Unit: Technological Design Process

Concept: Project Management

Standard

• 3.5.9-12.00 Use project management tools, strategies, and processes in planning, organizing, and controlling work.

Key Learning

 (LTTG) Students will be able to analyze a problem in its entirety while recognizing the subcomponents interacting with human-made and natural environments.

Unit Essential Question

 How can I analyze a problem in its entirety while recognizing the subcomponents interacting with human-made and natural environments?

Essential Question

How are various resources used in technology and engineering activities?

Key Vocabulary

Project Management, Teamwork, Responsibility, Plan, Organize, and Control

Learning Experience

- Students who demonstrate understanding can use project management tools, strategies, and processes in planning, organizing, and controlling work.
- Clarifying Statement: Management is sometimes defined as getting work done through other people.

 Teamwork, responsibility, and interpersonal dynamics play a significant role in the development and production of technological products. Management processes are used to oversee and guide these functions.

(Big Idea) Technology & Engineering Curriculum Framework Big Ideas

• Technology and engineering activities require resources.

(SEP) Science and Engineering Practices

• Planning and Carrying Out Investigations - Plan and conduct an investigation or test a design solution in a safe and ethical manner including considerations of environmental, social, and personal impacts.

(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.

(TEP) Technology and Engineering Practices

• Collaboration - Assesses technological products, systems, and processes through critical analysis of their impacts and outcomes.

• Communication - Conveys ideas clearly in constructive insightful ways, including through written and oral communication and via mathematical and physical models.

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