1	Yes, EL	2,107
2	No, formerly EL	907
3	No, not EL	44,250
9	Missing	10

Variable Number: 11

Variable Name: NSLP

Variable Description: National School Lunch Program Status

Variable Type: Character, length 1

Value	Description	Frequency
1	Not eligible	24,554
2	Free lunch	18,670
3	Reduced-price lunch	2,345
4	Not participating	1,210
5	School refused information	0
9	Missing	495

Variable Number: 12

Variable Name: MOG

Variable Description: Student Month of Graduation

Variable Type: Character, length 2

Value	Description	Frequency
01	January	13
02	February	13
03	March	53
04	April	53
05	May	12,799
06	June	8,522
07	July	92
08	August	42
09	September	34
10	October	2
11	November	0
12	December	6
99	Missing	25,645

Variable Number: 13

Variable Name: YOG

Variable Description: Student Year of Graduation

Variable Type: Character, length 4

Value	Description	Frequency
2010	2010	2
2018	2018	14
2019	2019	21,612
2020	2020	1
9999	Missing	25,645

Variable Number: 14

Variable Name: FINSTUWT

Variable Description: Final Usable Transcript Student Weight

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
3.25261809-568.81955311	All values	47,274

Variable Number: 15

Variable Name: REPWT1

Variable Description: Jackknife Replication Weight 1

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.78047543-609.26092571	All values	47,274

Variable Number: 16

Variable Name: REPWT2

Variable Description: Jackknife Replication Weight 2

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.51997870-572.93977243	All values	47,274

Variable Number: 17

Variable Name: REPWT3

Variable Description: Jackknife Replication Weight 3

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.78697307-564.27825350	All values	47,274

Variable Number: 18

Variable Name: REPWT4

Variable Description: Jackknife Replication Weight 4

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.57724687-570.41658522	All values	47,274

Variable Number: 19

Variable Name: REPWT5

Variable Description: Jackknife Replication Weight 5

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.48962356-582.11169968	All values	47,274

Variable Number: 20

Variable Name: REPWT6

Variable Description: Jackknife Replication Weight 6

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.56116028-542.48636782	All values	47,274

Variable Number: 21

Variable Name: REPWT7

Variable Description: Jackknife Replication Weight 7

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.64653749-567.75279593	All values	47,274

Variable Number: 22

Variable Name: REPWT8

Variable Description: Jackknife Replication Weight 8

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
1.13257237-563.94312059	All values	47,274

Variable Number: 23

Variable Name: REPWT9

Variable Description: Jackknife Replication Weight 9

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.77911158-592.69488626	All values	47,274

Variable Number: 24

Variable Name: REPWT10

Variable Description: Jackknife Replication Weight 10

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.94726921-569.43918749	All values	47,274

Variable Number: 25

Variable Name: REPWT11

Variable Description: Jackknife Replication Weight 11

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
1.10856973-570.91415455	All values	47,274

Variable Number: 26

Variable Name: REPWT12

Variable Description: Jackknife Replication Weight 12

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.84131696-568.86057932	All values	47,274

Variable Number: 27

Variable Name: REPWT13

Variable Description: Jackknife Replication Weight 13

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.87272721-562.75803773	All values	47,274

Variable Number: 28

Variable Name: REPWT14

Variable Description: Jackknife Replication Weight 14

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.77258338-552.67631899	All values	47,274

Variable Number: 29

Variable Name: REPWT15

Variable Description: Jackknife Replication Weight 15

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.47878749-568.88975607	All values	47,274

Variable Number: 30

Variable Name: REPWT16

Variable Description: Jackknife Replication Weight 16

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.76001368-581.70976924	All values	47,274

Variable Number: 31

Variable Name: REPWT17

Variable Description: Jackknife Replication Weight 17

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.76329730-1111.83405787	All values	47,274

Variable Number: 32

Variable Name: REPWT18

Variable Description: Jackknife Replication Weight 18

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.82489479-555.84655793	All values	47,274

Variable Number: 33

Variable Name: REPWT19

Variable Description: Jackknife Replication Weight 19

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.61360591-998.87226885	All values	47,274

Variable Number: 34

Variable Name: REPWT20

Variable Description: Jackknife Replication Weight 20

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.81115306-966.48851874	All values	47,274

Variable Number: 35

Variable Name: REPWT21

Variable Description: Jackknife Replication Weight 21

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
1.00404221-560.89296320	All values	47,274

Variable Number: 36

Variable Name: REPWT22

Variable Description: Jackknife Replication Weight 22

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.85085628-569.69328383	All values	47,274

Variable Number: 37

Variable Name: REPWT23

Variable Description: Jackknife Replication Weight 23

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
1.16179892-563.60072929	All values	47,274

Variable Number: 38

Variable Name: REPWT24

Variable Description: Jackknife Replication Weight 24

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-568.82255369	All values	47,274

Variable Number: 39

Variable Name: REPWT25

Variable Description: Jackknife Replication Weight 25

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-563.73581018	All values	47,274

Variable Number: 40

Variable Name: REPWT26

Variable Description: Jackknife Replication Weight 26

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.44882790-571.56915811	All values	47,274

Variable Number: 41

Variable Name: REPWT27

Variable Description: Jackknife Replication Weight 27

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-562.72259461	All values	47,274

Variable Number: 42

Variable Name: REPWT28

Variable Description: Jackknife Replication Weight 28

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-566.29933508	All values	47,274

Variable Number: 43

Variable Name: REPWT29

Variable Description: Jackknife Replication Weight 29

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-572.05047832	All values	47,274

Variable Number: 44

Variable Name: REPWT30

Variable Description: Jackknife Replication Weight 30

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-570.78212051	All values	47,274

Variable Number: 45

Variable Name: REPWT31

Variable Description: Jackknife Replication Weight 31

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-577.52764317	All values	47,274

Variable Number: 46

Variable Name: REPWT32

Variable Description: Jackknife Replication Weight 32

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.61124277-631.73514978	All values	47,274

Variable Number: 47

Variable Name: REPWT33

Variable Description: Jackknife Replication Weight 33

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-529.02504477	All values	47,274

Variable Number: 48

Variable Name: REPWT34

Variable Description: Jackknife Replication Weight 34

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-600.70332909	All values	47,274

Variable Number: 49

Variable Name: REPWT35

Variable Description: Jackknife Replication Weight 35

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-588.05089121	All values	47,274

Variable Number: 50

Variable Name: REPWT36

Variable Description: Jackknife Replication Weight 36

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-579.45093067	All values	47,274

Variable Number: 51

Variable Name: REPWT37

Variable Description: Jackknife Replication Weight 37

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.83446123-571.29066242	All values	47,274

Variable Number: 52

Variable Name: REPWT38

Variable Description: Jackknife Replication Weight 38

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-567.27291655	All values	47,274

Variable Number: 53

Variable Name: REPWT39

Variable Description: Jackknife Replication Weight 39

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-577.84267106	All values	47,274

Variable Number: 54

Variable Name: REPWT40

Variable Description: Jackknife Replication Weight 40

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-579.37786889	All values	47,274

Variable Number: 55

Variable Name: REPWT41

Variable Description: Jackknife Replication Weight 41

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-568.44935947	All values	47,274

Variable Number: 56

Variable Name: REPWT42

Variable Description: Jackknife Replication Weight 42

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-564.54761350	All values	47,274

Variable Number: 57

Variable Name: REPWT43

Variable Description: Jackknife Replication Weight 43

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-804.62018863	All values	47,274

Variable Number: 58

Variable Name: REPWT44

Variable Description: Jackknife Replication Weight 44

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-566.41141985	All values	47,274

Variable Number: 59

Variable Name: REPWT45

Variable Description: Jackknife Replication Weight 45

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.44754869-570.52138373	All values	47,274

Variable Number: 60

Variable Name: REPWT46

Variable Description: Jackknife Replication Weight 46

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.45025704-692.83000507	All values	47,274

Variable Number: 61

Variable Name: REPWT47

Variable Description: Jackknife Replication Weight 47

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.37610450-567.36505947	All values	47,274

Variable Number: 62

Variable Name: REPWT48

Variable Description: Jackknife Replication Weight 48

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-570.10856271	All values	47,274

Variable Number: 63

Variable Name: REPWT49

Variable Description: Jackknife Replication Weight 49

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-567.61422911	All values	47,274

Variable Number: 64

Variable Name: REPWT50

Variable Description: Jackknife Replication Weight 50

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
1.10399750-603.77581533	All values	47,274

Variable Number: 65

Variable Name: REPWT51

Variable Description: Jackknife Replication Weight 51

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-602.53660835	All values	47,274

Variable Number: 66

Variable Name: REPWT52

Variable Description: Jackknife Replication Weight 52

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-593.55722506	All values	47,274

Variable Number: 67

Variable Name: REPWT53

Variable Description: Jackknife Replication Weight 53

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-595.33874157	All values	47,274

Variable Number: 68

Variable Name: REPWT54

Variable Description: Jackknife Replication Weight 54

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-571.04164160	All values	47,274

Variable Number: 69

Variable Name: REPWT55

Variable Description: Jackknife Replication Weight 55

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-603.71659917	All values	47,274

Variable Number: 70

Variable Name: REPWT56

Variable Description: Jackknife Replication Weight 56

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.44503743-578.78101867	All values	47,274

Variable Number: 71

Variable Name: REPWT57

Variable Description: Jackknife Replication Weight 57

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.46627658-566.45406131	All values	47,274

Variable Number: 72

Variable Name: REPWT58

Variable Description: Jackknife Replication Weight 58

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.86726509-554.69823918	All values	47,274

Variable Number: 73

Variable Name: REPWT59

Variable Description: Jackknife Replication Weight 59

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-594.14120433	All values	47,274

Variable Number: 74

Variable Name: REPWT60

Variable Description: Jackknife Replication Weight 60

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-581.93007635	All values	47,274

Variable Number: 75

Variable Name: REPWT61

Variable Description: Jackknife Replication Weight 61

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.00000000-568.43744480	All values	47,274

Variable Number: 76

Variable Name: REPWT62

Variable Description: Jackknife Replication Weight 62

Variable Type: Numeric, length 13 with 8 decimal places

Value	Description	Frequency
0.55401522-572.55595262	All values	47,274

Variable Number: 77

Variable Name: TCRED

Variable Description: Total Carnegie Credits Earned (Computed)

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
16.00-61.00	All values	47,274

Variable Number: 78

Variable Name: TCREDC

Variable Description: Total Carnegie Credits Earned (Computed) (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 20.0 credits	545
2	20.1 – 25.0 credits	10,550
3	25.1 – 30.0 credits	22,647
4	30.1 credits or more	13,532

Variable Number: 79

Variable Name: ELACRED

Variable Description: Carnegie Credits Earned – English Language and Literature

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.50-18.00	All values	47,274

Variable Number: 80

Variable Name: ELACRDC

Variable Description: Carnegie Credits Earned – English Language and Literature (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 4.0 credits	27,551
2	4.1 – 4.5 credits	6,024
3	4.6 or more credits	13,699

Variable Number: 81

Variable Name: MTHCRED

Variable Description: Carnegie Credits Earned – Mathematics

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-12.00	All values	47,274

Variable Number: 82

Variable Name: MTHCRDC

Variable Description: Carnegie Credits Earned – Mathematics (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 3.0 credits	7,551
2	3.1 – 3.5 credits	2,818
3	3.6 – 4.0 credits	21,660
4	4.1 credits or more	15,245

Variable Number: 83

Variable Name: SCICRED

Variable Description: Carnegie Credits Earned – Life and Physical Sciences

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-15.00	All values	47,274

Variable Number: 84

Variable Name: SCICRDC

Variable Description: Carnegie Credits Earned – Life and Physical Sciences (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 3.0 credits	19,099
2	3.1 – 3.5 credits	2,860
3	3.6 – 4.0 credits	16,087
4	4.1 credits or more	9,228

Variable Number: 85

Variable Name: SOCCRED

Variable Description: Carnegie Credits Earned – Social Sciences and History

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-13.00	All values	47,274

Variable Number: 86

Variable Name: SOCCRDC

Variable Description: Carnegie Credits Earned – Social Sciences and History (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 3.0 credits	11,928
2	3.1 – 3.5 credits	4,980
3	3.6 – 4.0 credits	15,337
4	4.1 credits or more	15,029

Variable Number: 87

Variable Name: VPACRED

Variable Description: Carnegie Credits Earned – Visual and Performing Arts

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-28.10	All values	47,274

Variable Number: 88

Variable Name: VPACRDC

Variable Description: Carnegie Credits Earned – Visual and Performing Arts (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 0.5 credits	8,665
2	0.6 – 1.5 credits	14,895
3	1.6 – 3.0 credits	12,597
4	3.1 credits or more	11,117

Variable Number: 89

Variable Name: WLACRED

Variable Description: Carnegie Credits Earned – World Language and Literature

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-12.00	All values	47,274

Variable Number: 90

Variable Name: WLACRDC

Variable Description: Carnegie Credits Earned – World Language and Literature (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.0 credits	11,518
2	1.1 – 2.0 credits	20,115
3	2.1 – 3.0 credits	9,392
4	3.1 credits or more	6,249

Variable Number: 91

Variable Name: RELCRED

Variable Description: Carnegie Credits Earned – Religious Education and Theology

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-12.00	All values	47,274

Variable Number: 92

Variable Name: RELCRDC

Variable Description: Carnegie Credits Earned – Religious Education and Theology (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	44,794
2	0.1 or more credits	2,480

Variable Number: 93

Variable Name: PHSCRED

Variable Description: Carnegie Credits Earned – Physical, Health, and Safety Education

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-13.00	All values	47,274

Variable Number: 94

Variable Name: PHSCRDC

Variable Description: Carnegie Credits Earned – Physical, Health, and Safety Education (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.5 credits	16,872
2	1.6 – 3.0 credits	20,051
3	3.1 or more credits	10,351

Variable Number: 95

Variable Name: MILCRED

Variable Description: Carnegie Credits Earned – Military Science

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-11.50	All values	47,274

Variable Number: 96

Variable Name: MILCRDC

Variable Description: Carnegie Credits Earned – Military Science (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	44,150
2	0.1 or more credits	3,124

Variable Number: 97

Variable Name: ITCRED

Variable Description: Carnegie Credits Earned – Information Technology

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-17.50	All values	47,274

Variable Number: 98

Variable Name: ITCCRDC

Variable Description: Carnegie Credits Earned – Information Technology (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.0 credits	42,247
2	1.1 – 2.0 credits	3,391
3	2.1 – 3.0 credits	938
4	3.1 credits or more	698

Variable Number: 99

Variable Name: CAVCRED

Variable Description: Carnegie Credits Earned – Communication and Audio/Video Technology

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-12.50	All values	47,274

Variable Number: 100

Variable Name: CAVCRDC

Variable Description: Carnegie Credits Earned – Communication and Audio/Video Technology (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.0 credits	43,929
2	1.1 – 2.0 credits	1,942
3	2.1 – 3.0 credits	760
4	3.1 credits or more	643

Variable Number: 101

Variable Name: BUSCRED

Variable Description: Carnegie Credits Earned – Business and Marketing

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-17.00	All values	47,274

Variable Number: 102

Variable Name: BUSCRDC

Variable Description: Carnegie Credits Earned – Business and Marketing (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.0 credits	42,726
2	1.1 – 2.0 credits	2,720
3	2.1 – 3.0 credits	1,070
4	3.1 credits or more	758

Variable Number: 103

Variable Name: MFGCRED

Variable Description: Carnegie Credits Earned – Manufacturing

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-17.50	All values	47,274

Variable Number: 104

Variable Name: MFGCRDC

Variable Description: Carnegie Credits Earned – Manufacturing (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.0 credits	46,263
2	1.1 – 2.0 credits	436
3	2.1 – 3.0 credits	227
4	3.1 credits or more	348

Variable Number: 105

Variable Name: HCSCRED

Variable Description: Carnegie Credits Earned – Health Care Sciences

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-17.50	All values	47,274

Variable Number: 106

Variable Name: HCSCRDC

Variable Description: Carnegie Credits Earned – Health Care Sciences (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.0 credits	43,573
2	1.1 – 2.0 credits	1,457
3	2.1 – 3.0 credits	995
4	3.1 credits or more	1,249

Variable Number: 107

Variable Name: PPGCRED

Variable Description: Carnegie Credits Earned – Public, Protective, and Government Service

