



**Grades 3–5**

**3.5.3-5.E Technology and Engineering:** Impacts of Technology

**Students who demonstrate understanding can** *explain why responsible use of technology requires sustainable management of resources.*

**Clarifying Statement:** Building on their initial understandings about material resources, students can tie concepts of renewability, scarcity, and resource demand to sustainable use, defined as availability of a resource for use by future generations.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Obtaining, Evaluating, and Communicating Information</b></p> <p>Obtaining, evaluating, and communicating information in 3–5 builds on K–2 experiences and progresses to evaluating the merit and accuracy of ideas and methods.</p> <ul style="list-style-type: none"> <li>Communicate scientific and/or technical information orally and/or in written formats, including various forms of media as well as tables, diagrams, and charts.</li> </ul>	<p><b>ESS3.C</b></p> <ul style="list-style-type: none"> <li>Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth’s resources and environments.</li> </ul>	<p><b>Critical Thinking</b></p> <ul style="list-style-type: none"> <li>Knows how to find answers to technological questions.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to robotic industries and agriculture industries.

**Pennsylvania Career Ready Skills:** Select and utilize expressive communication strategies (e.g., tone, body language, facial expressions) with an understanding of its effect on others.



**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
<p><b>PA Core Standards: Reading and Writing in Science and Technical Areas</b></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><b>PA Core Standards and Practices: Math</b></p>	<p>MP.2: Reason abstractly and quantitatively.                      MP.4: Model with mathematics.                      MP.5: Use appropriate tools strategically.</p>
<p><b>Science, Technology &amp; Engineering, and Environmental Literacy &amp; Sustainability Academic Standards</b></p>	<p>3.3.5.F: Generate and design possible solutions to a current environmental issue, threat, or concern.</p>