



Grades K–2

3.5.K-2.W Technology and Engineering: Integration of Knowledge, Technologies, and Practices

Students who demonstrate understanding can *apply concepts and skills from technology and engineering activities that reinforce concepts and skills across multiple content areas.*

Clarifying Statement: Young children can use building blocks to develop computational and critical thinking skills by introducing design, measurement, and structural concepts. The intentional translation of skills learned in physical education, such as teamwork, can be applied to problem solving. Drawing in art class can lead to new ways of thinking about design and visual appeal.

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p>Analyzing and Interpreting Data Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"> Analyze data from tests of an object or tool to determine if it works as intended. 	<p>ETS1.A: Defining and Delimiting Engineering Problems</p> <ul style="list-style-type: none"> A situation that people want to change or create can be approached as a problem to be solved through engineering. Asking questions, making observations, and gathering information are helpful in thinking about problems. Before beginning to design a solution, it is important to clearly understand the problem. 	<p>Collaboration Learns to share technological products and ideas.</p>

Pennsylvania Context: Examples of Pennsylvania context include but are not limited to Pennsylvania’s food production industries.

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	3.3.K.E: Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.