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-12.00	All values	47,274

Variable Number: 108

Variable Name: PPGCRDC

Variable Description: Carnegie Credits Earned – Public, Protective, and Government Service (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.0 credits	46,308
2	1.1 – 2.0 credits	408
3	2.1 – 3.0 credits	272
4	3.1 credits or more	286

Variable Number: 109

Variable Name: HOSCREd

Variable Description: Carnegie Credits Earned – Hospitality and Tourism

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-17.50	All values	47,274

Variable Number: 110

Variable Name: HOSCRDC

Variable Description: Carnegie Credits Earned – Hospitality and Tourism (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.0 credits	45,584
2	1.1 – 2.0 credits	948
3	2.1 – 3.0 credits	370
4	3.1 credits or more	372

Variable Number: 111

Variable Name: ACOCREd

Variable Description: Carnegie Credits Earned – Architecture and Construction

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-17.50	All values	47,274

Variable Number: 112

Variable Name: ACOCRDC

Variable Description: Carnegie Credits Earned – Architecture and Construction (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.0 credits	45,753
2	1.1 – 2.0 credits	735
3	2.1 – 3.0 credits	335
4	3.1 credits or more	451

Variable Number: 113

Variable Name: ANRCREd

Variable Description: Carnegie Credits Earned – Agriculture, Food, and Natural Resources

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-14.00	All values	47,274

Variable Number: 114

Variable Name: ANRCRDC

Variable Description: Carnegie Credits Earned – Agriculture, Food, and Natural Resources (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.0 credits	44,283
2	1.1 – 2.0 credits	1,177
3	2.1 – 3.0 credits	763
4	3.1 credits or more	1,051

Variable Number: 115

Variable Name: HUMCRED

Variable Description: Carnegie Credits Earned – Human Services

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-17.50	All values	47,274

Variable Number: 116

Variable Name: HUMCRDC

Variable Description: Carnegie Credits Earned – Human Services (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.0 credits	40,307
2	1.1 – 2.0 credits	4,016
3	2.1 – 3.0 credits	1,567
4	3.1 credits or more	1,384

Variable Number: 117

Variable Name: TDLCRED

Variable Description: Carnegie Credits Earned – Transportation, Distribution, and Logistics

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-17.50	All values	47,274

Variable Number: 118

Variable Name: TDLCRDC

Variable Description: Carnegie Credits Earned – Transportation, Distribution, and Logistics (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.0 credits	46,078
2	1.1 – 2.0 credits	436
3	2.1 – 3.0 credits	289
4	3.1 credits or more	471

Variable Number: 119

Variable Name: ENTCRED

Variable Description: Carnegie Credits Earned – Engineering and Technology

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-11.00	All values	47,274

Variable Number: 120

Variable Name: ENTCRDC

Variable Description: Carnegie Credits Earned – Engineering and Technology (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.0 credits	44,609
2	1.1 – 2.0 credits	1,273
3	2.1 – 3.0 credits	698
4	3.1 credits or more	694

Variable Number: 121

Variable Name: MSCCRED

Variable Description: Carnegie Credits Earned – Miscellaneous

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-29.50	All values	47,274

Variable Number: 122

Variable Name: MISCRDC

Variable Description: Carnegie Credits Earned – Miscellaneous (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 1.0 credits	31,717
2	1.1 – 2.0 credits	7,236
3	2.1 – 3.0 credits	3,680
4	3.1 credits or more	4,641

Variable Number: 123

Variable Name: IBCCRD

Variable Description: Carnegie Credits Earned – IB Courses

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-34.00	All values	47,274

Variable Number: 124

Variable Name: IBCCRDC

Variable Description: Carnegie Credits Earned – IB Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	45,659
2	0.1 credits or more	1,615

Variable Number: 125

Variable Name: APCRD

Variable Description: Carnegie Credits Earned – AP Courses

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-23.00	All values	47,274

Variable Number: 126

Variable Name: APCRDI

Variable Description: Carnegie Credits Earned – AP Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	25,521
2	0.1 credits or more	21,753

Variable Number: 127

Variable Name: HONCRED

Variable Description: Carnegie Credits Earned – Honors Courses

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-26.00	All values	47,274

Variable Number: 128

Variable Name: HONCRDC

Variable Description: Carnegie Credits Earned – Honors Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	25,810
2	0.1 credits or more	21,464

Variable Number: 129

Variable Name: ADVCRED

Variable Description: Carnegie Credits Earned – Advanced Courses

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-25.50	All values	47,274

Variable Number: 130

Variable Name: ADVCRDC

Variable Description: Carnegie Credits Earned – Advanced Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	34,508
2	0.1 credits or more	12,766

Variable Number: 131

Variable Name: MASCCRD

Variable Description: Carnegie Credits Earned – Combined Mathematics and Science

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-23.00	All values	47,274

Variable Number: 132

Variable Name: MSCCRDC

Variable Description: Carnegie Credits Earned – Combined Mathematics and Science (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 5.5 credits	2,777
2	5.6 – 6.5 credits	6,007
3	6.6 – 8.0 credits	22,854
4	8.1 credits or more	15,636

Variable Number: 133

Variable Name: ACDCRED

Variable Description: Carnegie Credits Earned – Academic Courses

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
2.50-47.00	All values	47,274

Variable Number: 134

Variable Name: ACDCRDC

Variable Description: Carnegie Credits Earned – Academic Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 12.5 credits	416
2	12.6 – 15.0 credits	1,980
3	15.1 – 17.5 credits	6,320
4	17.6 credits or more	38,558

Variable Number: 135

Variable Name: CTECRED

Variable Description: Carnegie Credits Earned – Career and Technical Education Courses

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-22.00	All values	47,274

Variable Number: 136

Variable Name: CTECRDC

Variable Description: Carnegie Credits Earned – Career and Technical Education Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	4,175
2	0.1 – 2.0 credits	15,982
3	2.1 – 4.0 credits	12,719
4	4.1 – 6.0 credits	7,746
5	6.1 credits or more	6,652

Variable Number: 137

Variable Name: OTHCRED

Variable Description: Carnegie Credits Earned – Other Courses

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-35.00	All values	47,274

Variable Number: 138

Variable Name: OTHCRDC

Variable Description: Carnegie Credits Earned – Other Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 2.0 credits	11,695
2	2.1 – 4.0 credits	18,528
3	4.1 – 6.0 credits	10,698
4	6.1 credits or more	6,353

Variable Number: 139

Variable Name: G09CRD

Variable Description: Carnegie Credits Earned – Ninth Grade

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-22.00	All values	47,274

Variable Number: 140

Variable Name: G09CRDC

Variable Description: Carnegie Credits Earned – Ninth Grade (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 6.5 credits	15,961
2	6.6 – 7.5 credits	16,569
3	7.6 – 8.5 credits	11,670
4	8.6 credits or more	3,074

Variable Number: 141

Variable Name: G10CRD

Variable Description: Carnegie Credits Earned – Tenth Grade

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-22.60	All values	47,274

Variable Number: 142

Variable Name: G10CRDC

Variable Description: Carnegie Credits Earned – Tenth Grade (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 6.5 credits	15,353
2	6.6 – 7.5 credits	17,042
3	7.6 – 8.5 credits	11,925
4	8.6 credits or more	2,954

Variable Number: 143

Variable Name: G11CRD

Variable Description: Carnegie Credits Earned – Eleventh Grade

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-36.50	All values	47,274

Variable Number: 144

Variable Name: G11CRDC

Variable Description: Carnegie Credits Earned – Eleventh Grade (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 6.5 credits	16,869
2	6.6 – 7.5 credits	15,849
3	7.6 – 8.5 credits	11,554
4	8.6 credits or more	3,002

Variable Number: 145

Variable Name: G12CRD

Variable Description: Carnegie Credits Earned – Twelfth Grade

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-42.50	All values	47,274

Variable Number: 146

Variable Name: G12CRDC

Variable Description: Carnegie Credits Earned – Twelfth Grade (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 6.5 credits	23,574
2	6.6 – 7.5 credits	12,549
3	7.6 – 8.5 credits	7,608
4	8.6 credits or more	3,543

Variable Number: 147

Variable Name: TGPA

Variable Description: Overall Grade Point Average (Computed)

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.21-4.00	All values	46,534
Missing	No recorded grade point average	740

Variable Number: 148

Variable Name: TGPAL

Variable Description: Overall Grade Point Average (Computed) (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	8,125
2	2.50 – 2.99	11,627
3	3.00 – 3.74	19,588
4	3.75 – 4.00	7,194
9	No recorded grade point average	740

Variable Number: 149

Variable Name: ELAGPA

Variable Description: Grade Point Average – English Language and Literature

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.13-4.00	All values	46,520
Missing	No recorded grade point average	754

Variable Number: 150

Variable Name: ELAGPAC

Variable Description: Grade Point Average – English Language and Literature (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	12,178
2	2.50 – 2.99	9,763
3	3.00 – 3.74	15,989
4	3.75 – 4.00	8,590
9	No recorded grade point average	754

Variable Number: 151

Variable Name: MTHGPA

Variable Description: Grade Point Average – Mathematics

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.17-4.00	All values	46,502
Missing	No recorded grade point average	772

Variable Number: 152

Variable Name: MTHGPAC

Variable Description: Grade Point Average – Mathematics (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	17,037
2	2.50 – 2.99	10,072
3	3.00 – 3.74	13,330
4	3.75 – 4.00	6,063
9	No recorded grade point average	772

Variable Number: 153

Variable Name: SCIGPA

Variable Description: Grade Point Average – Life and Physical Sciences

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	46,420
Missing	No recorded grade point average	854

Variable Number: 154

Variable Name: SCIGPAC

Variable Description: Grade Point Average – Life and Physical Sciences (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	14,710
2	2.50 – 2.99	9,694
3	3.00 – 3.74	15,137
4	3.75 – 4.00	6,879
9	No recorded grade point average	854

Variable Number: 155

Variable Name: SOCGPA

Variable Description: Grade Point Average – Social Sciences and History

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	46,478
Missing	No recorded grade point average	796

Variable Number: 156

Variable Name: SOCGPAC

Variable Description: Grade Point Average – Social Sciences and History (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	11,477
2	2.50 – 2.99	9,269
3	3.00 – 3.74	16,903
4	3.75 – 4.00	8,829
9	No recorded grade point average	796

Variable Number: 157

Variable Name: VPAGPA

Variable Description: Grade Point Average – Visual and Performing Arts

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	39,973
Missing	No recorded grade point average	7,301

Variable Number: 158

Variable Name: VPAGPAC

Variable Description: Grade Point Average – Visual and Performing Arts (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	3,857
2	2.50 – 2.99	2,967
3	3.00 – 3.74	12,590
4	3.75 – 4.00	20,559
9	No recorded grade point average	7,301

Variable Number: 159

Variable Name: WLAGPA

Variable Description: Grade Point Average – World Language and Literature

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	40,716
Missing	No recorded grade point average	6,558

Variable Number: 160

Variable Name: WLAGPAC

Variable Description: Grade Point Average – World Language and Literature (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	9,163
2	2.50 – 2.99	5,859
3	3.00 – 3.74	14,005
4	3.75 – 4.00	11,689
9	No recorded grade point average	6,558

Variable Number: 161

Variable Name: RELGPA

Variable Description: Grade Point Average – Religious Education and Theology

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
1.00-4.00	All values	2,462
Missing	No recorded grade point average	44,812

Variable Number: 162

Variable Name: RELGPAC

Variable Description: Grade Point Average – Religious Education and Theology (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	192
2	2.50 – 2.99	177
3	3.00 – 3.74	754
4	3.75 – 4.00	1,339
9	No recorded grade point average	44,812

Variable Number: 163

Variable Name: PHSGPA

Variable Description: Grade Point Average – Physical, Health, and Safety Education

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	44,941
Missing	No recorded grade point average	2,333

Variable Number: 164

Variable Name: PHSGPAC

Variable Description: Grade Point Average – Physical, Health, and Safety Education (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	2,790
2	2.50 – 2.99	3,062
3	3.00 – 3.74	14,056
4	3.75 – 4.00	25,033
9	No recorded grade point average	2,333

Variable Number: 165

Variable Name: MILGPA

Variable Description: Grade Point Average – Military Science

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	3,036
Missing	No recorded grade point average	44,238

Variable Number: 166

Variable Name: MILGPAC

Variable Description: Grade Point Average – Military Science (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	452
2	2.50 – 2.99	272
3	3.00 – 3.74	1,162
4	3.75 – 4.00	1,150
9	No recorded grade point average	44,238

Variable Number: 167

Variable Name: ITGPA

Variable Description: Grade Point Average – Information Technology

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	19,720
Missing	No recorded grade point average	27,554

Variable Number: 168

Variable Name: ITGPAC

Variable Description: Grade Point Average – Information Technology (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	3,448
2	2.50 – 2.99	1,103
3	3.00 – 3.74	6,193
4	3.75 – 4.00	8,976
9	No recorded grade point average	27,554

Variable Number: 169

Variable Name: CAVGPA

Variable Description: Grade Point Average – Communication and Audio/Video Technology

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	11,404
Missing	No recorded grade point average	35,870

Variable Number: 170

Variable Name: CAVGPAC

Variable Description: Grade Point Average – Communication and Audio/Video Technology (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	1,572
2	2.50 – 2.99	608
3	3.00 – 3.74	3,418
4	3.75 – 4.00	5,806
9	No recorded grade point average	35,870

Variable Number: 171

Variable Name: BUSGPA

Variable Description: Grade Point Average – Business and Marketing

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	14,244
Missing	No recorded grade point average	33,030

Variable Number: 172

Variable Name: BUSGPAC

Variable Description: Grade Point Average – Business and Marketing (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	2,381
2	2.50 – 2.99	872
3	3.00 – 3.74	4,628
4	3.75 – 4.00	6,363
9	No recorded grade point average	33,030

Variable Number: 173

Variable Name: MFGGPA

Variable Description: Grade Point Average – Manufacturing

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	2,680
Missing	No recorded grade point average	44,594

Variable Number: 174

Variable Name: MFGGPAC

Variable Description: Grade Point Average – Manufacturing (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	397
2	2.50 – 2.99	192
3	3.00 – 3.74	905
4	3.75 – 4.00	1,186
9	No recorded grade point average	44,594

Variable Number: 175

Variable Name: HCSGPA

Variable Description: Grade Point Average – Health Care Sciences

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	7,313
Missing	No recorded grade point average	39,961

Variable Number: 176

Variable Name: HCSGPAC

Variable Description: Grade Point Average – Health Care Sciences (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	1,130
2	2.50 – 2.99	542
3	3.00 – 3.74	2,513
4	3.75 – 4.00	3,128
9	No recorded grade point average	39,961

Variable Number: 177

Variable Name: PPGGPA

Variable Description: Grade Point Average – Public, Protective, and Government Service

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	3,411
Missing	No recorded grade point average	43,863

Variable Number: 178

Variable Name: PPGGPAC

Variable Description: Grade Point Average – Public, Protective, and Government Service (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	651
2	2.50 – 2.99	207
3	3.00 – 3.74	1,189
4	3.75 – 4.00	1,364
9	No recorded grade point average	43,863

Variable Number: 179

Variable Name: HOSGPA

Variable Description: Grade Point Average – Hospitality and Tourism

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	5,600
Missing	No recorded grade point average	41,674

Variable Number: 180

Variable Name: HOSGPAC

Variable Description: Grade Point Average – Hospitality and Tourism (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	859
2	2.50 – 2.99	352
3	3.00 – 3.74	1,908
4	3.75 – 4.00	2,481
9	No recorded grade point average	41,674

Variable Number: 181

Variable Name: ACOGPA

Variable Description: Grade Point Average – Architecture and Construction

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	4,025
Missing	No recorded grade point average	43,249

Variable Number: 182

Variable Name: ACOGPAC

Variable Description: Grade Point Average – Architecture and Construction (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	613
2	2.50 – 2.99	240
3	3.00 – 3.74	1,429
4	3.75 – 4.00	1,743
9	No recorded grade point average	43,249

Variable Number: 183

Variable Name: ANRGPA

Variable Description: Grade Point Average – Agriculture, Food, and Natural Resources

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	6,247
Missing	No recorded grade point average	41,027

Variable Number: 184

Variable Name: ANRGPA

Variable Description: Grade Point Average – Agriculture, Food, and Natural Resources (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	978
2	2.50 – 2.99	430
3	3.00 – 3.74	2,045
4	3.75 – 4.00	2,794
9	No recorded grade point average	41,027

