#### **Standard**

• 3.5.9-12.CC Analyze how technology transfer occurs when a user applies an existing innovation developed for one function for a different purpose.

## **Key Learning**

 (LTTG) Students will be able to acquire, analyze, and evaluate information to reach an informed conclusion, using logic and reasoning skills.

#### **Unit Essential Question**

 How can I acquire, analyze, and evaluate information to reach an informed conclusion, using logic and reasoning skills?

### **Essential Question**

How do advancements from one field impact another?

#### **Key Vocabulary**

• Innovation, Invention, Setting, Transfer, Develop, Function, Purpose, Field of Study, and Advance

## **Learning Experience**

- Students who demonstrate understanding can analyze how technology transfer occurs when a user applies an existing innovation developed for one function for a different purpose.
- Clarifying Statement: For example, aerospace composite materials were used to design an advanced, lightweight, and easy-to-maneuver wheelchair. Similarly, memory foam was originally invented as a means of improving safety in aircraft seating. Students can engage in passive research related to this standard as well as actively engaging in it through tasks such as conducting strength testing with novel building materials.

#### (Big Idea) Technology & Engineering Curriculum Framework Big Ideas

• Technological knowledge and practices advance – and are advanced by – other fields.

# (SEP) Science and Engineering Practices

Engaging in Argument From Evidence - Evaluate the claims, evidence, and/or reasoning behind currently
accepted explanations or solutions to determine the merits of arguments.

### (DCI) Disciplinary Core Ideas

- HS-PS3-3 Design, build, and refine a device that works within given constraints to convert on form of energy into another form of energy.
- NAEP T.12.4 Analyze cultural, social, economic, or political changes (separately or together) that may be triggered by the transfer of a specific technology from one society to another. Include both anticipated and unanticipated effects.

## (TEP) Technology and Engineering Practices

• Critical Thinking - Uses evidence to better understand and solve problems in technology and engineering including applying computational thinking.

## **Terms**

- (ETS) Engineering, Technology, and Applications of Science Standards applicable across the Science, Environmental Literacy & Sustainability, and Technology & Engineering content areas.
- (LTTG) PDE Technology & Engineering Long Term Transfer Goals
- (Learning Experience) A learning experience refers to any interaction, activity, or other experience in which students acquire new understanding, knowledge, behaviors, or skills.
- (Big Idea #) PDE Technology & Engineering Curriculum Framework Big Ideas
- (SEP) PDE Science and Engineering Practices
- (DCI) PDE Disciplinary Core Ideas
- (TEP) PDE Technology and Engineering Practices