



Grades K–2

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

Students who demonstrate understanding can demonstrate that designs have requirements.

Clarifying Statement: Young children recognize that all designs must meet certain expectations. These expectations are related to the purpose, function, and requirements of a solution.

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
Constructing Explanations and Designing Solutions 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. <ul style="list-style-type: none"> Generate and/or compare multiple solutions to a problem. 	Defining and Delimiting Engineering Problems <ul style="list-style-type: none"> Before beginning to design a solution, it is important to clearly understand the problem. 	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 Pennsylvania Department of Labor & Industry regulations.

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)
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