Technology and Engineering Literacy
Student Questionnaire

2014
Grade 8
Computer-based Assessment
The following questions are about yourself and your family. Please answer questions about your home based on where you live most of the time during the school year.

1. Are you Hispanic or Latino? Select one or more squares.
   - ☐ No, I am not Hispanic or Latino.
   - ☐ Yes, I am Mexican, Mexican American, or Chicano.
   - ☐ Yes, I am Puerto Rican or Puerto Rican American.
   - ☐ Yes, I am Cuban or Cuban American.
   - ☐ Yes, I am from some other Hispanic or Latino background.

2. Which of the following best describes you? Select one or more squares.
   - ☐ White
   - ☐ Black or African American
   - ☐ Asian
   - ☐ American Indian or Alaska Native
   - ☐ Native Hawaiian or other Pacific Islander

3. About how many books are there in your home?
   - ☐ Few (0–10)
   - ☐ Enough to fill one shelf (11–25)
   - ☐ Enough to fill one bookcase (26–100)
   - ☐ Enough to fill several bookcases (more than 100)
4. Is there a computer at home that you use?
   ☑ Yes
   ☐ No

5. Do you have the following in your home? Select squares for all that apply.
   ☑ Access to the Internet
   ☑ Clothes dryer just for your family
   ☑ Dishwasher
   ☑ More than one bathroom
   ☑ Your own bedroom

6. About how many pages a day do you have to read in school and for homework?
   ☑ 5 or fewer
   ☑ 6–10
   ☑ 11–15
   ☑ 16–20
   ☑ More than 20

7. How often do you talk about things you have studied in school with someone in your family?
   ☑ Never or hardly ever
   ☑ Once every few weeks
   ☑ About once a week
   ☑ Two or three times a week
   ☑ Every day
8. How many days were you absent from school in the last month?
   - None
   - 1 or 2 days
   - 3 or 4 days
   - 5 to 10 days
   - More than 10 days

9. How far in school did your mother go?
   - She did not finish high school.
   - She graduated from high school.
   - She had some education after high school.
   - She graduated from college.
   - I don’t know.

10. How far in school did your father go?
    - He did not finish high school.
    - He graduated from high school.
    - He had some education after high school.
    - He graduated from college.
    - I don’t know.
11. How often do people in your home talk to each other in a language other than English?
   ☐ Never
   ☐ Once in a while
   ☐ About half of the time
   ☐ All or most of the time

12. Do the following people live in your home? Select squares for all that apply.
   ☐ Mother
   ☐ Stepmother
   ☐ Foster mother or other female legal guardian
   ☐ Father
   ☐ Stepfather
   ☐ Foster father or other male legal guardian

13. Write the ZIP code of your home address in the box.
The following questions are about your views and experiences related to technology and engineering.

*Technology* refers to all the things people make and do to their natural environment in order to get the things they want and need.

*Engineering* refers to using skills or knowledge to solve problems that meet people’s wants and needs.

Some questions ask for facts while other questions ask for your opinions. Read each question carefully, and pick the answer you think is best.
14. Have you ever taken or are you currently taking any of the following classes or subjects in school? Select one or more squares.

- Industrial technology (for example, auto mechanics, carpentry)
- Engineering (for example, robotics, bridge building, rocketry)
- Any class that involves learning to use, program, or build computers
- Any other technology-related class (for example, electronics, sewing, farming)
- I have not taken any of the classes listed above.

15. Have you ever studied technology or engineering topics in any of the following classes or subjects in school? Select one or more squares.

- Mathematics
- Science
- Social studies or history
- I have not studied technology or engineering in any of the classes or subjects listed above.

16. In school, how often do you learn about or discuss the following? Select one circle in each row.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. How to judge reliability of sources (for example, how a website might be biased or inaccurate)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. How to credit others for their ideas (for example, citing sources, using endnotes and footnotes in reports)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
### 17. For school work, how often do you use a computer or other digital technology for the following activities? Select one circle in each row.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never or almost never</th>
<th>A few times a year</th>
<th>Once or twice a month</th>
<th>Once or twice a week</th>
<th>Every day or almost every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Create, edit, or organize digital media</td>
<td>☐</td>
<td>☀</td>
<td>☎</td>
<td>☎</td>
<td>☎</td>
</tr>
<tr>
<td>b. Create a presentation</td>
<td>☐</td>
<td>☐</td>
<td>☀</td>
<td>☎</td>
<td>☎</td>
</tr>
<tr>
<td>c. Create a spreadsheet (a table or grid that displays data into columns and rows and may be used to create charts and graphs)</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☎</td>
<td>☎</td>
</tr>
</tbody>
</table>

### 18. In this question, please think about activities you do that are not related to your school work. How often do you use a computer or other digital technology for the following activities not for school work? Select one circle in each row.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never or almost never</th>
<th>A few times a year</th>
<th>Once or twice a month</th>
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<tr>
<td>a. Create, edit, or organize digital media</td>
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<td>☀</td>
<td>☎</td>
<td>☎</td>
<td>☎</td>
</tr>
<tr>
<td>b. Create a presentation</td>
<td>☐</td>
<td>☐</td>
<td>☀</td>
<td>☎</td>
<td>☎</td>
</tr>
<tr>
<td>c. Create a spreadsheet (a table or grid that displays data into columns and rows and may be used to create charts and graphs)</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☎</td>
<td>☎</td>
</tr>
</tbody>
</table>
### 19. In school, how often have you learned about or discussed the following? Select one circle in each row.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Designing or creating something to solve a problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Designing something when there is limited time, money, or materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 20. In school, how often have you ever done the following activities? Select one circle in each row.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once or twice</th>
<th>Three to five times</th>
<th>More than five times</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Used different tools, materials, or machines to see which are best for a given purpose</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Built or tested a model to see if it solves a problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Figured out why something is not working in order to fix it</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Taken something apart in order to fix it or see how it works</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Student Questionnaire – Technology and Engineering Literacy**

21. **Outside of school**, how often have you ever done the following activities? Select one circle in each row.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Once or twice</th>
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<th>More than five times</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Used tools or materials to plan or design something (for example, cake recipe, party)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. Used different tools, materials, or machines to see which are best for a given purpose</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c. Built or tested a model to see if it solves a problem</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d. Figured out why something is not working in order to fix it</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e. Taken something apart in order to fix it or see how it works</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
22. Do you think that you would be able to do each of the following? Select one circle in each row.

