



Grades K–2

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

Students who demonstrate understanding can *compare simple technologies to evaluate their impacts.*

Clarifying Statement: Children can look at simple tools in their home or school to compare how they impact life. For example, how does a hand-operated pencil sharpener versus an electric one impact people?

Assessment Boundary: N/A

| Science and Engineering Practices (SEP) | Disciplinary Core Ideas (DCI) | Technology and Engineering Practices (TEP) |
|---|---|---|
| Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. <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. | Optimizing the Design Solution <ul style="list-style-type: none"> Because there is always more than one possible solution to a problem, it is useful to compare and test designs. | Critical Thinking <ul style="list-style-type: none"> Engages in listening, questioning, and discussing. |

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 | 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. 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. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups. |
| PA Core Standards and Practices: Math | MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically. |



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

N/A