Variable Number: 185

Variable Name: HUMGPA

Variable Description: Grade Point Average – Human Services

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	20,829
Missing	No recorded grade point average	26,445

Variable Number: 186

Variable Name: HUMGPAC

Variable Description: Grade Point Average – Human Services (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	3,572
2	2.50 – 2.99	1,174
3	3.00 – 3.74	6,761
4	3.75 – 4.00	9,322
9	No recorded grade point average	26,445

Variable Number: 187

Variable Name: TDLGPA

Variable Description: Grade Point Average – Transportation, Distribution, and Logistics

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	2,725
Missing	No recorded grade point average	44,549

Variable Number: 188

Variable Name: TDLGPAC

Variable Description: Grade Point Average – Transportation, Distribution, and Logistics (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	540
2	2.50 – 2.99	237
3	3.00 – 3.74	1,077
4	3.75 – 4.00	871
9	No recorded grade point average	44,549

Variable Number: 189

Variable Name: ENTGPA

Variable Description: Grade Point Average – Engineering and Technology

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	7,155
Missing	No recorded grade point average	40,119

Variable Number: 190

Variable Name: ENTGPAC

Variable Description: Grade Point Average – Engineering and Technology (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	1,163
2	2.50 – 2.99	448
3	3.00 – 3.74	2,303
4	3.75 – 4.00	3,241
9	No recorded grade point average	40,119

Variable Number: 191

Variable Name: MSCGPA

Variable Description: Grade Point Average – Miscellaneous

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	25,267
Missing	No recorded grade point average	22,007

Variable Number: 192

Variable Name: MSCGPAC

Variable Description: Grade Point Average – Miscellaneous (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	2,672
2	2.50 – 2.99	1,470
3	3.00 – 3.74	7,287
4	3.75 – 4.00	13,838
9	No recorded grade point average	22,007

Variable Number: 193

Variable Name: IBCGPA

Variable Description: Grade Point Average – IB Courses

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
1.00-4.00	All values	1,595
Missing	No recorded grade point average	45,679

Variable Number: 194

Variable Name: IBCGPAC

Variable Description: Grade Point Average – IB Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	322
2	2.50 – 2.99	258
3	3.00 – 3.74	564
4	3.75 – 4.00	451
9	No recorded grade point average	45,679

Variable Number: 195

Variable Name: APGPA

Variable Description: Grade Point Average – AP Courses

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	21,233
Missing	No recorded grade point average	26,041

Variable Number: 196

Variable Name: APGPAI

Variable Description: Grade Point Average – AP Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	4,788
2	2.50 – 2.99	3,063
3	3.00 – 3.74	8,305
4	3.75 – 4.00	5,077
9	No recorded grade point average	26,041

Variable Number: 197

Variable Name: HNRGPA

Variable Description: Grade Point Average – Honors Courses

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	21,345
Missing	No recorded grade point average	25,929

Variable Number: 198

Variable Name: HONGPAC

Variable Description: Grade Point Average – Honors Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	4,573
2	2.50 – 2.99	3,426
3	3.00 – 3.74	8,344
4	3.75 – 4.00	5,002
9	No recorded grade point average	25,929

Variable Number: 199

Variable Name: AVNGPA

Variable Description: Grade Point Average – Advanced Courses

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	12,659
Missing	No recorded grade point average	34,615

Variable Number: 200

Variable Name: ADVGPAC

Variable Description: Grade Point Average – Advanced Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	2,805
2	2.50 – 2.99	1,707
3	3.00 – 3.74	4,649
4	3.75 – 4.00	3,498
9	No recorded grade point average	34,615

Variable Number: 201

Variable Name: MASC GPA

Variable Description: Grade Point Average – Combined Mathematics and Science

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.37-4.00	All values	46,517
Missing	No recorded grade point average	757

Variable Number: 202

Variable Name: MSGPAC

Variable Description: Grade Point Average – Combined Mathematics and Science (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	16,529
2	2.50 – 2.99	10,799
3	3.00 – 3.74	13,789
4	3.75 – 4.00	5,400
9	No recorded grade point average	757

Variable Number: 203

Variable Name: ACDGPA

Variable Description: Grade Point Average – Academic Courses

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.21-4.00	All values	46,532
Missing	No recorded grade point average	742

Variable Number: 204

Variable Name: ACDGPAC

Variable Description: Grade Point Average – Academic Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	11,874
2	2.50 – 2.99	11,520
3	3.00 – 3.74	16,860
4	3.75 – 4.00	6,278
9	No recorded grade point average	742

Variable Number: 205

Variable Name: CTEGPA

Variable Description: Grade Point Average – Career and Technical Education Courses

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	42,183
Missing	No recorded grade point average	5,091

Variable Number: 206

Variable Name: CTEGPAC

Variable Description: Grade Point Average – Career and Technical Education Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	5,488
2	2.50 – 2.99	5,071
3	3.00 – 3.74	16,118
4	3.75 – 4.00	15,506
9	No recorded grade point average	5,091

Variable Number: 207

Variable Name: OTHGPAX

Variable Description: Grade Point Average – Other Courses

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	45,994
Missing	No recorded grade point average	1,280

Variable Number: 208

Variable Name: OTHGPAC

Variable Description: Grade Point Average – Other Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	2,541
2	2.50 – 2.99	3,667
3	3.00 – 3.74	16,373
4	3.75 – 4.00	23,413
9	No recorded grade point average	1,280

Variable Number: 209

Variable Name: G09GPA

Variable Description: Grade Point Average – Ninth Grade

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	45,248
Missing	No recorded grade point average	2,026

Variable Number: 210

Variable Name: G09GPAI

Variable Description: Grade Point Average – Ninth Grade (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	9,047
2	2.50 – 2.99	9,568
3	3.00 – 3.74	17,386
4	3.75 – 4.00	9,247
9	No recorded grade point average	2,026

Variable Number: 211

Variable Name: G10GPA

Variable Description: Grade Point Average – Tenth Grade

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	45,901
Missing	No recorded grade point average	1,373

Variable Number: 212

Variable Name: G10GPAI

Variable Description: Grade Point Average – Tenth Grade (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	9,758
2	2.50 – 2.99	9,800
3	3.00 – 3.74	17,773
4	3.75 – 4.00	8,570
9	No recorded grade point average	1,373

Variable Number: 213

Variable Name: G11GPA

Variable Description: Grade Point Average – Eleventh Grade

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	45,826
Missing	No recorded grade point average	1,448

Variable Number: 214

Variable Name: G11GPAI

Variable Description: Grade Point Average – Eleventh Grade (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	9,107
2	2.50 – 2.99	9,771
3	3.00 – 3.74	18,484
4	3.75 – 4.00	8,464
9	No recorded grade point average	1,448

Variable Number: 215

Variable Name: G12GPA

Variable Description: Grade Point Average – Twelfth Grade

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	46,465
Missing	No recorded grade point average	809

Variable Number: 216

Variable Name: G12GPAI

Variable Description: Grade Point Average – Twelfth Grade (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	7,774
2	2.50 – 2.99	8,794
3	3.00 – 3.74	20,130
4	3.75 – 4.00	9,767
9	No recorded grade point average	809

Variable Number: 217

Variable Name: STFULLC

Variable Description: Carnegie Credits Earned – All STEM Courses

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-22.00	All values	47,274

Variable Number: 218

Variable Name: STFLLCC

Variable Description: Carnegie Credits Earned – All STEM Courses (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	1,664
2	0.1 – 1.0 credits	3,684
3	1.1 – 2.0 credits	6,109
4	2.1 – 3.0 credits	7,495
5	3.1 – 5.0 credits	14,364
6	5.1 – 10.0 credits	12,721
7	10.1 credits or more	1,237

Variable Number: 219

Variable Name: STFLLP

Variable Description: Earned Credits in STEM Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	1,664
2	Yes	45,610

Variable Number: 220

Variable Name: STMAMC

Variable Description: Carnegie Credits Earned – STEM Advanced Mathematics

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-8.00	All values	47,274

Variable Number: 221

Variable Name: STAMCC

Variable Description: Carnegie Credits Earned – STEM Advanced Mathematics (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	5,258
2	0.1 – 1.0 credits	14,368
3	1.1 – 2.0 credits	17,338
4	2.1 – 3.0 credits	7,358
5	3.1 credits or more	2,952

Variable Number: 222

Variable Name: STMAMG

Variable Description: Grade Point Average – STEM Advanced Mathematics

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	41,148
Missing	No recorded grade point average	6,126

Variable Number: 223

Variable Name: STAMGC

Variable Description: Grade Point Average – STEM Advanced Mathematics (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	14,836
2	2.50 – 2.99	6,276
3	3.00 – 3.74	13,312
4	3.75 – 4.00	6,724
9	No recorded grade point average	6,126

Variable Number: 224

Variable Name: STAMP

Variable Description: Earned Credits in STEM Advanced Mathematics Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	5,258
2	Yes	42,016

Variable Number: 225

Variable Name: STMA2C

Variable Description: Carnegie Credits Earned – STEM Algebra II

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-5.00	All values	47,274

Variable Number: 226

Variable Name: STAL2CC

Variable Description: Carnegie Credits Earned – STEM Algebra II (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	7,420
2	0.1 – 0.5 credits	1,173
3	0.6 – 1.0 credits	34,525
4	1.1 credits or more	4,156

Variable Number: 227

Variable Name: STMA2G

Variable Description: Grade Point Average – STEM Algebra II

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	38,916
Missing	No recorded grade point average	8,358

Variable Number: 228

Variable Name: STAL2GC

Variable Description: Grade Point Average – STEM Algebra II (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	14,277
2	2.50 – 2.99	3,454
3	3.00 – 3.74	12,192
4	3.75 – 4.00	8,993
9	No recorded grade point average	8,358

Variable Number: 229

Variable Name: STAL2P

Variable Description: Earned Credits in STEM Algebra II Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	7,420
2	Yes	39,854

Variable Number: 230

Variable Name: STMOAC

Variable Description: Carnegie Credits Earned – STEM: Other Advanced Mathematics

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	47,274

Variable Number: 231

Variable Name: STOAMCC

Variable Description: Carnegie Credits Earned – STEM Other Advanced Mathematics (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	34,652
2	0.1 – 0.5 credits	1,815
3	0.6 – 1.0 credits	9,655
4	1.1 credits or more	1,152

Variable Number: 232

Variable Name: STMOAG

Variable Description: Grade Point Average – STEM Other Advanced Mathematics

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	12,298
Missing	No recorded grade point average	34,976

Variable Number: 233

Variable Name: STOAMGC

Variable Description: Grade Point Average – STEM Other Advanced Mathematics (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	3,599
2	2.50 – 2.99	889
3	3.00 – 3.74	4,228
4	3.75 – 4.00	3,582
9	No recorded grade point average	34,976

Variable Number: 234

Variable Name: STOAMP

Variable Description: Earned Credits in STEM Other Advanced Mathematics Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	34,652
2	Yes	12,622

Variable Number: 235

Variable Name: STMPCC

Variable Description: Carnegie Credits Earned – STEM Precalculus/Analysis

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	47,274

Variable Number: 236

Variable Name: STPCACC

Variable Description: Carnegie Credits Earned – STEM Precalculus/Analysis (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	29,780
2	0.1 – 0.5 credits	1,249
3	0.6 – 1.0 credits	15,454
4	1.1 credits or more	791

Variable Number: 237

Variable Name: STMPCG

Variable Description: Grade Point Average – STEM Precalculus/Analysis

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	17,081
Missing	No recorded grade point average	30,193

Variable Number: 238

Variable Name: STPCAGC

Variable Description: Grade Point Average – STEM Precalculus/Analysis (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	4,462
2	2.50 – 2.99	1,264
3	3.00 – 3.74	5,864
4	3.75 – 4.00	5,491
9	No recorded grade point average	30,193

Variable Number: 239

Variable Name: STPCAP

Variable Description: Earned Credits in STEM Precalculus/Analysis Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	29,780
2	Yes	17,494

Variable Number: 240

Variable Name: STMCAC

Variable Description: Carnegie Credits Earned – STEM Calculus

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-5.00	All values	47,274

Variable Number: 241

Variable Name: STCALCC

Variable Description: Carnegie Credits Earned – STEM Calculus (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	40,347
2	0.1 – 0.5 credits	301
3	0.6 – 1.0 credits	5,282
4	1.1 credits or more	1,344

Variable Number: 242

Variable Name: STMCAG

Variable Description: Grade Point Average – STEM Calculus

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	6,732
Missing	No recorded grade point average	40,542

Variable Number: 243

Variable Name: STCALGC

Variable Description: Grade Point Average – STEM Calculus (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	1,241
2	2.50 – 2.99	505
3	3.00 – 3.74	2,340
4	3.75 – 4.00	2,646
9	No recorded grade point average	40,542

Variable Number: 244

Variable Name: STCALP

Variable Description: Earned Credits in STEM Calculus Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	40,347
2	Yes	6,927

Variable Number: 245

Variable Name: STMASC

Variable Description: Carnegie Credits Earned – STEM Advanced Science and Engineering

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-16.00	All values	47,274

Variable Number: 246

Variable Name: STASCC

Variable Description: Carnegie Credits Earned – STEM Advanced Science and Engineering (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	5,901
2	0.1 – 1.0 credits	12,675
3	1.1 – 2.0 credits	14,164
4	2.1 – 3.0 credits	8,849
5	3.1 credits or more	5,685

Variable Number: 247

Variable Name: STMASG

Variable Description: Grade Point Average – STEM Advanced Science and Engineering

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	40,561
Missing	No recorded grade point average	6,713

Variable Number: 248

Variable Name: STASGC

Variable Description: Grade Point Average – STEM Advanced Science and Engineering (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	11,971
2	2.50 – 2.99	6,125
3	3.00 – 3.74	14,677
4	3.75 – 4.00	7,788
9	No recorded grade point average	6,713

Variable Number: 249

Variable Name: STASP

Variable Description: Earned Credits in STEM Advanced Science and Engineering Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	5,901
2	Yes	41,373

Variable Number: 250

Variable Name: STMESC

Variable Description: Carnegie Credits Earned – STEM Advanced Environmental and Earth Science

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-8.00	All values	47,274

Variable Number: 251

Variable Name: STERTCC

Variable Description: Carnegie Credits Earned – STEM Advanced Environmental and Earth Science (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	39,427
2	0.1 – 0.5 credits	1,441
3	0.6 – 1.0 credits	5,766
4	1.1 credits or more	640

Variable Number: 252

Variable Name: STMESG

Variable Description: Grade Point Average – STEM Advanced Environmental and Earth Science

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	7,621
Missing	No recorded grade point average	39,653

Variable Number: 253

Variable Name: STERTGC

Variable Description: Grade Point Average – STEM Advanced Environmental and Earth Science (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	1,991
2	2.50 – 2.99	502
3	3.00 – 3.74	2,623
4	3.75 – 4.00	2,505
9	No recorded grade point average	39,653

Variable Number: 254

Variable Name: STERTP

Variable Description: Earned Credits in STEM Advanced Environmental and Earth Science Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	39,427
2	Yes	7,847

Variable Number: 255

Variable Name: STMBIC

Variable Description: Carnegie Credits Earned – STEM Advanced Biology

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-5.00	All values	47,274

Variable Number: 256

Variable Name: STABICC

Variable Description: Carnegie Credits Earned – STEM Advanced Biology (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	31,046
2	0.1 – 0.5 credits	1,497
3	0.6 – 1.0 credits	11,586
4	1.1 credits or more	3,145

Variable Number: 257

Variable Name: STMBIG

Variable Description: Grade Point Average – STEM Advanced Biology

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	15,927
Missing	No recorded grade point average	31,347

Variable Number: 258

Variable Name: STABIGC

Variable Description: Grade Point Average – STEM Advanced Biology (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	3,622
2	2.50 – 2.99	1,287
3	3.00 – 3.74	5,690
4	3.75 – 4.00	5,328
9	No recorded grade point average	31,347

Variable Number: 259

Variable Name: STABIP

Variable Description: Earned Credits in STEM Advanced Biology Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	31,046
2	Yes	16,228

Variable Number: 260

Variable Name: STMCHC

Variable Description: Carnegie Credits Earned – STEM Chemistry

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-6.00	All values	47,274

Variable Number: 261

Variable Name: STCHMCC

Variable Description: Carnegie Credits Earned – STEM Chemistry (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	12,512
2	0.1 – 0.5 credits	1,193
3	0.6 – 1.0 credits	29,280
4	1.1 credits or more	4,289

