Grades 3–5

3.5.3-5.EE Technology and Engineering: Nature and Characteristics of Technology and Engineering

Students who demonstrate understanding can *explain how solutions to problems are shaped by economic, political, and cultural forces.*

Clarifying Statement: For example, the interests, desires, and financial resources of a group of people will influence the type of transportation system developed for that community. A transportation system for a large city may rely on mass transit, while one in a smaller town might rely on personal vehicles.

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
Engaging in Argument From Evidence Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). • Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem.	N/A	**Systems Thinking** • Provides examples of how human-designed products are connected.

Pennsylvania Context: Examples of Pennsylvania context include but are not limited to Pennsylvania Department of Labor and 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.1.2.3.G: Use information gained from text features to demonstrate understanding of a text. CC.1.2.4.G: Interpret various presentations of information within a text or digital source and explain how the information contributes to an understanding of text in which it appears. CC.1.2.5.G: Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. CC.1.4.3.V: Conduct short research projects that build knowledge about a topic. CC.1.4.4.V: Conduct short research projects that build knowledge through investigation of different aspects of a topic. CC.1.4.5.V: Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic. CC.1.4.3.W: Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. CC.1.4.4.W: Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources. CC.1.4.5.W: Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.
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	3.3.5.F: Generate and design possible solutions to a current environmental issue, threat, or concern.