



Grades 3–5

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

Students who demonstrate understanding can *describe the unique relationship between science and technology, and how the natural world can contribute to the human-made world to foster innovation.*

Clarifying Statement: People have, from the beginning, looked around to identify and use the materials and resources available to improve their lives. Raw materials and resources are shaped into tools, systems, and forms of energy to provide people with products that satisfy a need or want. Energy is harnessed to provide power and heat, and animals and crops are raised for food and clothing. These and other processes continue today as people use raw materials to create items they want and need.

Assessment Boundary: N/A

| Science and Engineering Practices (SEP) | Disciplinary Core Ideas (DCI) | Technology and Engineering Practices (TEP) |
|---|-------------------------------|--|
| <p>Obtaining, Evaluating, and Communicating Information</p> <p>Obtaining, evaluating, and communicating information in 3–5 builds on K–2 experiences and progresses to evaluating the merit and accuracy of ideas and methods.</p> <ul style="list-style-type: none"> Communicate scientific and/or technical information orally and/or in written formats, including various forms of media as well as tables, diagrams, and charts. | <p>N/A</p> | <p>Creativity</p> <ul style="list-style-type: none"> Tries new technologies and generates strategies for improving existing ideas. |

Pennsylvania Context: Examples of Pennsylvania context include but are not limited to robotic industries and agriculture industries.

Pennsylvania Career Ready Skills: Explain ways to establish relationships that are positive and supportive of others.

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.1.2.3.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.</p> |
| <p>PA Core Standards and Practices: Math</p> | <p>MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.</p> |
| <p>Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards</p> | <p>3.3.3.C: Make a claim supported by evidence about the merit of a design solution that reduces the impacts of a weather-related hazard.</p> |