



Grades K–2

3.5.K-2.Q Technology and Engineering: Design in Technology and Engineering Education

Students who demonstrate understanding can apply skills necessary for making in design.

Clarifying Statement: Providing opportunities to use tools and manipulate materials can facilitate making skills in young children. Structuring design experiences at this age may take the form of tinkering and play.

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p>Constructing Explanations and Designing Solutions</p> <p>Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</p> <ul style="list-style-type: none"> Use tools and/or materials to design and/or build a device that solves a specific problem or a solution to a specific problem. 	<p>ETS1.B: Developing Possible Solutions</p> <ul style="list-style-type: none"> Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people. 	<p>Making and Doing</p> <ul style="list-style-type: none"> Learns to use tools and materials to accomplish a task.

Pennsylvania Context: Examples of Pennsylvania context include but are not limited to manufacturing businesses.

Pennsylvania Career Ready Skills: Identify one’s own strengths, needs, and preferences.

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.1.4.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	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