



Grades 6–8

3.5.6-8.B Technology and Engineering: Applying, Maintaining, Assessing, and Evaluating Technological Products and Systems

Students who demonstrate understanding can use instruments to gather data on the performance of everyday products.

Clarifying Statement: Students should use evidence to make more complex technology assessment decisions. For example, monitoring the power produced by a photovoltaic system will allow students to determine if the system is operating according to its rated output

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p>Using Mathematics and Computational Thinking</p> <p>Mathematical and computational thinking in 6–8 builds on K–5 experiences and progresses to identifying patterns in large data sets and using mathematical concepts to support explanations and arguments.</p> <ul style="list-style-type: none"> Use digital tools (e.g., computers) to analyze very large data sets for patterns and trends. 	<p>ETS1.B: Developing Possible Solutions</p> <ul style="list-style-type: none"> There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem. <p>NAEP I.8.5</p> <ul style="list-style-type: none"> Select and use appropriate digital and network tools and media resources to collect, organize, analyze, and display supporting data to answer questions and test hypotheses. 	<p>Systems Thinking</p> <ul style="list-style-type: none"> Uses the systems model to show how parts of technological systems work together.

Pennsylvania Context: Examples of Pennsylvania context include but are not limited to Pennsylvania’s Public Utility Commission.

Pennsylvania Career Ready Skills: Explain to others one’s own strengths, needs, and preferences specific to a context.

Connections to Other Standards Content and Practices



Standard Source	Possible Connections to Other Standard(s) or Practice(s)
<p>PA Core Standards: Reading and Writing in Science and Technical Areas</p>	<p>CC.1.2.3.G: Use information gained from text features to demonstrate understanding of a text. CC.1.2.4.G: Interpret various presentations of information within a text or digital source and explain how the information contributes to an understanding of text in which it appears. CC.1.2.5.G: Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. CC.1.4.3.V: Conduct short research projects that build knowledge about a topic. CC.1.4.4.V: Conduct short research projects that build knowledge through investigation of different aspects of a topic. CC.1.4.5.V: Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic. CC.1.4.3.W: Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. CC.1.4.4.W: Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources. CC.1.4.5.W: Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.</p>
<p>PA Core Standards and Practices: Math</p>	<p>MP.5: Use appropriate tools strategically.</p>
<p>Integrated Standards for Science, Environment & Ecology, and Technology & Engineering Standards Grades K–12</p>	<p>N/A</p>