

# NAEP and International Assessments as Independent Indicators of Student Performance

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- Large scale student assessments in US schools
- Value of federal assessments
- Transition to technology-based assessment (TBA)
- Early NCEES efforts on TBA
- 2015 NAEP transition goals and activities
- Adding value to federal assessments
- Conclusions

# Large Scale Student Assessments in 2015



State



Partnership for Assessment of  
Readiness for College and Careers

Tied to  
curriculum  
(high stakes)



Various non-affiliated state assessments

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National



*National Assessment of Educational Progress (NAEP)*

Publications & Products | Staff | Data Tools

Applicable to  
all U.S.  
schools (low  
stakes)

International



Applicable to  
multiple  
nations

# What is the value of the federal assessments?



- Both NAEP and the international assessments have been collecting data for decades
  - Long Term Trend NAEP: 1969
  - Main NAEP: 1990 (Mathematics), 1992 (Reading),
  - TIMSS: 1995
  - PISA: 2000
  - PIRLS: 2001
- NAEP and international assessments are designed to measure what students should know and be able to do – not tied to any particular curriculum but relevant to all

# Adding Value to the Federal Assessments



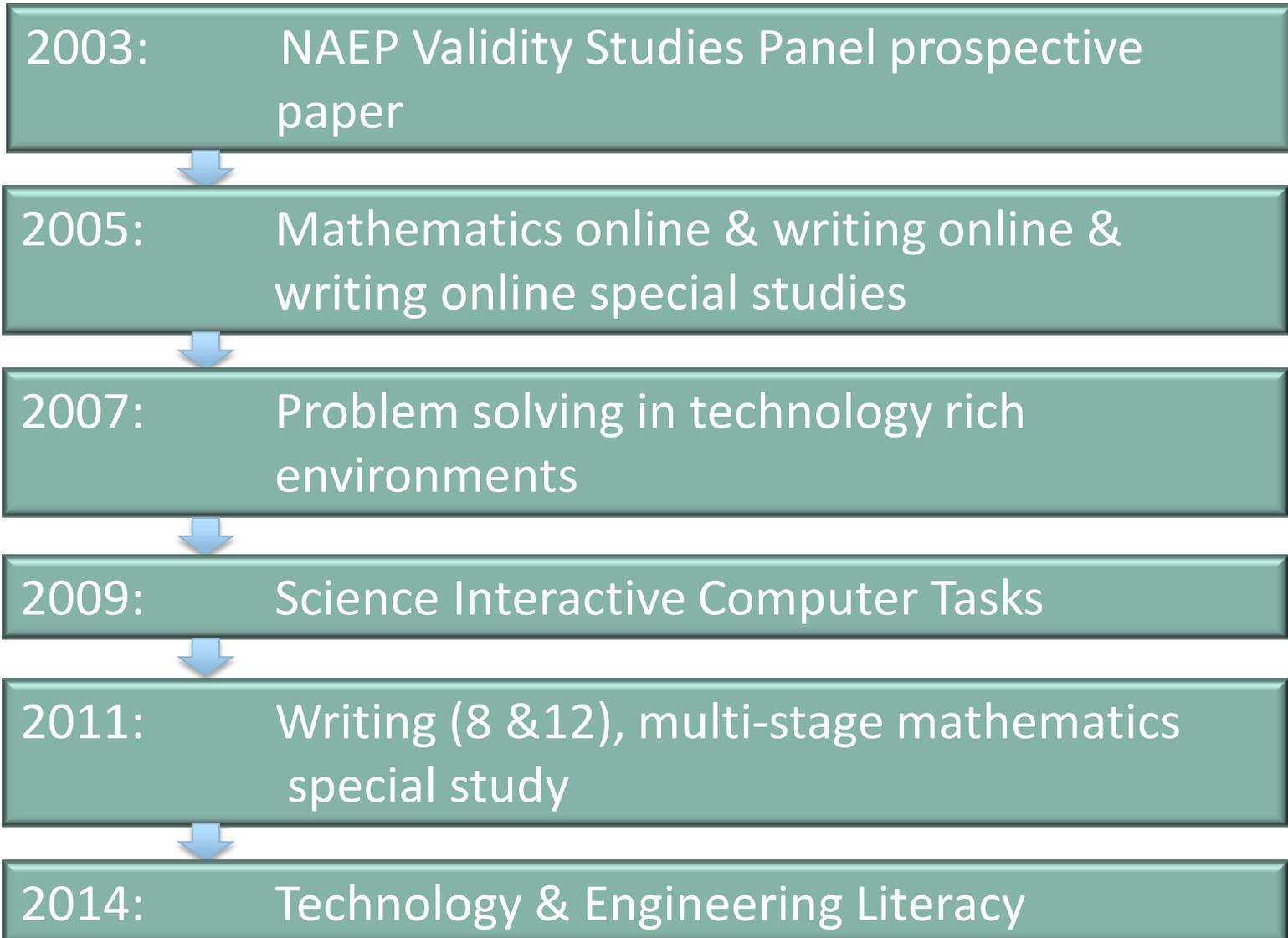
- NCES has begun to conduct statistical linking studies with TIMSS, PISA, and PIRLS that will enable states to compare their students to the international community
  - NAEP/TIMSS - 2011
  - NAEP/PISA – 2013
- NAEP could be used as common metric to link PARCC and SBAC
- May be possible to link PARCC and SBAC to international studies

