Unit: Testing, Evaluating, and Refining	Concept: Testing

Standard

- 3.5.9-12.H Evaluate ways that technology and engineering can impact individuals, society, and the environment.

Key Learning	Unit Essential Question
• (LTTG) Students will be able to investigate better solutions through a belief that opportunities can be found in every challenge.	• How can I investigate better solutions through a belief that opportunities can be found in every challenge?

Essential Question

- How can one assess the impact of technology and engineering on society?

Key Vocabulary

- Evaluate, Technology, Engineering, Individual, Society, Environment, Impact, and Sustainability

Learning Experience

- Students who demonstrate understanding can evaluate ways that technology and engineering can impact individuals, society, and the environment.
- Clarifying Statement: A variety of approaches and resources can be used by students when asked to evaluate given technologies. These include technology assessment, cost-benefit analysis, risk assessment, environmental impact analysis, and case studies, among others. By applying evaluative techniques, students can analyze the relationships between resources and technology to improve sustainability efforts. This process should be accompanied by an understanding of the importance of evaluating technologies in a holistic manner.

(Big Idea) Technology & Engineering Curriculum Framework Big Ideas

- Technology and engineering have both positive and negative impacts on society and the environment.

(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-LS2-7 - Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
- 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

- Attention to Ethics - Assesses technological products, systems, and processes through critical analysis of their impacts and outcomes.

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