Variable Number: 262

Variable Name: STMCHG

Variable Description: Grade Point Average – STEM Chemistry

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	33,963
Missing	No recorded grade point average	13,311

Variable Number: 263

Variable Name: STCHMGC

Variable Description: Grade Point Average – STEM Chemistry (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	10,801
2	2.50 – 2.99	3,068
3	3.00 – 3.74	11,758
4	3.75 – 4.00	8,336
9	No recorded grade point average	13,311

Variable Number: 264

Variable Name: STCHMP

Variable Description: Earned Credits in STEM Chemistry Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	12,512
2	Yes	34,762

Variable Number: 265

Variable Name: STMPHC

Variable Description: Carnegie Credits Earned – STEM Physics

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-5.00	All values	47,274

Variable Number: 266

Variable Name: STPHYCC

Variable Description: Carnegie Credits Earned – STEM Physics (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	29,928
2	0.1 – 0.5 credits	849
3	0.6 – 1.0 credits	14,298
4	1.1 credits or more	2,199

Variable Number: 267

Variable Name: STMPHG

Variable Description: Grade Point Average – STEM Physics

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	16,979
Missing	No recorded grade point average	30,295

Variable Number: 268

Variable Name: STPHYGC

Variable Description: Grade Point Average – STEM Physics (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	4,302
2	2.50 – 2.99	1,477
3	3.00 – 3.74	6,159
4	3.75 – 4.00	5,041
9	No recorded grade point average	30,295

Variable Number: 269

Variable Name: STPHYP

Variable Description: Earned Credits in STEM Physics Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	29,928
2	Yes	17,346

Variable Number: 270

Variable Name: STMENC

Variable Description: Carnegie Credits Earned – STEM Engineering

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-11.00	All values	47,274

Variable Number: 271

Variable Name: STEGGCC

Variable Description: Carnegie Credits Earned – STEM Engineering (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	42,019
2	0.1 – 0.5 credits	1,066
3	0.6 – 1.0 credits	2,487
4	1.1 credits or more	1,702

Variable Number: 272

Variable Name: STMENG

Variable Description: Grade Point Average – STEM Engineering

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	4,997
Missing	No recorded grade point average	42,277

Variable Number: 273

Variable Name: STEGGGC

Variable Description: Grade Point Average – STEM Engineering (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	839
2	2.50 – 2.99	303
3	3.00 – 3.74	1,611
4	3.75 – 4.00	2,244
9	No recorded grade point average	42,277

Variable Number: 274

Variable Name: STEGGP

Variable Description: Earned Credits in STEM Engineering Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	42,019
2	Yes	5,255

Variable Number: 275

Variable Name: STMTCC

Variable Description: Carnegie Credits Earned – STEM Technical

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-18.50	All values	47,274

Variable Number: 276

Variable Name: STTCHCC

Variable Description: Carnegie Credits Earned – STEM Technical (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	29,183
2	0.1 – 1.0 credits	10,516
3	1.1 – 2.0 credits	3,691
4	2.1 – 3.0 credits	1,847
5	3.1 credits or more	2,037

Variable Number: 277

Variable Name: STMTCCG

Variable Description: Grade Point Average – STEM Technical

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	17,469
Missing	No recorded grade point average	29,805

Variable Number: 278

Variable Name: STTCHGC

Variable Description: Grade Point Average – STEM Technical (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	2,772
2	2.50 – 2.99	1,244
3	3.00 – 3.74	5,757
4	3.75 – 4.00	7,696
9	No recorded grade point average	29,805

Variable Number: 279

Variable Name: STTCHP

Variable Description: Earned Credits in STEM Technical Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	29,183
2	Yes	18,091

Variable Number: 280

Variable Name: STMETC

Variable Description: Carnegie Credits Earned – STEM Engineering/Science Technologies

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-11.00	All values	47,274

Variable Number: 281

Variable Name: STTESTCC

Variable Description: Carnegie Credits Earned – STEM Engineering/Science Technologies (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	44,336
2	0.1 – 0.5 credits	879
3	0.6 – 1.0 credits	1,495
4	1.1 credits or more	564

Variable Number: 282

Variable Name: STMETG

Variable Description: Grade Point Average – STEM Engineering/Science Technologies

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
1.00-4.00	All values	2,604
Missing	No recorded grade point average	44,670

Variable Number: 283

Variable Name: STTESTGC

Variable Description: Grade Point Average – STEM Engineering/Science Technologies (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	391
2	2.50 – 2.99	124
3	3.00 – 3.74	778
4	3.75 – 4.00	1,311
9	No recorded grade point average	44,670

Variable Number: 284

Variable Name: STTESTP

Variable Description: Earned Credits in STEM Engineering/Science Technologies Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	44,336
2	Yes	2,938

Variable Number: 285

Variable Name: STMHSC

Variable Description: Carnegie Credits Earned – STEM Health Sciences

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-18.50	All values	47,274

Variable Number: 286

Variable Name: STHLTCC

Variable Description: Carnegie Credits Earned – STEM Health Sciences (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	38,799
2	0.1 – 0.5 credits	1,311
3	0.6 – 1.0 credits	3,051
4	1.1 credits or more	4,113

Variable Number: 287

Variable Name: STMHSG

Variable Description: Grade Point Average – STEM Health Sciences

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	8,321
Missing	No recorded grade point average	38,953

Variable Number: 288

Variable Name: STHLTGC

Variable Description: Grade Point Average – STEM Health Sciences (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	1,339
2	2.50 – 2.99	620
3	3.00 – 3.74	2,843
4	3.75 – 4.00	3,519
9	No recorded grade point average	38,953

Variable Number: 289

Variable Name: STHLTP

Variable Description: Earned Credits in STEM Health Sciences Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	38,799
2	Yes	8,475

Variable Number: 290

Variable Name: STMCSG

Variable Description: Carnegie Credits Earned – STEM Computer/Information Science

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-17.50	All values	47,274

Variable Number: 291

Variable Name: STCISCC

Variable Description: Carnegie Credits Earned – STEM Computer/Information Science (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 credits	38,504
2	0.1 – 0.5 credits	2,348
3	0.6 – 1.0 credits	4,282
4	1.1 credits or more	2,140

Variable Number: 292

Variable Name: STMCSG

Variable Description: Grade Point Average – STEM Computer/Information Science

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	8,529
Missing	No recorded grade point average	38,745

Variable Number: 293

Variable Name: STCISGC

Variable Description: Grade Point Average – STEM Computer/Information Science (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.00 – 2.49	1,429
2	2.50 – 2.99	477
3	3.00 – 3.74	2,609
4	3.75 – 4.00	4,014
9	No recorded grade point average	38,745

Variable Number: 294

Variable Name: STCISP

Variable Description: Earned Credits in STEM Computer/Information Science Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	38,504
2	Yes	8,770

Variable Number: 295

Variable Name: ALG1CRD

Variable Description: Carnegie Credits Earned – Algebra I

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-8.00	All values	47,274

Variable Number: 296

Variable Name: ALG1CRC

Variable Description: Carnegie Credits Earned – Algebra I (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 0.9 credits	7,359
2	1.0 credit	29,001
3	1.1 or more credits	10,914

Variable Number: 297

Variable Name: GEOMCRD

Variable Description: Carnegie Credits Earned – Geometry

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-5.00	All values	47,274

Variable Number: 298

Variable Name: GEOMCRC

Variable Description: Carnegie Credits Earned – Geometry (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 0.9 credits	4,231
2	1.0 credit	39,770
3	1.1 or more credits	3,273

Variable Number: 299

Variable Name: ALG2CRD

Variable Description: Carnegie Credits Earned – Algebra II

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-5.00	All values	47,274

Variable Number: 300

Variable Name: ALG2CRC

Variable Description: Carnegie Credits Earned – Algebra II (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 0.9 credits	8,672
2	1.0 credit	34,446
3	1.1 or more credits	4,156

Variable Number: 301

Variable Name: BIOLCRD

Variable Description: Carnegie Credits Earned – Biology

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-9.00	All values	47,274

Variable Number: 302

Variable Name: BIOLCRC

Variable Description: Carnegie Credits Earned – Biology (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 0.9 credits	1,864
2	1.0 credit	27,134
3	1.1 – 2.0 credits	14,255
4	2.1 or more credits	4,021

Variable Number: 303

Variable Name: CHEMCRD

Variable Description: Carnegie Credits Earned – Chemistry

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-6.00	All values	47,274

Variable Number: 304

Variable Name: CHEMCRD

Variable Description: Carnegie Credits Earned – Chemistry (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 0.9 credits	13,399
2	1.0 credit	29,532
3	1.1 – 2.0 credits	3,713
4	2.1 or more credits	630

Variable Number: 305

Variable Name: PHYSCRD

Variable Description: Carnegie Credits Earned – Physics

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-5.00	All values	47,274

Variable Number: 306

Variable Name: PHYSCRC

Variable Description: Carnegie Credits Earned – Physics (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0.0 – 0.9 credits	30,396
2	1.0 credit	14,605
3	1.1 – 2.0 credits	1,950
4	2.1 or more credits	323

Variable Number: 307

Variable Name: APMTH

Variable Description: Carnegie Credits Earned – AP Mathematics Courses

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-5.00	All values	47,274

Variable Number: 308

Variable Name: APMTHC

Variable Description: Graduate Earned Credits in AP Mathematics Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	39,897
2	Yes	7,377

Variable Number: 309

Variable Name: APSCII

Variable Description: Carnegie Credits Earned – AP Science Courses

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-11.50	All values	47,274

Variable Number: 310

Variable Name: APSCIC

Variable Description: Graduate Earned Credits in AP Science Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	38,246
2	Yes	9,028

Variable Number: 311

Variable Name: APIBCM

Variable Description: Carnegie Credits Earned – AP/IB Mathematics Courses

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-6.00	All values	47,274

Variable Number: 312

Variable Name: APIBCMC

Variable Description: Graduate Earned Credits in AP/IB Mathematics Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	39,143
2	Yes	8,131

Variable Number: 313

Variable Name: APIBCS

Variable Description: Carnegie Credits Earned – AP/IB Science Courses

Variable Type: Numeric, length 5 with 2 decimal places

Value	Description	Frequency
0.00-11.50	All values	47,274

Variable Number: 314

Variable Name: APIBCSC

Variable Description: Graduate Earned Credits in AP/IB Science Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	37,397
2	Yes	9,877

Variable Number: 315

Variable Name: ALGITMI

Variable Description: When Student Took Algebra I (Imputed)

Variable Type: Character, length 1

Value	Description	Frequency
1	Before high school	13,691
2	During high school	33,259
3	Did not take at all	324

Variable Number: 316

Variable Name: HLVMC

Variable Description: Highest Level Mathematics Course Completed

Variable Type: Character, length 1

Value	Description	Frequency
1	Algebra I or below	1,005
2	Geometry	4,156
3	Algebra II	15,672
4	Precalculus, statistics, and trigonometry	19,514
5	Calculus	6,927

Variable Number: 317

Variable Name: MHLVGPA

Variable Description: Grade Point Average – Highest Level Mathematics Course Completed

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	46,224
Missing	No recorded grade point average	1,050

Variable Number: 318

Variable Name: MHLGPAC

Variable Description: Grade Point Average – Highest Level Mathematics Course Completed (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	4.00	7,862
2	3.00 – 3.99	14,148
3	2.00 – 2.99	15,325
4	0.00 – 1.99	8,889
9	No recorded grade point average	1,050

Variable Number: 319

Variable Name: HLVM9

Variable Description: Highest Level Mathematics Course Completed in Ninth Grade

Variable Type: Character, length 1

Value	Description	Frequency
1	No mathematics course taken	1,653
2	Below Algebra I	2,446
3	Algebra I	28,863
4	Geometry	10,563
5	Algebra II	2,487
6	Advanced mathematics	379
7	Calculus	12
9	Missing	871

Variable Number: 320

Variable Name: HLVSC

Variable Description: Highest Level Science Course Completed

Variable Type: Character, length 1

Value	Description	Frequency
1	Survey or Earth science	613
2	Biology	8,118
3	Chemistry	13,402
4	Physics	10,009
5	Advanced science	15,132

Variable Number: 321

Variable Name: SHLVGPA

Variable Description: Grade Point Average – Highest Level Science Course Completed

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	46,083
Missing	No recorded grade point average	1,191

Variable Number: 322

Variable Name: SHLGPAC

Variable Description: Grade Point Average – Highest Level Science Course Completed (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	4.00	9,238
2	3.00 – 3.99	15,694
3	2.00 – 2.99	14,362
4	0.00 – 1.99	6,789
9	No recorded grade point average	1,191

Variable Number: 323

Variable Name: HLVS9

Variable Description: Highest Level Science Course Completed in Ninth Grade

Variable Type: Character, length 1

Value	Description	Frequency
1	No science course taken	2,168
2	Survey science	10,997
3	Earth science	6,820
4	Biology	23,201
5	Chemistry	800
6	Physics	1,693
7	Advanced science	724
9	Missing	871

Variable Number: 324

Variable Name: LEVERTC

Variable Description: Highest Level Earth/Environmental Science Course Completed

Variable Type: Character, length 1

Value	Description	Frequency
1	None	23,670
2	Regular	20,665
3	Advanced	2,939

Variable Number: 325

Variable Name: EHLGPA

Variable Description: Grade Point Average – Highest Level Earth/Environmental Science Course Completed

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	22,932
Missing	No recorded grade point average	24,342

Variable Number: 326

Variable Name: EHLGPAC

Variable Description: Grade Point Average – Highest Level Earth/Environmental Science Course Completed (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	4.00	5,734
2	3.00 – 3.99	7,940
3	2.00 – 2.99	6,505
4	0.00 – 1.99	2,753
9	No recorded grade point average	24,342

Variable Number: 327

Variable Name: LEVBIOC

Variable Description: Highest Level Biology Course Completed

Variable Type: Character, length 1

Value	Description	Frequency
1	None	1,368
2	Regular	39,125
3	Advanced	6,781

Variable Number: 328

Variable Name: BHLGPA

Variable Description: Grade Point Average – Highest Level Biology Course Completed

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	44,993
Missing	No recorded grade point average	2,281

Variable Number: 329

Variable Name: BHLGPAC

Variable Description: Grade Point Average – Highest Level Biology Course Completed (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	4.00	9,296
2	3.00 – 3.99	16,267
3	2.00 – 2.99	13,825
4	0.00 – 1.99	5,605
9	No recorded grade point average	2,281

Variable Number: 330

Variable Name: LEVCHMC

Variable Description: Highest Level Chemistry Course Completed

Variable Type: Character, length 1

Value	Description	Frequency
1	None	12,108
2	Regular	32,157
3	Advanced	3,009

Variable Number: 331

Variable Name: CHLGPA

Variable Description: Grade Point Average – Highest Level Chemistry Course Completed

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	34,336
Missing	No recorded grade point average	12,938

Variable Number: 332

Variable Name: CHLGPA

Variable Description: Grade Point Average – Highest Level Chemistry Course Completed (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	4.00	8,277
2	3.00 – 3.99	11,847
3	2.00 – 2.99	10,023
4	0.00 – 1.99	4,189
9	No recorded grade point average	12,938

Variable Number: 333

Variable Name: LEVPHYC

Variable Description: Highest Level Physics Course Completed

Variable Type: Character, length 1

Value	Description	Frequency
1	None	29,464
2	Regular	14,111
3	Advanced	3,699

Variable Number: 334

Variable Name: PHLGPA

Variable Description: Grade Point Average – Highest Level Physics Course Completed

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	17,392
Missing	No recorded grade point average	29,882

Variable Number: 335

Variable Name: PHLGPAC

Variable Description: Grade Point Average – Highest Level Physics Course Completed (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	4.00	5,040
2	3.00 – 3.99	6,334
3	2.00 – 2.99	4,536
4	0.00 – 1.99	1,482
9	No recorded grade point average	29,882

Variable Number: 336

Variable Name: LEVSRVC

Variable Description: Highest Level Integrated/Unified/Survey Science Course Completed

Variable Type: Character, length 1

Value	Description	Frequency
1	None	24,870
2	Regular	19,018
3	Advanced	3,386

Variable Number: 337

Variable Name: SVLGPA

Variable Description: Grade Point Average – Highest Level Integrated/Unified/Survey Science Course Completed

Variable Type: Numeric, length 4 with 2 decimal places

Value	Description	Frequency
0.00-4.00	All values	21,828
Missing	No recorded grade point average	25,446

