

<b>Unit: Applying Digital Graphics Knowledge and Skills</b>	<b>Concept: Applying Knowledge</b>
<b>Standard</b> <ul style="list-style-type: none"> <li>3.5.9-12.DD Develop a plan that incorporates knowledge from science, mathematics, and other disciplines to design or improve a technological product or system.</li> </ul>	
<b>Key Learning</b> <ul style="list-style-type: none"> <li>(LTTG) Students will be able to demonstrate integrity and conscientiousness, considering ethical issues involved.</li> </ul>	<b>Unit Essential Question</b> <ul style="list-style-type: none"> <li>How can I demonstrate integrity and conscientiousness, considering ethical issues involved?</li> </ul>
<b>Essential Question</b> <ul style="list-style-type: none"> <li>How does technology and engineering relate to other content areas?</li> </ul>	
<b>Key Vocabulary</b> <ul style="list-style-type: none"> <li>Technological Literacy, Synthesize, Knowledge, Improve, Design, Construct, Execute, Plan, and Solve</li> </ul>	
<b>Learning Experience</b> <ul style="list-style-type: none"> <li>Students who demonstrate understanding can develop a plan that incorporates knowledge from science, mathematics, and other disciplines to design or improve a technological product or system.</li> <li>Clarifying Statement: Designing, maintaining, and improving products or systems often require unique knowledge and skills. Technologically and engineering literate citizens are capable of synthesizing knowledge from science, mathematics, and other disciplines to design, construct, and execute a plan to solve a system's design problem.</li> </ul>	
<b>(Big Idea) Technology &amp; Engineering Curriculum Framework Big Ideas</b> <ul style="list-style-type: none"> <li>Technology and engineering are interdisciplinary, relating to more than one content area.</li> </ul>	
<b>(SEP) Science and Engineering Practices</b> <ul style="list-style-type: none"> <li>Asking Questions and Defining Problems - Define a design problem that can be solved through the development of an object, tool, process or system and includes multiple criteria and constraints, including scientific knowledge that may limit possible solutions.</li> </ul>	
<b>(DCI) Disciplinary Core Ideas</b> <ul style="list-style-type: none"> <li>NAEP D.12.2 - Engineers use science, mathematics, and other disciplines to improve technology, while scientists use tools devised by engineers to advance knowledge in their disciplines. This interaction has deepened over the past century.</li> </ul>	
<b>(TEP) Technology and Engineering Practices</b> <ul style="list-style-type: none"> <li>Making and Doing - Demonstrates the ability to regulate and improve making and doing skills.</li> </ul>	

- Systems Thinking - Designs and troubleshoots technological systems in ways that consider the multiple components of the system.

**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