



## Grades 3–5

### 3.5.3-5.L Technology and Engineering: Core Concepts of Technology and Engineering

**Students who demonstrate understanding can** *demonstrate how tools and machines extend human capabilities, such as holding, lifting, carrying, fastening, separating, and computing.*

**Clarifying Statement:** The use of tools and machines, such as glue guns, mini-saws, rulers, scissors, gears, clamps, and computers, makes it possible for people to accomplish more tasks.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Engaging in Argument From Evidence</b> Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). <ul style="list-style-type: none"> <li>Construct and/or support an argument with evidence, data, and/or a model.</li> </ul>	<b>Developing Possible Solutions</b> <ul style="list-style-type: none"> <li>Research on a problem should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs under a range of likely conditions.</li> </ul>	<b>Optimism</b> <ul style="list-style-type: none"> <li>Engages in “tinkering” to improve a design.</li> </ul>

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

**Pennsylvania Career Ready Skills:** Demonstrate respect for the uniqueness of others.

## Connections to Other Standards Content and Practices



Standard Source	Possible Connections to Other Standard(s) or Practice(s)
<b>PA Core Standards: Reading and Writing in Science and Technical Areas</b>	<p>CC.1.2.3.G: Use information gained from text features to demonstrate understanding of a text.</p> <p>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</p> <p>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.</p> <p>CC.1.4.3.V: Conduct short research projects that build knowledge about a topic.</p> <p>CC.1.4.4.V: Conduct short research projects that build knowledge through investigation of different aspects of a topic.</p> <p>CC.1.4.5.V: Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.</p> <p>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.</p> <p>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.</p> <p>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>
<b>PA Core Standards and Practices: Math</b>	<p>MP.2: Reason abstractly and quantitatively.</p> <p>MP.4: Model with mathematics.</p> <p>MP.5: Use appropriate tools strategically.</p>
<b>Science, Technology &amp; Engineering, and Environmental Literacy &amp; Sustainability Academic Standards</b>	<p>N/A</p>