Unit: Applying Digital Graphics 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	Unit Essential Question
• (LTTG) Students will be able to demonstrate integrity and conscientiousness, considering ethical issues involved.	• 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