Variable Number: 338

Variable Name: SVLGPAI

Variable Description: Grade Point Average – Highest Level Integrated/Unified/Survey Science Course Completed (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	4.00	5,626
2	3.00 – 3.99	7,460
3	2.00 – 2.99	6,301
4	0.00 – 1.99	2,441
9	No recorded grade point average	25,446

Variable Number: 339

Variable Name: LGRDM

Variable Description: Last Grade Mathematics Course Completed

Variable Type: Character, length 1

Value	Description	Frequency
1	Not taken at all	9
2	Ninth grade	23
3	Tenth grade	381
4	Eleventh grade	7,284
5	Twelfth grade	39,577

Variable Number: 340

Variable Name: LGRDS

Variable Description: Last Grade Science Course Completed

Variable Type: Character, length 1

Value	Description	Frequency
1	Not taken at all	73
2	Ninth grade	111
3	Tenth grade	1,752
4	Eleventh grade	15,641
5	Twelfth grade	29,697

Variable Number: 341

Variable Name: TGPAQ

Variable Description: Overall Grade Point Average Quartile

Variable Type: Character, length 1

Value	Description	Frequency
1	Top quartile	10,878
2	Second quartile	11,574
3	Third quartile	11,867
4	Bottom quartile	12,215
9	No grade point average reported	740

Variable Number: 342

Variable Name: MTHGPAQ

Variable Description: Mathematics Grade Point Average Quartile

Variable Type: Character, length 1

Value	Description	Frequency
1	Top quartile	10,738
2	Second quartile	11,157
3	Third quartile	12,619
4	Bottom quartile	11,988
9	No grade point average reported	772

Variable Number: 343

Variable Name: SCIGPAQ

Variable Description: Science Grade Point Average Quartile

Variable Type: Character, length 1

Value	Description	Frequency
1	Top quartile	11,527
2	Second quartile	10,798
3	Third quartile	12,098
4	Bottom quartile	11,997
9	No grade point average reported	854

Variable Number: 344

Variable Name: ACLCCHK

Variable Description: Took Calculus Course? (Highest Level Definition)

Variable Type: Character, length 1

Value	Description	Frequency
1	No	40,232
2	Yes	7,042

Variable Number: 345

Variable Name: AADMCHK

Variable Description: Took Precalculus, Statistics, or Trigonometry Course? (Highest Level Definition)

Variable Type: Character, length 1

Value	Description	Frequency
1	No	21,017
2	Yes	26,257

Variable Number: 346

Variable Name: AADSCHK

Variable Description: Took Advanced Science Course? (Highest Level Definition)

Variable Type: Character, length 1

Value	Description	Frequency
1	No	31,828
2	Yes	15,446

Variable Number: 347

Variable Name: APHYCHK

Variable Description: Took Physics Course? (Highest Level Definition)

Variable Type: Character, length 1

Value	Description	Frequency
1	No	31,987
2	Yes	15,287

Variable Number: 348

Variable Name: USHSTCH

Variable Description: Earned Credits in U.S. History Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	1,535
2	Yes	45,739

Variable Number: 349

Variable Name: WDHSTCH

Variable Description: Earned Credits In World History Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	2,841
2	Yes	44,433

Variable Number: 350

Variable Name: GOVCVCH

Variable Description: Earned Credits in Government/Civics/Politics Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	4,115
2	Yes	43,159

Variable Number: 351

Variable Name: ECONCK

Variable Description: Earned Credits in Economics Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	18,381
2	Yes	28,893

Variable Number: 352

Variable Name: WDGEOCH

Variable Description: Earned Credits in World Geography Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	33,011
2	Yes	14,263

Variable Number: 353

Variable Name: SCPSYCH

Variable Description: Earned Credits in Sociology/Psychology Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	31,525
2	Yes	15,749

Variable Number: 354

Variable Name: GMTHCHK

Variable Description: Earned Credits in General/Occupational/Technical Mathematics Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	32,815
2	Yes	14,459

Variable Number: 355

Variable Name: ALG1CHK

Variable Description: Earned Credits in Algebra I Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	6,574
2	Yes	40,700

Variable Number: 356

Variable Name: GEOMCHK

Variable Description: Earned Credits in Geometry Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	3,379
2	Yes	43,895

Variable Number: 357

Variable Name: ALG2CK

Variable Description: Earned Credits in Algebra II Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	7,420
2	Yes	39,854

Variable Number: 358

Variable Name: TRIGCK

Variable Description: Earned Credits in Trigonometry Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	45,615
2	Yes	1,659

Variable Number: 359

Variable Name: PCALCK

Variable Description: Earned Credits in Precalculus/Mathematical Analysis Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	29,012
2	Yes	18,262

Variable Number: 360

Variable Name: OMTCHCK

Variable Description: Earned Credits in Discrete, Finite, or Other Analytical Mathematics Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	43,424
2	Yes	3,850

Variable Number: 361

Variable Name: STATCK

Variable Description: Earned Credits in a Probability/Statistics Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	39,545
2	Yes	7,729

Variable Number: 362

Variable Name: CALCK

Variable Description: Earned Credits in Calculus Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	40,347
2	Yes	6,927

Variable Number: 363

Variable Name: BIOLCK

Variable Description: Earned Credits in Biology Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	1,368
2	Yes	45,906

Variable Number: 364

Variable Name: CHEMCK

Variable Description: Earned Credits in Chemistry Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	12,108
2	Yes	35,166

Variable Number: 365

Variable Name: PHYSCK

Variable Description: Earned Credits in Physics Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	29,464
2	Yes	17,810

Variable Number: 366

Variable Name: ESCICK

Variable Description: Earned Credits in Earth/Environmental Science Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	23,675
2	Yes	23,599

Variable Number: 367

Variable Name: ISCICK

Variable Description: Earned Credits in Integrated/Unified/Survey Science Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	24,870
2	Yes	22,404

Variable Number: 368

Variable Name: CTE1

Variable Description: Earned at Least One Carnegie Credit in Career and Technical Education Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	6,831
2	Yes	40,443

Variable Number: 369

Variable Name: ITC1

Variable Description: Earned at Least One Carnegie Credit in Information Technology Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	33,008
2	Yes	14,266

Variable Number: 370

Variable Name: CAVC1

Variable Description: Earned at Least One Carnegie Credit in Communication and Audio/Video Technology Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	38,661
2	Yes	8,613

Variable Number: 371

Variable Name: BUSC1

Variable Description: Earned at Least One Carnegie Credit in Business and Marketing Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	37,057
2	Yes	10,217

Variable Number: 372

Variable Name: MFGC1

Variable Description: Earned at Least One Carnegie Credit in Manufacturing Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	45,255
2	Yes	2,019

Variable Number: 373

Variable Name: HCSC1

Variable Description: Earned at Least One Carnegie Credit in Health Care Sciences Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	41,045
2	Yes	6,229

Variable Number: 374

Variable Name: PPGC1

Variable Description: Earned at Least One Carnegie Credit in Public, Protective, and Government Service Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	44,729
2	Yes	2,545

Variable Number: 375

Variable Name: HOSC1

Variable Description: Earned at Least One Carnegie Credit in Hospitality and Tourism Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	43,041
2	Yes	4,233

Variable Number: 376

Variable Name: ACOC1

Variable Description: Earned at Least One Carnegie Credit in Architecture and Construction Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	44,283
2	Yes	2,991

Variable Number: 377

Variable Name: ANRC1

Variable Description: Earned at Least One Carnegie Credit in Agriculture, Food, and Natural Resources Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	41,881
2	Yes	5,393

Variable Number: 378

Variable Name: HUMC1

Variable Description: Earned at Least One Carnegie Credit in Human Services Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	33,210
2	Yes	14,064

Variable Number: 379

Variable Name: TDLC1

Variable Description: Earned at Least One Carnegie Credit in Transportation, Distribution, and Logistics Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	45,195
2	Yes	2,079

Variable Number: 380

Variable Name: ENTC1

Variable Description: Earned at Least One Carnegie Credit in Engineering and Technology Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	41,117
2	Yes	6,157

Variable Number: 381

Variable Name: CTE3

Variable Description: Earned at Least Three Carnegie Credits in Career and Technical Education Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	22,946
2	Yes	24,328

Variable Number: 382

Variable Name: ITC3

Variable Description: Earned at Least Three Carnegie Credits in Information Technology courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	45,896
2	Yes	1,378

Variable Number: 383

Variable Name: CAVC3

Variable Description: Earned at Least Three Carnegie Credits in Communication and Audio/Video Technology Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	46,038
2	Yes	1,236

Variable Number: 384

Variable Name: BUSC3

Variable Description: Earned at Least Three Carnegie Credits in Business and Marketing courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	45,792
2	Yes	1,482

Variable Number: 385

Variable Name: MFGC3

Variable Description: Earned at Least Three Carnegie Credits in Manufacturing Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	46,750
2	Yes	524

Variable Number: 386

Variable Name: HCSC3

Variable Description: Earned at Least Three Carnegie Credits in Health Care Sciences Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	45,254
2	Yes	2,020

Variable Number: 387

Variable Name: PPGC3

Variable Description: Earned at Least Three Carnegie Credits in Public, Protective, and Government Service Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	46,764
2	Yes	510

Variable Number: 388

Variable Name: HOSC3

Variable Description: Earned at Least Three Carnegie Credits in Hospitality and Tourism Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	46,591
2	Yes	683

Variable Number: 389

Variable Name: ACOC3

Variable Description: Earned at Least Three Carnegie Credits in Architecture and Construction Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	46,558
2	Yes	716

Variable Number: 390

Variable Name: ANRC3

Variable Description: Earned at Least Three Carnegie Credits in Agriculture, Food, and Natural Resources Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	45,613
2	Yes	1,661

Variable Number: 391

Variable Name: HUMC3

Variable Description: Earned at Least Three Carnegie Credits in Human Services Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	44,900
2	Yes	2,374

Variable Number: 392

Variable Name: TDLC3

Variable Description: Earned at Least Three Carnegie Credits in Transportation, Distribution, and Logistics Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	46,569
2	Yes	705

Variable Number: 393

Variable Name: ENTC3

Variable Description: Earned at Least Three Carnegie Credits in Engineering and Technology Courses?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	46,000
2	Yes	1,274

Variable Number: 394

Variable Name: CURRLVL

Variable Description: Curriculum Level Earned

Variable Type: Character, length 1

Value	Description	Frequency
1	Incomplete transcript	878
2	Below standard	6,944
3	Standard	10,723
4	Midlevel	23,750
5	Rigorous	4,979

Variable Number: 395

Variable Name: ATLSTD

Variable Description: Graduate Earned at Least a Standard Curriculum?

Variable Type: Character, length 1

Value	Description	Frequency
1	Incomplete transcript	878
2	No	6,944
3	Yes	39,452

Variable Number: 396

Variable Name: ATLMID

Variable Description: Graduate Earned at Least a Midlevel Curriculum?

Variable Type: Character, length 1

Value	Description	Frequency
1	Incomplete transcript	878
2	No	17,667
3	Yes	28,729

Variable Number: 397

Variable Name: MSTDENG

Variable Description: Not Enough English Credits for Standard Curriculum?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	4,553
2	Yes	2,391
9	Not applicable	40,330

Variable Number: 398

Variable Name: MSTDMTH

Variable Description: Not Enough Mathematics Credits for Standard Curriculum?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	5,807
2	Yes	1,137
9	Not applicable	40,330

Variable Number: 399

Variable Name: MSTDSCI

Variable Description: Not Enough Science Credits for Standard Curriculum?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	2,830
2	Yes	4,114
9	Not applicable	40,330

Variable Number: 400

Variable Name: MSTDSOC

Variable Description: Not Enough Social Studies Credits for Standard Curriculum?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	5,563
2	Yes	1,381
9	Not applicable	40,330

Variable Number: 401

Variable Name: MMIDAAG

Variable Description: Missing Algebra or Geometry for Midlevel Curriculum?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	8,292
2	Yes	2,431
9	Not applicable	36,551

Variable Number: 402

Variable Name: MMIDSC2

Variable Description: Not Enough Laboratory Sciences for Midlevel Curriculum?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	3,385
2	Yes	7,338
9	Not applicable	36,551

Variable Number: 403

Variable Name: MMIDWL1

Variable Description: Not Enough World Language Credits for Midlevel Curriculum?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	6,505
2	Yes	4,218
9	Not applicable	36,551

Variable Number: 404

Variable Name: MRIGMTH

Variable Description: Not Enough Mathematics Credits for Rigorous Curriculum?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	19,964
2	Yes	3,786
9	Not applicable	23,524

Variable Number: 405

Variable Name: MRIGCAL

Variable Description: Missing Precalculus or Calculus for Rigorous Curriculum?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	9,920
2	Yes	13,830
9	Not applicable	23,524

Variable Number: 406

Variable Name: MRIGSC3

Variable Description: Not Enough Laboratory Sciences for Rigorous Curriculum?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	8,431
2	Yes	15,319
9	Not applicable	23,524

Variable Number: 407

Variable Name: MRIGWL3

Variable Description: Not Enough World Language Credits for Rigorous Curriculum?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	6,619
2	Yes	17,131
9	Not applicable	23,524

Variable Number: 408

Variable Name: TKDE

Variable Description: Took Dual Enrollment Course?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	34,660
2	Yes	12,614

Variable Number: 409

Variable Name: TKDEENG

Variable Description: Took English Dual Enrollment Course?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	42,606
2	Yes	4,668

Variable Number: 410

Variable Name: TKDEMTH

Variable Description: Took Mathematics Dual Enrollment Course?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	43,531
2	Yes	3,743

Variable Number: 411

Variable Name: TKDESCI

Variable Description: Took Science Dual Enrollment Course?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	45,139
2	Yes	2,135

Variable Number: 412

Variable Name: TKDESOC

Variable Description: Took Social Studies Dual Enrollment Course?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	43,385
2	Yes	3,889

Variable Number: 413

Variable Name: TKDEVPA

Variable Description: Took Visual and Performing Arts Dual Enrollment Course?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	45,713
2	Yes	1,561

Variable Number: 414

Variable Name: TKDEWLA

Variable Description: Took World Language Dual Enrollment Course?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	45,911
2	Yes	1,363

Variable Number: 415

Variable Name: TKDECTE

Variable Description: Took Career/Technical Education Dual Enrollment Course?

