

Unit: Design and Creation of Digital Graphics	Concept: Peer Review and Innovation
<p><b>Standards</b></p> <ul style="list-style-type: none"> <li>3.5.9-12.N Analyze and use relevant and appropriate design thinking processes to solve technological and engineering problems.</li> <li>3.5.9-12.P Apply a broad range of design skills to a design thinking process.</li> <li>3.5.9-12.Y (ETS) Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</li> <li>3.5.9-12.X Implement the best possible solution to a design using an explicit process.</li> </ul>	
<p><b>Key Learning</b></p> <ul style="list-style-type: none"> <li>(LTTG) Students will be able to employ hands-on problem solving, i.e., designing, making/building, producing, and evaluating outcomes.</li> <li>(LTTG) Students will be able to collaborate as part of a team, valuing the contributions of all members.</li> </ul>	<p><b>Unit Essential Question</b></p> <ul style="list-style-type: none"> <li>How can I employ hands-on problem solving, i.e., designing, making/building, producing, and evaluating outcomes?</li> <li>How can I collaborate as part of a team, valuing the contributions of all members?</li> </ul>
<p><b>Essential Question</b></p> <ul style="list-style-type: none"> <li>How can I peer review and / or improve student produced or professionally produced digital graphic designs?</li> </ul>	
<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>Peer Review, Compare, Contrast, Invention, Innovation, Imagination, and Research Skills</li> </ul>	
<p><b>Learning Experience</b></p> <ul style="list-style-type: none"> <li>Students can learn an enormous amount about design by assessing how others have successfully solved the same problem. Any design problem can be solved in a great number of ways, but each design solution bears positive and negative consequences. Utilizing peer review questions, students will examine, evaluate, and peer review sample student produced and professionally produced design solutions. Students will examine how and why the designer arranged design elements, why the designer choose the design elements, does the design clearly communicate the intended message and does the design solution work. Students will use what they observe to brainstorm ideas, innovate, and begin to visually represent their own creative ideas.</li> </ul>	
<p><b>(Big Idea) Technology &amp; Engineering Curriculum Framework Big Ideas</b></p> <ul style="list-style-type: none"> <li>Technological knowledge and practices advance – and are advanced by – other fields.</li> </ul>	
<p><b>(SEP) Science and Engineering Practices</b></p> <ul style="list-style-type: none"> <li>Engaging in Argument From Evidence - Evaluate the claims, evidence, and/or reasoning behind currently accepted explanations or solutions to determine the merits of arguments.</li> </ul>	
<p><b>(DCI) Disciplinary Core Ideas</b></p>	

- HS-PS3-3 - Design, build, and refine a device that works within given constraints to convert on form of energy into another form of energy.
- 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**

- Critical Thinking - Uses evidence to better understand and solve problems in technology and engineering including applying computational thinking.

**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