- In 2015 Race to the Top Consortia assessments go operational with computer-delivered tests
  - Partnership for Assessment of Readiness for College and Careers (PARCC)
  - Smarter Balanced Assessment Consortium (SBAC)
- NAEP and the international assessments (PIAAC, PIRLS, TIMSS, PISA) are also undergoing transition to technology-based assessments

# TBA Transition: Why now?

- Technology has become ubiquitous
- Students now typically complete assignments using some sort of technology-based interface
- Most of the writing that students do takes place on a computer
- Students are using fewer and fewer paper-and-pencil methods to complete work once they leave school

# Initial NAEP Forays into Computer-based Testing



# International Assessments Transition to Technology-Based Assessments



- Transition began with pilots in PISA in science in 2005, reading in 2009, and math in 2013. PISA will be fully TBA in 2015.
- PIAAC, an adult assessment, was the first large scale assessment designed to be fully TBA in 2011-2012
- PIRLS will have an optional computer-based assessment in 2016.
- TIMSS is planning for a TBA assessment in 2019.

# 2015 NAEP Transition Goals & Activities

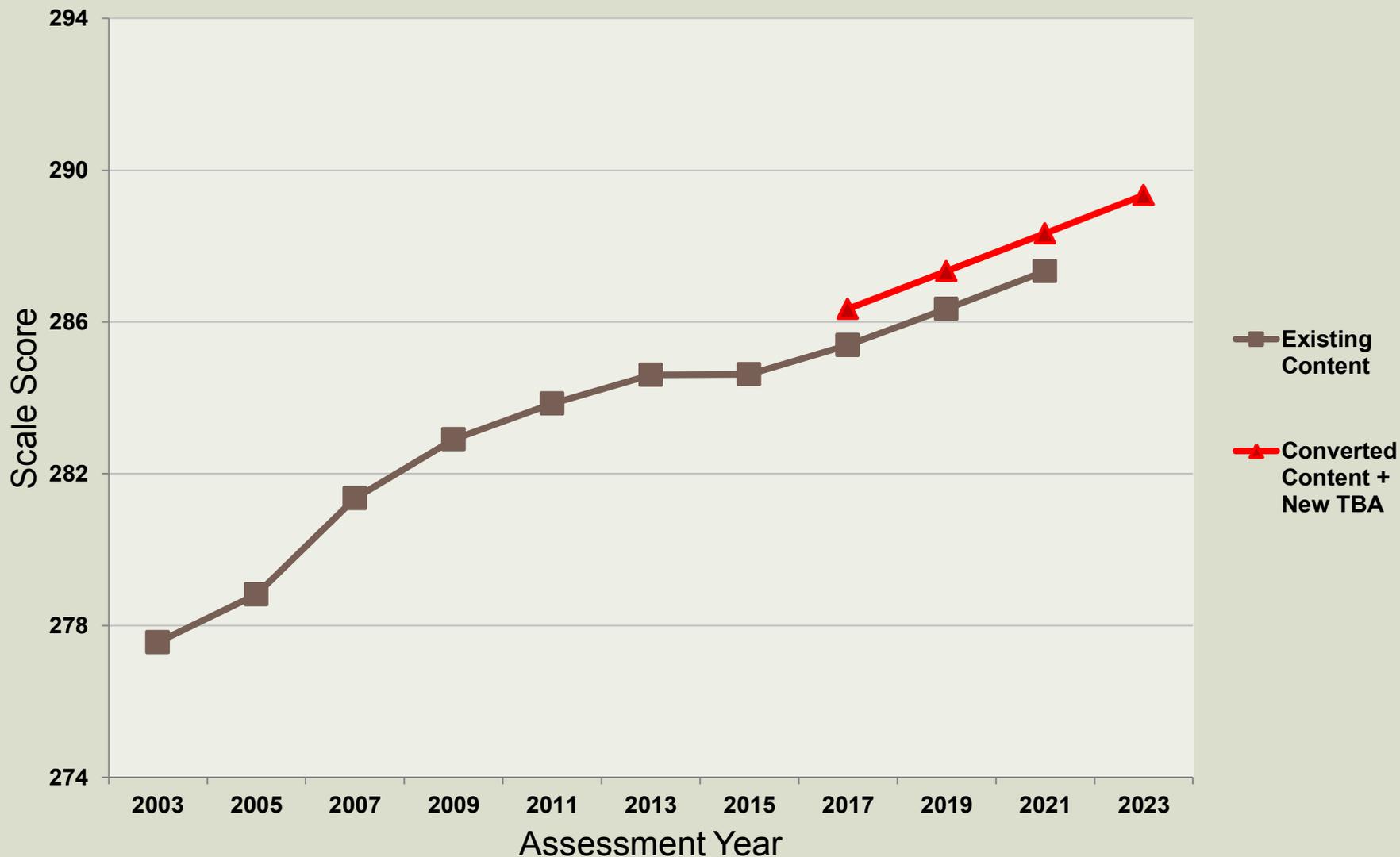
# 2015 NAEP Transition Goals & Activities



- Identify challenges, limitations, and opportunities of TBA
- Convert paper-and-pencil items for TBA and administer in TBA start-ups
  - Conduct bridge studies that evaluate the mode effect by comparing results on paper-and-pencil and TBA versions of the same content
- Begin the development and implementation of innovative, technology-based (TBA) items

- TBA start-up is intended to study the effects of transition
  - Revision of paper-and-pencil items for computer-based use
  - Bridge study
  - Innovative item development
  - Monitor and understand trend

# Trend: Overlapping Tracks



# Timeline for Reading and Math

	2015	2016	2017	2018	2019
<b>Math and Reading Grades 4 &amp; 8</b>	TBA Startup	TBA Pilot	TBA Operational TBA Pilot		TBA Operational TBA Pilot
	TBA Startup		TBA Pilot		TBA Operational TBA Pilot

- NAEP and international assessments serve as objective, low-stakes indicators of student achievement
  - Equally relevant to all curricula
  - Provide advantage of many years of student data
- Transition to technology-based assessments is necessary but will require careful empirical work
- NAEP offers additional value as a common metric
  - Links to international assessments
  - Links to consortia assessments

**Questions?**