Variable Type: Character, length 1

Value	Description	Frequency
1	No	41,703
2	Yes	5,571

Variable Number: 416

Variable Name: CLRANK

Variable Description: Graduating Class Rank

Variable Type: Numeric, Integer length 4

Value	Description	Frequency
1-1563	All values	14,230
Missing	Not reported	33,044

Variable Number: 417

Variable Name: CLSIZE

Variable Description: Graduating Class Size

Variable Type: Numeric, Integer length 4

Value	Description	Frequency
1-4479	All values	14,362
Missing	Not reported	32,912

Variable Number: 418

Variable Name: PCTRN

Variable Description: Quotient of Class Rank to Class Size

Variable Type: Numeric, length 6 with 2 decimal places

Value	Description	Frequency
0.10-100.00	All values	14,099
Missing	Not reported	33,175

Variable Number: 419

Variable Name: ABS09

Variable Description: Number Days Absent in Grade 9

Variable Type: Numeric, Integer length 3

Value	Description	Frequency
0-83	All values	2,703
Missing	Not reported	44,571

Variable Number: 420

Variable Name: ABS09C

Variable Description: Number Days Absent in Grade 9 (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0 days	237
2	1 – 4 days	1,050
3	5 – 9 days	798
4	10 or more days	618
9	Not reported	44,571

Variable Number: 421

Variable Name: ABS10

Variable Description: Number Days Absent in Grade 10

Variable Type: Numeric, Integer length 3

Value	Description	Frequency
0-105	All values	2,810
Missing	Not reported	44,464

Variable Number: 422

Variable Name: ABS10C

Variable Description: Number Days Absent in Grade 10 (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0 days	223
2	1 – 4 days	976
3	5 – 9 days	795
4	10 or more days	816
9	Not reported	44,464

Variable Number: 423

Variable Name: ABS11

Variable Description: Number Days Absent in Grade 11

Variable Type: Numeric, Integer length 3

Value	Description	Frequency
0-100	All values	2,918
Missing	Not reported	44,356

Variable Number: 424

Variable Name: ABS11C

Variable Description: Number Days Absent in Grade 11 (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0 days	137
2	1 – 4 days	926
3	5 – 9 days	846
4	10 or more days	1,009
9	Not reported	44,356

Variable Number: 425

Variable Name: ABS12

Variable Description: Number Days Absent in Grade 12

Variable Type: Numeric, Integer length 3

Value	Description	Frequency
0-144	All values	2,878
Missing	Not reported	44,396

Variable Number: 426

Variable Name: ABS12C

Variable Description: Number Days Absent in Grade 12 (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0 days	123
2	1 – 4 days	692
3	5 – 9 days	769
4	10 or more days	1,294
9	Not reported	44,396

Variable Number: 427

Variable Name: ABSTOT

Variable Description: Total Number Days Absent

Variable Type: Numeric, Integer length 3

Value	Description	Frequency
0-322	All values	3,431
Missing	Not reported	43,843

Variable Number: 428

Variable Name: ABSTOTC

Variable Description: Total Number Days Absent (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	0 days	346
2	1 – 16 days	1,052
3	17 – 37 days	1,101
4	38 or more days	932
9	Not reported	43,843

Variable Number: 429

Variable Name: ACADMTR

Variable Description: Derived Academic Track

Variable Type: Character, length 1

Value	Description	Frequency
1	Academic	33,414
2	Vocational	351
3	Both	12,924
4	Neither	585

Variable Number: 430

Variable Name: CREDTR

Variable Description: Reported Total Credits Earned (Transcript)

Variable Type: Numeric, length 7 with 2 decimal places

Value	Description	Frequency
2.00-2220.00	All values	22,062
Missing	Not reported	25,212

Variable Number: 431

Variable Name: GPATR

Variable Description: Reported Overall Grade Point Average (Transcript)

Variable Type: Numeric, length 6 with 2 decimal places

Value	Description	Frequency
0.00-256.00	All values	10,220
Missing	Not reported	37,054

Variable Number: 432

Variable Name: UGPATR

Variable Description: Reported Unweighted Grade Point Average (Transcript)

Variable Type: Numeric, length 6 with 2 decimal places

Value	Description	Frequency
0.00-114.00	All values	10,502
Missing	Not reported	36,772

Variable Number: 433

Variable Name: WGPATR

Variable Description: Reported Weighted Grade Point Average (Transcript)

Variable Type: Numeric, length 6 with 2 decimal places

Value	Description	Frequency
0.33-158.60	All values	12,021
Missing	Not reported	35,253

Variable Number: 434

Variable Name: SATMAT

Variable Description: Highest SAT Mathematics Score

Variable Type: Numeric, Integer length 3

Value	Description	Frequency
221-800	All values	2,747
Missing	Not reported	44,527

Variable Number: 435

Variable Name: SATMATI

Variable Description: Highest SAT Mathematics Score (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	400 or less	451
2	401 – 500	884
3	501 – 600	930
4	601 or more	482
9	Not reported	44,527

Variable Number: 436

Variable Name: SATVRB

Variable Description: Highest SAT Verbal Score

Variable Type: Numeric, Integer length 3

Value	Description	Frequency
220-800	All values	2,744
Missing	Not reported	44,530

Variable Number: 437

Variable Name: SATVRBI

Variable Description: Highest SAT Verbal Score (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	400 or less	331
2	401 – 500	968
3	501 – 600	909
4	601 or more	536
9	Not reported	44,530

Variable Number: 438

Variable Name: PSTMAT2

Variable Description: Highest PSAT Mathematics Score (2019)

Variable Type: Numeric, Integer length 3

Value	Description	Frequency
160-730	All values	464
Missing	Not reported	46,810

Variable Number: 439

Variable Name: PSTMA2I

Variable Description: Highest PSAT Mathematics Score (2019) (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	400 or less	153
2	401 – 500	207
3	501 – 600	89
4	601 or more	15
9	Not reported	46,810

Variable Number: 440

Variable Name: PSTVRB2

Variable Description: Highest PSAT Verbal Score (2019)

Variable Type: Numeric, Integer length 3

Value	Description	Frequency
220-720	All values	466
Missing	Not reported	46,808

Variable Number: 441

Variable Name: PSTVR2I

Variable Description: Highest PSAT Verbal Score (2019) (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	400 or less	172
2	401 – 500	162
3	501 – 600	103
4	601 or more	29
9	Not reported	46,808

Variable Number: 442

Variable Name: ACTCMP

Variable Description: Highest ACT Composite Score

Variable Type: Numeric, Integer length 2

Value	Description	Frequency
5-36	All values	2,876
Missing	Not reported	44,398

Variable Number: 443

Variable Name: ACTCMPI

Variable Description: Highest ACT Composite Score (Categ.)

Variable Type: Character, length 1

Value	Description	Frequency
1	18 or less	1,294
2	19 – 20	392
3	21 – 22	312
4	23 – 24	308
5	25 or more	570
9	Not reported	44,398

Variable Number: 444

Variable Name: NAEPASMT

Variable Description: NAEP Assessment Completed by Student

Variable Type: Character, length 1

Value	Description	Frequency
1	Mathematics - Digital	10,057
2	Mathematics - Paper	9,417
3	Science - Digital	13,271
4	Science - Paper	6,972
9	NAEP assessment not taken	7,557

Variable Number: 445

Variable Name: GRREQFLG

Variable Description: Graduation Requirements Level Flag

Variable Type: Character, length 1

Value	Description	Frequency
1	Earned more credits than required to graduate	37,511
2	Earned >75% but <=100% of credits required to graduate	3,751
3	Earned 75% of credits required to graduate	28
4	Earned less than 75% of credits required to graduate	140
9	Missing graduation credits data	5,844

Variable Number: 446

Variable Name: MEETREQ

Variable Description: Meets Analysis Requirements?

Variable Type: Character, length 1

Value	Description	Frequency
0	Does not meet analysis requirements	0
1	Meets analysis requirements	47,274

Appendix N

2019 High School Transcript Study Codebook for Test File

2019 NAEP HSTS Test Data Codebook

Variable Number: 1

Variable Name: SCHOOLID

Variable Description: School ID

Variable Type: Character, length 7

Value	Description	Frequency
0130014-5630023	All school ID values	37,142

Variable Number: 2

Variable Name: STUDENTI

Variable Description: Student ID

Variable Type: Character, length 10

Value	Description	Frequency
1016004768-5266005089	All student ID values	37,142

Variable Number: 3

Variable Name: T_SEQ

Variable Description: Test Sequence Number

Variable Type: Character, length 2

Value	Description	Frequency
01-64	01 - 64	37,142

Variable Number: 4

Variable Name: T_CODE

Variable Description: Test Code

Variable Type: Character, length 3

Value	Description	Frequency
901	ACT Composite	4,905
902	ACT English	4,770
903	ACT Mathematics	4,751
904	ACT Reading	4,724
905	ACT Science	4,711
906	ACT Writing	694
907	ACT ELA	186
908	ACT STEM	599
909	PSAT Composite	520
910	PSAT Math	740
911	PSAT Reading/Writing	744
912	SAT Composite	2,006
913	SAT Math	3,515
914	SAT Evidence-Based Reading and Writing (ERBW)	3,518
915	SAT Reading Test	307
916	SAT Writing Test	370
917	SAT Subject Test: Literature	8

Value	Description	Frequency
918	SAT Subject Test: U.S. History	5
919	SAT Subject Test: World History	2
920	SAT Subject Test: Mathematics Level 1	4
921	SAT Subject Test: Mathematics Level 2	25
922	SAT Subject Test: Biology E/M	10
923	SAT Subject Test: Chemistry	6
924	SAT Subject Test: Physics	2
925	SAT Subject Test: Chinese (with listening)	1
926	SAT Subject Test: Japanese (with listening)	1
927	SAT Subject Test: Korean (with listening)	1
928	SAT Subject Test: French (with listening)	0
929	SAT Subject Test: French (without listening)	0
930	SAT Subject Test: German (with listening)	0
931	SAT Subject Test: German (without listening)	0
932	SAT Subject Test: Spanish (with listening)	0
933	SAT Subject Test: Spanish (without listening)	15
934	SAT Subject Test: Modern Hebrew	1
935	SAT Subject Test: Italian	0
936	SAT Subject Test: Latin	1

Variable Number: 5

Variable Name: T_DESCR

Variable Description: Test Description

Variable Type: Character, length 50

Value	Description	Frequency
All values	All test descriptions	37,142

Variable Number: 6

Variable Name: T_YEAR

Variable Description: Year of Test

Variable Type: Character, length 4

Value	Description	Frequency
2014	2014	18
2015	2015	182
2016	2016	1,541
2017	2017	4,886
2018	2018	27,969
2019	2019	1,780
Missing	Missing	766

Variable Number: 7

Variable Name: T_MONTH

Variable Description: Month of Test

Variable Type: Character, length 2

Value	Description	Frequency
01	January	39
02	February	6,301
03	March	3,135
04	April	8,806
05	May	696
06	June	3,165
07	July	740
08	August	562
09	September	1,704
10	October	6,489
11	November	973
12	December	3,761
Missing	Missing	771

Variable Number: 8

Variable Name: T_SCORE

Variable Description: Test Score

Variable Type: Numeric, length 4

Value	Description	Frequency
1-1580	1 - 1580	37,142

Appendix O

2019 High School Transcript Study Codebook for Transcript File

2019 NAEP HSTS Transcript Data Codebook

Variable Number: 1

Variable Name: COURSEID

Variable Description: Transcript Course ID Number

Variable Type: Character, length 7

Value	Description	Frequency
0000001-3000271	All transcript ID values	2,327,191

Variable Number: 2

Variable Name: SCHOOLID

Variable Description: School ID Number

Variable Type: Character, length 7

Value	Description	Frequency
0130013-5630043	All school ID values	2,327,191

Variable Number: 3

Variable Name: STUDENTI

Variable Description: Student ID Number

Variable Type: Character, length 10

Value	Description	Frequency
1016004661-6946012793	All student ID values	2,327,191

Variable Number: 4

Variable Name: CATLOGID

Variable Description: Catalog Course ID Number

Variable Type: Character, length 6

Value	Description	Frequency
000249-442048	All catalog ID values	2,327,191

Variable Number: 5

Variable Name: GRADLEV

Variable Description: Grade Level in Which Course Taken

Variable Type: Character, length 2

Value	Description	Frequency
05	Fifth grade	4
06	Sixth grade	181
07	Seventh grade	5,561
08	Eighth grade	29,928
09	Ninth grade	575,691
10	Tenth grade	581,593
11	Eleventh grade	570,366
12	Twelfth grade	563,371
99	Unknown grade	496

Variable Number: 6

Variable Name: YEARS PAN

Variable Description: School Year in Which Course Taken

Variable Type: Character, length 5

Value	Description	Frequency
10-11	2010 - 2011	142
11-12	2011 - 2012	87
12-13	2012 - 2013	670
13-14	2013 - 2014	6,722
14-15	2014 - 2015	35,377
15-16	2015 - 2016	547,469
16-17	2016 - 2017	582,805
17-18	2017 - 2018	577,242
18-19	2018 - 2019	576,677

Variable Number: 7

Variable Name: TERM

Variable Description: School Term in Which Course Taken

Variable Type: Character, length 2

Value	Description	Frequency
01	Year	376,250
02	First/Fall Semester	792,288
03	Second/Spring Semester	786,503
04	Unspecified Semester	85,001
05	First Quarter	34,477
06	Second Quarter	38,382
07	Third Quarter	32,621
08	Fourth Quarter	36,525
09	Unspecified Quarter	12,349
10	First Trimester	19,526
11	Second Trimester	18,857
12	Third Trimester	18,100
13	Unspecified Trimester	164
14	Six-week session	1
15	Summer session	23,579
16	Other	52,568

Variable Number: 8

Variable Name: CRSENAME

Variable Description: Transcript Course Title

Variable Type: Character, length 120

Value	Description	Frequency
All values	All Course Titles	2,327,191

Variable Number: 9

Variable Name: CRSEGRAD

Variable Description: Course Grade Reported on Transcript

Variable Type: Character, length 10

Value	Description	Frequency
All values	All Recorded Course Grades	2,327,191

Variable Number: 10

Variable Name: STDGRAD

Variable Description: Standardized Course Grade

Variable Type: Character, length 2

Value	Description	Frequency
A	A	957,410
AU	Audited course	232
B	B	625,304
C	C	386,551
D	D	156,438
F	F	74,552
I	Incomplete	800
NG	Not Graded	41,247
P	Pass	78,190
S	Satisfactory	2,648
U	Unsatisfactory	607
W	Withdrew	1,955
WF	Withdrew Failing	261
WP	Withdrew Passing	412
WV	Waiver	584

Variable Number: 11

Variable Name: RAWCRED

Variable Description: Course Credits Reported on Transcript

Variable Type: Numeric, length 8 with up to 4 decimal places

Value	Description	Frequency
0.0000-205.0000	0 - 205	2,327,191

Variable Number: 12

Variable Name: CARNCRED

Variable Description: Course Carnegie Credits

Variable Type: Numeric, length 6 with up to 4 decimal places

Value	Description	Frequency
0.0000-7.7500	0 - 7.75	2,327,191

Variable Number: 13

Variable Name: TOOKONLN

Variable Description: Took Course Online?

Variable Type: Character, length 1

Value	Description	Frequency
0	No	2,311,185
1	Yes	16,006

Variable Number: 14

Variable Name: TRANSFER

Variable Description: Course Transferred from Another School?

Variable Type: Character, length 1

Value	Description	Frequency
0	No	2,214,174
1	Yes	113,017

Appendix P

2019 High School Transcript Study Glossary

Accommodations	Assessment accommodations are changes in testing materials or procedures that enable a student to participate in an assessment that allows knowledge and skills to be assessed rather than disabilities or limited English.
Advanced Placement (AP)	The Advanced Placement Program is designed to give high school students exposure to college-level work and prepare students to take the advanced placement examinations given by the College Board. Students who pass these tests may be given credit and/or be exempted from requirements in colleges and universities based on their scores. Colleges and universities make their own rules regarding what tests to accept and the scores needed for credit or exemptions.
Carnegie unit	A factor used to standardize all credits indicated on transcripts across the study. A single Carnegie unit is equal to 120 hours of classroom time over the course of a year.
Catalog	A document compiled by a school, state or district listing all available courses that are offered and a description of those courses. Curriculum specialists reviewed catalogs and used them to determine the appropriate SCED code for each course.
Continuous sorting variable	A sorting variable used in stratification that is continuous in nature, not discrete. For example, in the private school stratification, census division and type of location are discrete sorting variables, but proportion of minority enrollment is a continuous sorting variable.
Continuous variable	A data variable that has an infinite number of values. For example, percentage variables are considered to be continuous variables. Ranges can be assigned to continuous variables to make them discrete variables.
Correlation	A measure of the relation between two or more variables. Correlation coefficients can range from -1.00 to +1.00. The value of -1.00 represents a perfect negative correlation while a value of +1.00 represents a perfect positive correlation. A value of 0.00 represents a lack of correlation.
Course Offerings File	An HSTS data file that provides a comprehensive list of the courses offered in the schools included in the study. A SCED code is associated with each course title.
Data files	HSTS 2019 has produced a set of six data files that are available on a restricted-use basis. These include the Course Offerings File, School File, Student File, NAEP Data File, Transcript File, and Test File.
Diploma	A document granted by a school indicating the student completed all the requirements for graduation. The type of diploma is indicated by the Exit Status.
Discrete variable	A data variable that has a limited number of values. For example, student gender is a discrete variable because students can only be male or female.

Eligible student	A student who meets the graduation criteria established for the HSTS sample. Eligible students graduated from high school with a standard, honors, or special education diploma, or they received either a certificate of completion or a certificate of attendance. Note this term applies only to the HSTS sample, not to the sample of HSTS students used in generating the results for this report.
English learner (EL)	A term used to describe students who are in the process of acquiring English language skills and knowledge. Some schools refer to these students using the term limited English proficient, or LEP.
Exclusion criteria	Criteria adopted to exclude HSTS students who did not meet the graduation requirements established for analyses found in this report. Students with special education diplomas, certificates of attendance, and certificates of completion were excluded, as were students with zero English credits and students with fewer than 16 Carnegie units.
Exit status	A code that describes the type of diploma the student received.
Explicit stratification	The organization of a population into parts achieved by building separate sampling frames, according to the set of variables under consideration. It is the stratification used for categorical variables, in contrast to implicit stratification, which is used for continuous variables.
Flags	Markers used to indicate special features of a course, such as any enrollment restrictions (regular or disabled students), whether the course serves any language-learning purposes, and whether it earns dual enrollment credit.
High School and Beyond	A longitudinal study following cohorts of 1980 high school students from which the HSTS 1982 sample was drawn. Samples for subsequent studies were drawn from the corresponding NAEP samples.
High School Transcript Study (HSTS)	A periodic study developed by NCES that provides the Department of Education and other education policymakers with information regarding current course offerings and students' coursetaking patterns in the nation's secondary schools.
Implicit stratification	The organization of a population into parts achieved by sorting records in a file instead of explicitly separating the population units into different strata. Only one implicit stratification variable can be used at a time. It is the stratification used for continuous variables, in contrast to explicit stratification, which is used for categorical variables.
Imputation	Imputation is often used in surveys to compensate for item nonresponse and involves replacing a missing value with a nonmissing value, typically generated from a statistical model. Imputation is used to reduce nonresponse bias in survey estimates, simplify analyses, and improve the consistency of results across analyses. Imputations should also preserve multivariate distributions.

