

Unit: Design and Creation of Promotional Graphics	Concept: Layout and Design
<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 layout and design promotional graphic applications to create effective designs?</li> </ul>	
<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>Initiative, Planning, Self-Direction, Brainstorming, Audience, Creative Thinking, Layout, Theme, Criteria, and Constraints</li> </ul>	
<p><b>Learning Experience</b></p> <ul style="list-style-type: none"> <li>Students will design, develop, and create effective designs that convey a message to an audience, is a visual representation of an idea, and relies on the creation, selection, and organization of visual elements.</li> </ul>	
<p><b>(Big Idea) Technology &amp; Engineering Curriculum Framework Big Ideas</b></p> <ul style="list-style-type: none"> <li>Decisions made about technology and engineering involve consideration of costs, benefits, and tradeoffs.</li> </ul>	
<p><b>(SEP) Science and Engineering Practices</b></p> <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>	
<p><b>(DCI) Disciplinary Core Ideas</b></p> <ul style="list-style-type: none"> <li>ETS1.B: Developing Possible Solutions - When evaluating solutions, it is important to take into account a range of constraints, including cost, safety, reliability, and aesthetics, and to consider social, cultural, and environmental impacts.</li> </ul>	

**(TEP) Technology and Engineering Practices**

- Asking Questions and Defining Problems - Define a simple problem that can be solved through the development of a new or improved object or tool.

**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