



Grades 6–8

3.5.6-8.Z Technology and Engineering: Integration of Knowledge, Technologies, and Practices

Students who demonstrate understanding can analyze how different technological systems often interact with economic, environmental, and social systems.

Clarifying Statement: For example, a navigation system in a delivery vehicle uses sensors that provide input to the distribution center and sends customers notifications when their products are delivered. If a package is delivered to a wrong address, GPS data can accurately determine the location to which the package was actually delivered.

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p>Engaging in Argument From Evidence Engaging in argument from evidence in 6–8 builds on K–5 experiences and progresses to constructing a convincing argument that supports or refutes claims for either explanations or solutions about the natural and designed world(s).</p> <ul style="list-style-type: none"> Compare and critique two arguments on the same topic and analyze whether they emphasize similar or different evidence and/or interpretations of facts. 	<p>NAEP T.8.1</p> <ul style="list-style-type: none"> Economic, political, social, and cultural aspects of society drive improvements in technological products, processes, and systems 	<p>Systems Thinking</p> <ul style="list-style-type: none"> Uses the systems model to show how parts of technological systems work together. <p>Attention to Ethics</p> <ul style="list-style-type: none"> Shows an understanding of ways to regulate technologies and the reasons for doing so.

Pennsylvania Context: Examples of Pennsylvania context include but are not limited to Pennsylvania water and wastewater facilities and processes.

Pennsylvania Career Ready Skills: Distinguish among various social contexts and how they impact personal feelings.

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.2: Reason abstractly and quantitatively.</p>
<p>Integrated Standards for Science, Environment & Ecology, and Technology & Engineering Standards Grades K–12</p>	<p>N/A</p>