



Grades K–2

3.5.K-2.E Technology and Engineering: Impacts of Technology

Students who demonstrate understanding can *illustrate helpful and harmful effects of technology*.

Clarifying Statement: Children can examine a familiar technology and explain how it can be both helpful and harmful. For example, a crayon can be used to draw creatively but can also be used to write on bedroom walls.

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p>Asking Questions and Defining Problems</p> <p>Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.</p> <ul style="list-style-type: none"> Define a simple problem that can be solved through the development of a new or improved object or tool. 	N/A	<p>Communication</p> <ul style="list-style-type: none"> Learns that humans have many ways to communicate. <p>Attention to Ethics</p> <ul style="list-style-type: none"> Learns that use of technology affects humans and the environment.

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

Pennsylvania Career Ready Skills: Identify consequences of a decision to oneself and others prior to action.

Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	<p>CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers.</p> <p>CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers.</p> <p>CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest.</p> <p>CC.1.4.1-2.V: Participate in individual or shared research and writing projects.</p> <p>CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question.</p> <p>CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question.</p> <p>CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.</p>
PA Core Standards and Practices: Math	<p>MP.2: Reason abstractly and quantitatively.</p> <p>MP.4: Model with mathematics.</p> <p>MP.5: Use appropriate tools strategically.</p>



**Science, Technology &
Engineering, and
Environmental Literacy &
Sustainability Academic
Standards**

3.3.2.B: Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.