<table>
<thead>
<tr>
<th></th>
<th>I definitely can’t</th>
<th>I probably can’t</th>
<th>Maybe</th>
<th>I probably can</th>
<th>I definitely can</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Create presentations with sound, pictures, or video</td>
<td><img src="VH008238" alt="Circle" /></td>
<td><img src="VH008238" alt="Circle" /></td>
<td><img src="VH008238" alt="Circle" /></td>
<td><img src="VH008238" alt="Circle" /></td>
</tr>
<tr>
<td>b.</td>
<td>Organize information into a chart, graph, or spreadsheet</td>
<td><img src="VH008240" alt="Circle" /></td>
<td><img src="VH008240" alt="Circle" /></td>
<td><img src="VH008240" alt="Circle" /></td>
<td><img src="VH008240" alt="Circle" /></td>
</tr>
<tr>
<td>c.</td>
<td>Compare products using the Internet</td>
<td><img src="VH008241" alt="Circle" /></td>
<td><img src="VH008241" alt="Circle" /></td>
<td><img src="VH008241" alt="Circle" /></td>
<td><img src="VH008241" alt="Circle" /></td>
</tr>
<tr>
<td>d.</td>
<td>Use tools or materials to fix something</td>
<td><img src="VH008243" alt="Circle" /></td>
<td><img src="VH008243" alt="Circle" /></td>
<td><img src="VH008243" alt="Circle" /></td>
<td><img src="VH008243" alt="Circle" /></td>
</tr>
<tr>
<td>e.</td>
<td>Take something apart in order to fix it or see how it works</td>
<td><img src="VH008244" alt="Circle" /></td>
<td><img src="VH008244" alt="Circle" /></td>
<td><img src="VH008244" alt="Circle" /></td>
<td><img src="VH008244" alt="Circle" /></td>
</tr>
<tr>
<td>f.</td>
<td>Describe how inventions change society</td>
<td><img src="VH008245" alt="Circle" /></td>
<td><img src="VH008245" alt="Circle" /></td>
<td><img src="VH008245" alt="Circle" /></td>
<td><img src="VH008245" alt="Circle" /></td>
</tr>
<tr>
<td>g.</td>
<td>Compare how different activities affect the environment</td>
<td><img src="VH008247" alt="Circle" /></td>
<td><img src="VH008247" alt="Circle" /></td>
<td><img src="VH008247" alt="Circle" /></td>
<td><img src="VH008247" alt="Circle" /></td>
</tr>
<tr>
<td>h.</td>
<td>Explain why people have different tools, machines, or devices in different parts of the world</td>
<td><img src="VH008248" alt="Circle" /></td>
<td><img src="VH008248" alt="Circle" /></td>
<td><img src="VH008248" alt="Circle" /></td>
<td><img src="VH008248" alt="Circle" /></td>
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23. **In school**, how often have you learned about or discussed the following? Select one circle in each row.

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<tbody>
<tr>
<td>a. Inventions that change the way people live</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>b. Choices people make that affect the environment</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>c. Conditions that influence the use or availability of machines or devices</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>d. The ways people work together to solve problems in their community or the world</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
</tr>
</tbody>
</table>

24. **Outside of school**, how often have you learned about or discussed the following? Select one circle in each row.

<table>
<thead>
<tr>
<th></th>
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<th>Sometimes</th>
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</tr>
</thead>
<tbody>
<tr>
<td>a. Inventions that change the way people live</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>b. Choices people make that affect the environment</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>c. Conditions that influence the use or availability of machines or devices</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>d. The ways people work together to solve problems in their community or the world</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
</tr>
</tbody>
</table>
25. Who taught you most of what you know about building things, fixing things, or how things work?
   - ☐ I taught myself.
   - ☐ Family members
   - ☐ Friends
   - ☐ Teachers
   - ☐ Someone else

26. Who taught you most of what you know about using computers or other digital technology for collecting or sharing information?
   - ☐ I taught myself.
   - ☐ Family members
   - ☐ Friends
   - ☐ Teachers
   - ☐ Someone else

27. Who taught you most of what you know about how technology, people, and the environment are related to each other?
   - ☐ I taught myself.
   - ☐ Family members
   - ☐ Friends
   - ☐ Teachers
   - ☐ Someone else
28. Before today, had you ever taken an interactive computer test similar to the one you just took? Select one circle in each row.

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I had taken an interactive computer test in school.</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>b. I had taken an interactive computer test outside of school.</td>
<td>☑</td>
<td>☐</td>
</tr>
</tbody>
</table>

29. How hard was this test compared to most other tests you have taken this year in school?

- ☑ Easier than other tests
- ☐ About as hard as other tests
- ☒ Harder than other tests
- ☐ Much harder than other tests

30. How hard did you try on this test compared to how hard you tried on most other tests you have taken this year in school?

- ☑ Not as hard as on other tests
- ☐ About as hard as on other tests
- ☒ Harder than on other tests
- ☐ Much harder than on other tests

31. How important was it to you to do well on this test?

- ☑ Not very important
- ☐ Somewhat important
- ☒ Important
- ☐ Very important