

Unit: Design and Creation of Promotional Graphics	Concept: Design Process
<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 apply the design process to create effective promotional graphic designs?</li> </ul>	
<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>Design Process and Systems Thinking</li> </ul>	
<p><b>Learning Experience</b></p> <ul style="list-style-type: none"> <li>Students will form ideas, gather information, create or gather design elements, organize and arrange design elements, and convert their ideas into design solutions that solve promotional graphic design problems.</li> </ul>	
<p><b>(Big Idea) Technology &amp; Engineering Curriculum Framework Big Ideas</b></p> <ul style="list-style-type: none"> <li>A system is a group of interrelated components designed collectively to achieve a desired goal.</li> </ul>	
<p><b>(SEP) Science and Engineering Practices</b></p> <ul style="list-style-type: none"> <li>Constructing Explanations and Designing Solutions - Design, evaluate, and/or refine a solution to a complex real-world problem, based on scientific knowledge, student-generated sources of evidence, prioritized criteria, and trade-off considerations.</li> </ul>	
<p><b>(DCI) Disciplinary Core Ideas</b></p> <ul style="list-style-type: none"> <li>ISTE 4A - Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.</li> <li>NAEP D.12.8 - Meet a sophisticated design challenge by identifying criteria and constraints, predicting how these will affect the solution, researching and generating ideas, and using trade-offs to balance competing values in selecting the best solution.</li> </ul>	

**(TEP) Technology and Engineering Practices**

- 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