Unit: Foundations of Digital Graphics	Concept: Interdisciplinary Skills

Standard
- 3.5.9-12.EE Connect technological and engineering progress to the advancement of other areas of knowledge and vice versa.

Key Learning
- (LTTG) Students will be able to engage as technological and engineering literate members of a global society.

Unit Essential Question
- How can I engage as a technological and engineering literate member of a global society?

Essential Question
- How do advancements from one field impact another?

Key Vocabulary
- Advancement, Traverse, and Progress

Learning Experience
- Students who demonstrate understanding can connect technological and engineering progress to the advancement of other areas of knowledge and vice versa.
- Clarifying Statement: For instance, cloud data storage aided the connectivity of physical devices, known as the Internet of Things (IoT). This advancement has enabled real-time mathematical, economic, medical, and other applications of data collection, analysis, and production. These advancements in turn are being applied to a multitude of areas, including the emerging field of "Smart Highways," infrastructure integrated with sensors to collect data on road conditions and weather to better aid in the decision-making process of road crews and local authorities.

(Big Idea) Technology & Engineering Curriculum Framework Big Ideas
- Technological knowledge and practices advance – and are advanced by – other fields.

(SEP) Science and Engineering Practices
- Obtaining, Evaluating, and Communicating Information - Compare, integrate and evaluate sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a scientific question or solve a problem.

(DCI) Disciplinary Core Ideas
- ETS1.A: Defining and Delimiting Engineering Problems - Criteria and constraints also include satisfying any requirements set by society, such as taking issues of risk mitigation into account, and they should be quantified to the extent possible and stated in such a way that one can tell if a given design meets them.
- NAEP D.12.1 - Advances in science have been applied by engineers to design new products, processes, and systems, while improvements in technology have enabled breakthroughs in scientific knowledge.

(TEP) Technology and Engineering Practices

- Systems Thinking - Designs and troubleshoots technological systems in ways that consider the multiple components of the system.
- Optimism - Shows persistence in addressing technological problems and finding solutions to those problems.

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