# **Unit: Applying Multimedia Knowledge and Skills**

## **Concept: Making and Doing**

### **Standard**

• 3.5.9-12.AA Safely apply an appropriate range of making skills to a design thinking process.

## **Key Learning**

 (LTTG) Students will be able to demonstrate integrity and conscientiousness, considering ethical issues involved.

#### **Unit Essential Question**

 How can I demonstrate integrity and conscientiousness, considering ethical issues involved?

#### **Essential Question**

Why is making a necessary component of design?

# **Key Vocabulary**

Safe, Skill, Making, and Design Thinking

## **Learning Experience**

- Students who demonstrate understanding can safely apply an appropriate range of making skills to a design thinking process.
- Clarifying Statement: Students independently identify and safely use appropriate tools and processes to
  complete a design making task. Students recognize their own knowledge and skill gaps, pursue opportunities
  to develop necessary skills, and become more confident and competent in making.

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

Making is an inherent part of technology and engineering design.

## (SEP) Science and Engineering Practices

• Constructing Explanations and Designing Solutions - Design, evaluate, and/or refine a solution to a complex real-world problem, based on scientific knowledge, student-generated sources of evidence, prioritized criteria, and trade-off considerations.

# (DCI) Disciplinary Core Ideas

- ETS1.B: Developing Possible Solutions Both physical models and computers can be used in various ways to aid in the engineering design process.
- ISTE 4C Students develop, test and refine prototypes as part of a cyclical design process.

#### (TEP) Technology and Engineering Practices

Making and Doing - Demonstrates the ability to regulate and improve making and doing skills.

#### **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