International Baccalaureate (IB)	A nonprofit educational foundation program consisting of a comprehensive 2-year international curriculum that allows students to fulfill the requirements of their national or state education systems.
Jackknife method	A method of replication used to compute the variance of statistics from complex samples. HSTS used a paired jackknife method. This method divides the sample into subsamples by excluding one unit at a time from a pair sampled within a stratum.
Measure of size	A value of measurement for a unit that determines that unit's probability of selection within a probability proportional to size (PPS) sampling scheme.
Multistage sample design	A sample design that uses more than one stage of sampling. The NAEP 2019 sample design, for example, uses two stages of sampling: (1) a sample of schools from across the nation, and (2) a sample of students within each sampled school.
National Assessment of Educational Progress (NAEP)	The only nationally representative and continuing assessment of what America's students know and can do in various subject areas—also known as "the Nation's Report Card." Since 1969, assessments have been conducted periodically in mathematics, reading, science, writing, U.S. history, geography, civics, the arts, and other subjects.
NAEP Data File	An HSTS data file that contains proficiency estimates (also described as plausible values) and sampling weights for each student who participated in the NAEP 2019 mathematics and science assessments. These files contain NAEP scores for the 2009 high school graduates who participated in both the transcript study and either the NAEP mathematics or science assessment. All students listed in the NAEP data file also appear in the student file.
NAEP ID	The 10-digit NAEP assessment booklet number used as an HSTS student ID number for students in schools fully linked to the NAEP assessment.
NAEP-linked	A reference to students or schools that maintained their unique NAEP ID or school ID.
National Center for Education Statistics (NCES)	The primary federal entity for collecting, analyzing, and reporting data related to education in the United States.
National Education Longitudinal Study of 1988 (NELS:88)	A major longitudinal effort designed to provide trend data about critical transitions experienced by students as they leave middle school or junior high school, and progress through high school and into postsecondary institutions or the work force. It started as a nationally representative sample survey of 8th-graders in 1988, with follow-up surveys in the years 1990, 1992, 1994, and 2000.

National School Lunch Program (NSLP)	A program providing free or reduced-priced school meals to children from households meeting federal income guidelines.
Percentage	A relative measure of how often the value(s) of a variable appears within a category as compared to all values of that variable.
Poststratification	An estimation method that adjusts the sampling weights so that they add to specified population totals corresponding to the levels of a particular response variable.
Primary sampling unit (PSU)	The basic geographic sampling unit for NAEP; can be either a single county or a set of contiguous counties. The PSU served as the first stage in the NAEP multistage sample for previous high school transcript studies. For HSTS 2009 and 2019, however, the school sample served as the first stage.
Probability proportional to size sampling	A sampling method in which the probability of selecting a unit is directly proportional to the unit's size. In NAEP, schools are selected with probabilities proportionate to estimated grade enrollment.
Probability sample	A sample drawn from a population using a random mechanism so that every element of the population has a known chance of ending up in the sample.
Proportionate sampling	A variation of stratified random sampling. Proportionate sampling strategies begin by stratifying the population into relevant subgroups and then random sampling within each subgroup. The number of participants from each subgroup is equal to their proportion in the population.
Replicate estimate	An estimate of the population quantity based on the replicate subsample using the same estimation methods used to compute the full sample estimate.
Replicate sample	A sample derived by deleting a subsample of the originally observed sample where the subsampling procedure depends on the replicate method.
Replicate weight	The weight assigned to an observation for a particular replicate subsample.
Replicates	A term often used to refer to either the replicate sample or the replicate estimate, depending on context.
Replication method	A method of drawing a replicate subsample and weighting the observations that includes balanced repeated replication, jackknife replication, and bootstrap replication.

Response	A possible value, or set of possible values, for a catalog variable, as defined by the Electronic Codebook (ECB) software. For continuous variables, which have an infinite set of possible values, a category will list a range of values. For discrete variables, which have a finite set of possible values, a category most likely will represent a single value, but it can also represent a range of values.
Sampling	A subset of a population whose characteristics are studied to gain information about the entire population. NAEP assesses a representative sample of students each year, rather than the entire population of students.
Sampling error	The standard deviation of the estimate, used to measure the precision of the estimate.
Sampling frame	The full list of possible units from which the sample is selected.
School Courses for the Exchange of Data (SCED)	A coding system employed for the purpose of standardizing HSTS transcripts. The SCED course code contains five digits. The first two digits identify the main program area, and the last three digits indicate the specific course. For example, for the SCED code 01001, the first two digits (01) identify the subject as English language and literature, while the final three digits (001) indicate the course 9 th grade English. The SCED code also includes the course level, credits earned, and course sequence.
School base weight	The initial weight given to a school for sampling purposes. It is the inverse of the school's probability of selection.
School File	An HSTS data file providing detailed information on the schools from which students were sampled. Where available, it includes data taken from the NAEP School Questionnaire.
School Information Form (SIF)	The SIF is completed by a school staff member, state, or district. The completed SIF contains information about the following: the school in general, sources of information within the school (if needed to complete HSTS data collection), course description materials, graduation requirements and grading practices at the school, and the format of the school's transcripts.
School Questionnaire	A survey form that collects information about school, teacher, and home factors that might relate to student achievement. It was completed by a school official (usually the principal) as part of NAEP for the NAEP participating schools.
Serpentine sorting	A method of sorting in which records are ordered in an alternating ascending and descending pattern, so that any two consecutive records in the sorted file are more similar with respect to their values of the sort variables than in traditional sorting. This technique reduces the estimates of variance when replication methods, such as the jackknife method, are used.

Session type	A designation that indicates which NAEP subject or subjects were assessed during the given session.
Sort variable	A variable within a data file that is used to sort the data file. For the NAEP school sample, before the sample was selected, a school-level characteristic was used to sort the schools, one that was continuous in nature. Pass/fail or correct/incorrect indicators are not effective sort variables because they include only two categories.
Student File	An HSTS data file providing demographic information on all students in the study, as well as summaries of their coursetaking histories, derived measures of academic achievement, and sampling weights.
Student ID number	A 10-digit ID number used to track students in HSTS. For schools fully linked to NAEP, this number matches the NAEP assessment booklet number. For students in schools where the link to NAEP was lost and for students in schools that did not participate in NAEP, this is a unique 10-digit number beginning with 990.
Systematic sample	A sample selected by a systematic method. It is also called an Nth name selection technique. After the required sample size has been calculated, every Nth record is selected from a list of population members.
Systematic equal probability sample	A systematic sample where each unit has an equal probability of being selected.
Test File	An HSTS data file providing a list of standardized test results, including SAT and ACT scores that were found on the transcripts.
Transcript	A student's secondary school record containing courses taken, grades, graduation status, and attendance. In addition, it often includes assessments such as PSAT, SAT, ACT, and honors.
Transcript File	An HSTS data file providing a complete list of all courses appearing on the transcripts of students sampled in the study.
Two-stage probability-based sample	A sample design that uses two stages of sampling. The NAEP 2009 national sample was a two-stage probability-based sample. The schools were the first-stage sampling units selected with probability proportional to a measure of size based on the estimated grade-specific enrollment in the schools. The second stage involved selection of students within schools and their assignment to session types.
Type of location	A field attached to each school that defines the type of locality of the school's community. Its values include large city, medium-sized city, urban fringe of large city, urban fringe of medium-sized city, large town, small town, and rural.

User's Guide	A document detailing procedures used to collect and summarize the data. It also provides information needed to use all publicly released data files produced by the study.
Weighted frequency	The number of times the value(s) of a variable appears within a catalog, as defined by the weights assigned to the data file records.
Weighted percentage	A relative measure of how often the value(s) of a variable appears within a catalog as compared to all values of that variable, as defined by the weights assigned to the data file records.

Appendix Q

HSTS NAEP Score Analyses and Linking Error

CALCULATING STANDARD ERRORS FOR THE NAEP 2019 MATHEMATICS AND SCIENCE ASSESSMENT DATA USING LINKING ERRORS

An important feature of the National Assessment of Educational Progress (NAEP) High School Transcript Study (HSTS) data is being able to compare high school graduates' coursetaking measures with measures of student achievement, as reflected by their NAEP grade 12 assessment scores. The HSTS sample is a subsample of twelfth-grade schools and students selected for participation in selected NAEP operational assessments. Since 2000, the HSTS sample has been linked with the NAEP grade 12 mathematics and science assessments.

The NAEP scores or achievement-level percentages generated with the NAEP HSTS 2019 data can be compared with previous HSTS years' NAEP data as defined by the assessment framework. For the NAEP grade 12 mathematics assessment, the framework was last revised in 2005, so the NAEP mathematics data generated for HSTS 2019 can be compared to the NAEP mathematics data for HSTS 2005 and HSTS 2009. For the NAEP grade 12 science assessment, the framework was last revised in 2009, so the NAEP science data generated for HSTS 2019 can be compared to the NAEP science data for HSTS 2009.

For both 2005 and 2009, the NAEP grade 12 mathematics and science assessments were paper-based assessments. For 2019, though, the twelfth-grade assessments were transitioning from paper-based assessments to digitally based assessments. Two equivalent random samples from the same student population in each school were selected; one sample was given the paper-and-pencil version of the assessment, while the other sample was given the digital version. So that the 2019 mixed sample could be compared to the previous years' paper-based assessments, common population linking was used to align results from the digital portion of the sample to the existing trend scale used to report the paper-based results from previous administrations. A generalized definition of common population linking involves linking scales by matching the distributions of scores on two different scales for a single group or for randomly equivalent groups of examinees.

For a detailed description of the statistical procedures involved in estimating the variance and standard error of NAEP assessment measures using the 2019 combined paper-and-digital sample, which includes how common population linking is implemented, see section 3.5 of *National Assessment of Educational Progress (NAEP) 2019 Mathematics and Reading Grade 12 Assessments Restricted-Use Data Files Data Companion* (NCES 2021). This appendix focuses on how to calculate the correct standard errors for the HSTS-based NAEP measures based on the combined paper-and-digital sample. Statistical programs like WesVar, SUDAAN, and Stata are not programmed to calculate sampling

variances that involve common population linking, so the standard errors they calculate will slightly differ from the correct standard errors. This appendix discusses the transformation coefficient data needed for the linking error and explains how to use the SAS programs that are provided to calculate the correct standard errors. Note that the procedures only affect HSTS analyses involving NAEP measures, such as average assessment scores or achievement-level percentages. The HSTS analyses that do not involve NAEP measures, such as average credits earned, overall GPA, and percentage distribution of high school graduates across curriculum levels, are unaffected, and their sampling variances can be calculated normally, as detailed in chapter 6.

Transformation Coefficient Data. Estimating the sampling and measurement variances for the measures derived from the combined digital-and-paper 2019 NAEP grade 12 assessment requires a set of transformation coefficients. These coefficients transform the plausible values for the digitally based assessments so they can be compared equally with the paper-based assessments. For the sampling variance, pairs of transformation coefficients are applied to the first plausible value, corresponding to each of the 62 replicate weights. For the measurement variance, 100 pairs of transformation coefficients are used, grouped into 5 sequences of 20 pairs. Each sequence is applied to a random permutation of the 20 plausible values. More information about the transformation coefficients can be found in section 3.5.1 of *National Assessment of Educational Progress (NAEP) 2019 Mathematics and Reading Grade 12 Assessments Restricted-Use Data Files Data Companion* (NCES 2021).

Because both the student weights and plausible values for the NAEP 2019 grade 12 mathematics and science assessments were reconditioned for the HSTS, the transformation coefficients were also revised for the HSTS. Using the original NAEP transformation coefficients with the HSTS-based NAEP scores and linked weights will result in incorrect estimations of standard errors. As part of the HSTS 2019 restricted-use data files, the Linking Errors folder contains an Excel workbook that contains the HSTS-based transformation coefficients. The workbook has five worksheets. The first four worksheets—MRPS1, MRPS6, MRPS4, and MRPS5—contain the transformation coefficients for calculating the variances of NAEP mathematics assessment measures. The fifth worksheet—SRPS—contains the transformation coefficients for calculating the variances of NAEP science assessment measures.

Because the NAEP mathematics score is a composite value, there are transformation coefficients required for each component of the score. The transformation coefficients listed on the MRPS1 worksheet correspond to the number properties and operations component, while the transformation coefficients listed on the MRPS6 sheet correspond to the measurement and geometry component. The transformation coefficients listed on the MRPS4 worksheet correspond to the data

analysis and probability component, while the transformation coefficients listed on the MRPS5 sheet correspond to the algebra component. The transformation coefficients are applied to each component, and then the composite value is calculated from the set of transformed components. As the NAEP science score is a univariate score, there is only one set of transformation coefficients that need to be applied.

Variance Estimation Programs. The Linking Errors folder also contains four SAS programs that will help HSTS restricted-use data users calculate the correct standard errors for NAEP mathematics and science assessment measures (i.e., assessment scores, achievement-level percentages, etc.). The programs will calculate a NAEP measure (either average assessment score or percentage of graduates above or below an achievement level) using either the NAEP mathematics or science assessment data for a cross-tabulation between two demographic or coursetaking independent variables. Elements in the SAS program name indicate which assessment and NAEP measure to calculate. The terms “math” and “sci” respectively represent the mathematics and science NAEP assessments, while the terms “scores” and “achlevel” respectively represent average assessment scores and achievement-level percentages.

The SAS programs require several fields to be modified before they can be used. The first of these fields are located in Step 1 of the program, which defines the directories and file names needed for the program. The DIRRUF directory is defined as the directory that holds the SAS databases that came with the HSTS 2019 restricted-use files, while the DIROUT directory is defined as the directory where the output files from the program will be stored. The LNKERR file name statement indicates where the Excel database containing the linking error transformation coefficients are located. Users will need to adjust the directories in these LIBNAME and FILENAME statements to indicate where they stored the restricted-use data files and/or want their output to be stored.

At the end of each SAS program is a macro statement (%CMBVAR) that contains elements that also need to be modified. For the programs that produce NAEP scores, the first two elements in the parentheses are the two cross-tabbed independent variables for which the program will produce average NAEP scores, and the third element is a text string that will be added to the output SAS databases so the user can quickly identify them. For the programs that produce NAEP achievement-level percentages, the first two elements are the independent variables, the third element is the achievement type indicator, and the fourth element is the text string added to the names of the output files. The program assumes that the independent variables are located in the student restricted-use data file. If the user wants to use either coursetaking or demographic variables from either the school or NAEP data restricted-use data files, the code at the start of Step 3 of the program, which extracts the variables needed to do the NAEP analyses, will need to be modified. If the user only wants to examine NAEP measures for just one coursetaking or

demographic measure, then the second independent variable listed in the macro should be BLANKVAR, which will act as a constant.

For calculating NAEP achievement-level percentages, the SAS programs offer one of two options. The first option is the percentage of high school graduates below the *NAEP Basic* achievement level, while the second option is the percentage of high school graduates in or above the *NAEP Proficient* achievement level. For the below *NAEP Basic* percentage, the third element in the macro statement should be set to 1. For the *NAEP Proficient* and above percentage, the third element in the macro statement should be set to 2. To calculate other NAEP achievement-level percentages, the SAS will need to be modified in Step 4 of the program, which does the NAEP measure and standard error calculations.

The program will output two SAS databases in the directory designated in the DIROUT directory statement. The first database will contain the NAEP measures and standard errors calculated for each combination of the two independent variables. The second database will contain the differences and their standard errors for each possible comparison between the measures found in the first database. Besides the abbreviated subject area (i.e., “math” or “sci”) and the text string listed in the macro statement, the name of the first database will end with “ctabs” (an abbreviation of cross-tabulations), and the name of the second database will end with “comps” (an abbreviation of comparisons).

The data listed in the crosstabs output SAS database are as follows:

- The values of the two independent variables that were chosen are displayed as the leftmost variables.
- The COMBVAR variable indicates the sequential order of the combination of the two independent variables.
- The MRGORD variable indicates the merge order of the combination of the two independent variables. If there are observations in the NAEP restricted-use data file for each combination of the independent variables, then MRGORD will be equal to COMBVAR. If there are some combinations that have no observations in the NAEP restricted-use data file, then MRGORD will be a missing value for those combinations. This variable is important, as it is needed to identify the comparisons made in the comparisons output SAS database.
- The UWN variable provides the unweighted count of observations for the combination of the independent variables, while the SWT variable provides the weighted graduate count.
- The PCT variable provides the weighted percentage of high school graduates with the values indicated by the combined independent variables, while the SEPCT variable lists the standard error for the weighted percentage.

- The MEANSCOR variable indicates either the average NAEP assessment score or the achievement-level percentage for the graduates in the combined independent variable categories.
- The SAMPVAR and MEASVAR variables indicate the sampling and measurement variances, respectively, for the NAEP measure, which include the linking error components.
- The SESCOR variable lists the standard error associated with the NAEP measure indicated by the MEANSCOR variable.

The data listed in the comparisons output SAS database are as follows:

- The two leftmost variables in the database are the two independent variables combinations being compared (MRGORD1 and MRGORD2). To indicate which combinations are being compared, look up the MRGORD values in the crosstabs output SAS database. The program calculates all comparisons between the independent variable combinations, regardless of whether the user considers them useful comparisons.
- The MEANDIFF variable indicates the numerical difference between either the average NAEP assessment scores or the achievement-level percentages for the graduates in the two combined independent variable categories being compared.
- The SAMPVAR and MEASVAR variables indicate the sampling and measurement variances, respectively, for the difference, which include the linking error components.
- The SEDIFF variable lists the standard error associated with the NAEP measure indicated by the MEANDIFF variable.

Appendix R

2019 High School Transcript Study Nonresponse Bias Analysis School Tables

Table R-1. 2019 HSTS original sample—weighted percentages of full sample and responding schools, by various subgroups—all public schools (sample size = 1,774)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square <i>p</i> -value
Census region					<0.0001
Northeast	16.68	16.47	-0.20	-0.0123	
Midwest	20.56	18.83	-1.73	-0.0843	
South	38.43	44.65	6.22	0.1617	
West	24.33	20.05	-4.28	-0.1758	
Urban-centric locale					0.0799
City	28.35	27.90	-0.45	-0.0159	
Suburban	40.91	40.37	-0.54	-0.0131	
Town	11.75	11.31	-0.44	-0.0377	
Rural	18.99	20.42	1.43	0.0754	
Size class					0.1565
Large (≥ 425)	34.72	34.97	0.25	0.0072	
Medium (191-424)	37.16	38.17	1.00	0.0270	
Small (≤ 190)	28.12	26.86	-1.25	-0.0446	

NOTE: Size-adjusted school weights were used.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2019.

Table R-2. 2019 HSTS original sample—weighted mean values of various characteristics for full sample and responding schools—all public schools (sample size = 1,774)

	Full sample mean	Respondent mean	Bias	Relative bias	<i>t</i> -test <i>p</i> -value
Mean grade 12 enrollment averaged across students	352.55	354.36	1.80	0.0051	0.583
Mean grade 12 enrollment	171.09	179.28	8.19	0.0479	0.009
Race/ethnicity					
Percentage White, not Hispanic	51.04	51.84	0.80	0.0157	0.107
Percentage Black, not Hispanic	14.41	15.12	0.71	0.0495	0.018
Percentage Hispanic	25.19	23.83	-1.35	-0.0537	0.001
Percentage Asian, not Hispanic	5.03	4.85	-0.18	-0.0363	0.225
Percentage American Indian/ Alaska Native, not Hispanic	1.02	1.12	0.11	0.1042	0.004
Percentage Native Hawaiian/Pacific Islander, not Hispanic	0.32	0.25	-0.07	-0.2070	0.095
Percentage Two or more races, not Hispanic	3.00	2.98	0.02	-0.0067	0.627

NOTE: For the mean grade 12 enrollment averaged across students and the race/ethnicity percentages, size-adjusted school weights were used.

For the mean grade 12 enrollment, school weights were used.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2019.

Table R-3. 2019 HSTS sample with substitutes—weighted percentages of full sample and responding schools, by various subgroups—all public schools (sample size = 1,774)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square <i>p</i> -value
Census region					<0.0001
Northeast	16.68	16.25	-0.43	-0.0256	
Midwest	20.56	19.45	-1.12	-0.0543	
South	38.43	44.07	5.64	0.1468	
West	24.33	20.23	-4.10	-0.1684	
Urban-centric locale					0.1335
City	28.35	28.02	-0.33	-0.0115	
Suburban	40.91	40.52	-0.39	-0.0095	
Town	11.75	11.19	-0.57	-0.0481	
Rural	18.99	20.27	1.28	0.0674	
Size class					0.1494
Large (≥ 425)	34.72	35.10	0.38	0.0110	
Medium (191-424)	37.16	38.06	0.90	0.0241	
Small (≤ 190)	28.12	26.84	-1.28	-0.0455	

NOTE: Size-adjusted school weights were used.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2019.

Table R-4. 2019 HSTS sample with substitutes—weighted mean values of various characteristics for full sample and responding schools—all public schools (sample size = 1,774)

	Full sample mean	Respondent mean	Bias	Relative bias	<i>t</i> -test <i>p</i> -value
Mean grade 12 enrollment averaged across students	352.55	354.64	2.09	0.0059	0.521
Mean grade 12 enrollment	171.09	178.57	7.48	0.0437	0.017
Race/ethnicity					
Percentage White, not Hispanic	51.04	51.86	0.81	0.0159	0.124
Percentage Black, not Hispanic	14.41	15.10	0.69	0.0478	0.045
Percentage Hispanic	25.19	23.82	-1.37	-0.0543	0.001
Percentage Asian, not Hispanic	5.03	4.88	-0.15	-0.0298	0.318
Percentage American Indian/ Alaska Native, not Hispanic	1.02	1.11	0.09	0.0931	0.008
Percentage Native Hawaiian/Pacific Islander, not Hispanic	0.32	0.25	-0.07	-0.2085	0.093
Percentage Two or more races, not Hispanic	3.00	2.99	-0.01	-0.0044	0.752

NOTE: For the mean grade 12 enrollment averaged across students and the race/ethnicity percentages, size-adjusted school weights were used.

For the mean grade 12 enrollment, school weights were used.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2019.

Table R-5. 2019 HSTS nonresponse-adjusted sample—weighted percentages of full sample and responding schools, by various subgroups—all public schools (sample size = 1,774)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square <i>p</i> -value
Census region					0.0030
Northeast	16.68	16.54	-0.14	-0.0084	
Midwest	20.56	20.97	0.41	0.0200	
South	38.43	37.93	-0.50	-0.0129	
West	24.33	24.56	0.22	0.0092	
Urban-centric locale					
City	28.35	28.68	0.33	0.0116	0.0107
Suburban	40.91	41.40	0.50	0.0121	
Town	11.75	11.03	-0.72	-0.0616	
Rural	18.99	18.89	-0.10	-0.0054	
Size class					
Large (≥ 425)	34.72	36.42	1.70	0.0490	0.0357
Medium (191-424)	37.16	37.07	-0.09	-0.0025	
Small (≤ 190)	28.12	26.51	-1.61	-0.0572	

NOTE: Size-adjusted school weights were used.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2019.

Table R-6. 2019 HSTS nonresponse-adjusted sample—weighted mean values of various characteristics for full sample and responding schools—all public schools (sample size = 1,774)

	Full sample mean	Respondent mean	Bias	Relative bias	<i>t</i> -test <i>p</i> -value
Mean grade 12 enrollment averaged across students	352.55	360.25	7.70	0.0218	0.029
Mean grade 12 enrollment	171.09	177.25	6.16	0.0360	0.075
Race/ethnicity					
Percentage White, not Hispanic	51.04	51.19	0.14	0.0028	0.725
Percentage Black, not Hispanic	14.41	13.88	-0.53	-0.0368	0.052
Percentage Hispanic	25.19	25.48	0.30	0.0118	0.343
Percentage Asian, not Hispanic	5.03	5.14	0.12	0.0233	0.493
Percentage American Indian/ Alaska Native, not Hispanic	1.02	1.10	0.09	0.0876	0.059
Percentage Native Hawaiian/Pacific Islander, not Hispanic	0.32	0.26	-0.06	-0.1788	0.144
Percentage Two or more races, not Hispanic	3.00	2.94	-0.06	-0.0203	0.115

NOTE: For the mean grade 12 enrollment averaged across students and the race/ethnicity percentages, size-adjusted school weights were used.

For the mean grade 12 enrollment, school weights were used.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2019.

Table R-7. 2019 HSTS original sample—weighted percentages of full sample and responding schools, by various subgroups—all private schools (sample size = 326)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square <i>p</i> -value
Census region					0.8220
Northeast	28.00	24.65	-3.35	-0.1197	
Midwest	20.21	22.77	2.56	0.1264	
South	32.99	30.92	-2.06	-0.0626	
West	18.80	21.66	2.86	0.1521	
Private school reporting subgroup					<0.0001
Roman Catholic	44.09	73.61	29.52	0.6697	
NonCatholic Private	55.91	26.39	-29.52	-0.5280	
Urban-centric locale					0.2825
City	47.18	47.92	0.74	0.0156	
Suburban	36.04	26.93	-9.11	-0.2527	
Town	5.13	8.93	3.80	0.7393	
Rural	11.64	16.22	4.57	0.3929	
Size class					0.0780
Large (≥ 60)	67.88	76.71	8.83	0.1301	
Medium (16-59)	23.90	17.28	-6.62	-0.2770	
Small (≤ 15)	8.22	6.01	-2.21	-0.2687	

NOTE: Size-adjusted school weights were used.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2019.

Table R-8. 2019 HSTS original sample—weighted mean values of various characteristics for full sample and responding schools—all private schools (sample size = 326)

	Full sample mean	Respondent mean	Bias	Relative bias	<i>t</i> -test <i>p</i> -value
Mean grade 12 enrollment averaged across students	125.06	128.98	3.91	0.0313	0.761
Mean grade 12 enrollment	43.24	53.55	10.31	0.2385	0.152
Race/ethnicity					
Percentage White, not Hispanic	69.06	65.17	-3.90	-0.0564	0.276
Percentage Black, not Hispanic	7.42	6.67	-0.75	-0.1014	0.418
Percentage Hispanic	11.23	19.14	7.92	0.7053	0.012
Percentage Asian, not Hispanic	6.71	4.90	-1.81	-0.2699	0.012
Percentage American Indian/ Alaska Native, not Hispanic	0.32	0.40	0.08	0.2334	0.561
Percentage Native Hawaiian/Pacific Islander, not Hispanic	0.91	0.73	-0.18	-0.1979	0.731
Percentage Two or more races, not Hispanic	4.35	3.00	-1.35	-0.3108	0.005

NOTE: For the mean grade 12 enrollment averaged across students and the race/ethnicity percentages, size-adjusted school weights were used. For the mean grade 12 enrollment, school weights were used.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2019.

Table R-9. 2019 HSTS sample with substitutes—weighted percentages of full sample and responding schools, by various subgroups—all private schools (sample size = 326)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square <i>p</i> -value
Census region					0.722
Northeast	28.00	23.07	-4.93	-0.1761	
Midwest	20.21	24.18	3.97	0.1965	
South	32.99	31.80	-1.19	-0.0359	
West	18.80	20.94	2.14	0.1140	
Private school reporting subgroup					<0.0001
Roman Catholic	44.09	70.29	26.20	0.5944	
NonCatholic Private	55.91	29.71	-26.20	-0.4686	
Urban-centric locale					0.1981
City	47.18	44.35	-2.83	-0.0600	
Suburban	36.04	28.66	-7.38	-0.2047	
Town	5.13	10.54	5.41	1.0529	
Rural	11.64	16.44	4.80	0.4122	
Size class					0.1860
Large (≥ 60)	67.88	74.27	6.40	0.0942	
Medium (16-59)	23.90	18.17	-5.72	-0.2395	
Small (≤ 15)	8.22	7.55	-0.67	-0.0817	

NOTE: Size-adjusted school weights were used.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2019.

Table R-10. 2019 HSTS sample with substitutes—weighted mean values of various characteristics for full sample and responding schools—all private schools (sample size = 326)

	Full sample mean	Respondent mean	Bias	Relative bias	<i>t</i> -test <i>p</i> -value
Mean grade 12 enrollment averaged across students	125.06	128.90	3.83	0.0307	0.766
Mean grade 12 enrollment	43.24	49.93	6.69	0.1548	0.245
Race/ethnicity					
Percentage White, not Hispanic	69.06	68.79	-0.28	-0.0040	0.933
Percentage Black, not Hispanic	7.42	5.88	-1.54	-0.2072	0.053
Percentage Hispanic	11.23	16.60	5.38	0.4791	0.044
Percentage Asian, not Hispanic	6.71	4.86	-1.85	-0.2755	0.012
Percentage American Indian/ Alaska Native, not Hispanic	0.32	0.34	0.01	0.0348	0.913
Percentage Native Hawaiian/Pacific Islander, not Hispanic	0.91	0.66	-0.25	-0.2763	0.617
Percentage Two or more races, not Hispanic	4.35	2.87	-1.47	-0.3393	0.005

NOTE: For the mean grade 12 enrollment averaged across students and the race/ethnicity percentages, size-adjusted school weights were used.

For the mean grade 12 enrollment, school weights were used.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2019.

Table R-11. 2019 HSTS nonresponse-adjusted sample—weighted percentages of full sample and responding schools, by various subgroups—all private schools (sample size = 326)

	Full sample weighted percentage	Respondent weighted percentage	Bias	Relative bias	Chi-square <i>p</i> -value
Census region					0.0530
Northeast	28.00	17.40	-10.61	-0.3788	
Midwest	20.21	22.64	2.42	0.1199	
South	32.99	38.46	5.47	0.1659	
West	18.80	21.51	2.71	0.1440	
Private school reporting subgroup					0.0403
Roman Catholic	44.09	46.39	2.30	0.0522	
NonCatholic Private	55.91	53.61	-2.30	-0.0412	
Urban-centric locale					0.0464
City	47.18	37.57	-9.61	-0.2037	
Suburban	36.04	30.89	-5.15	-0.1428	
Town	5.13	10.62	5.48	1.0677	
Rural	11.64	20.92	9.27	0.7966	
Size class					0.2620
Large (≥ 60)	67.88	60.67	-7.20	-0.1061	
Medium (16-59)	23.90	26.73	2.83	0.1184	
Small (≤ 15)	8.22	12.60	4.38	0.5320	

NOTE: Size-adjusted school weights were used.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2019.

Table R-12. 2019 HSTS nonresponse-adjusted sample—weighted mean values of various characteristics for full sample and responding schools—all private schools (sample size = 326)

	Full sample mean	Respondent mean	Bias	Relative bias	<i>t</i> -test <i>p</i> -value
Mean grade 12 enrollment averaged across students	125.06	102.81	-22.26	-0.1780	0.025
Mean grade 12 enrollment	43.24	35.93	-7.30	-0.1689	0.146
Race/ethnicity					
Percentage White, not Hispanic	69.06	72.16	3.10	0.0448	0.165
Percentage Black, not Hispanic	7.42	5.84	-1.59	-0.2136	0.050
Percentage Hispanic	11.23	13.15	1.92	0.1715	0.155
Percentage Asian, not Hispanic	6.71	5.16	-1.55	-0.2313	0.036
Percentage American Indian/ Alaska Native, not Hispanic	0.32	0.37	0.05	0.1554	0.588
Percentage Native Hawaiian/Pacific Islander, not Hispanic	0.91	0.64	-0.27	-0.2922	0.573
Percentage Two or more races, not Hispanic	4.35	2.68	-1.67	-0.3841	0.001

NOTE: For the mean grade 12 enrollment averaged across students and the race/ethnicity percentages, size-adjusted school weights were used. For the mean grade 12 enrollment, school weights were used.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 2019.



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