

## BIG IDEAS

Design for the life cycle includes consideration of social and **environmental impacts**.

Design choices require the evaluation and refinement of skills.

Tools and technologies can be adapted for specific purposes.

## Learning Standards

Curricular Competencies	Content
<p><i>Students are expected to be able to do the following:</i></p> <p><b>Applied Design</b></p> <p><i>Understanding context</i></p> <ul style="list-style-type: none"> <li>Engage in a period of <b>user-centered research</b> and <b>empathetic observation</b></li> <li>Participate in <b>reciprocal relationships</b> throughout the design and production process</li> </ul> <p><i>Defining</i></p> <ul style="list-style-type: none"> <li>Establish a point of view for a chosen design opportunity</li> <li>Identify potential users, intended impact, and possible unintended negative consequences</li> <li>Make inferences about premises and <b>constraints</b> that define the design and production</li> </ul> <p><i>Ideating</i></p> <ul style="list-style-type: none"> <li>Generate ideas and add to others' ideas to create possibilities, and prioritize them for prototyping</li> <li>Critically analyze how competing social, ethical, and sustainability considerations impact designed solutions to meet global needs</li> <li>Work with users throughout the design process</li> </ul>	<p><i>Students are expected to know the following:</i></p> <ul style="list-style-type: none"> <li>design and production opportunities</li> <li><b>technologies for image development in prepress</b> through post-production environments</li> <li><b>elements</b> and <b>principles of design</b> as communication tools</li> <li><b>design for the life cycle</b></li> <li>intellectual property use and its <b>ethical, moral, and legal considerations</b>, including <b>cultural appropriation</b></li> <li><b>standards</b> of production and <b>limitations</b> of chosen materials for efficient output</li> <li><b>standards-compliant</b> technology</li> <li>balance of form and function</li> <li>influences on culture through <b>graphic production</b></li> <li>graphic design through various stages of project</li> <li>use of <b>typography</b> to communicate a message or idea</li> <li>materials organization, planning, and time frame</li> <li>role of manufacturing in meeting consumer needs and wants</li> <li>design presentation skills for potential clients</li> <li>appropriate use of technology, including digital citizenship, etiquette, and literacy</li> </ul>

Learning Standards (continued)

Curricular Competencies	Content
<p><b>Prototyping</b></p> <ul style="list-style-type: none"> <li>• Identify and apply <b>sources of inspiration</b> and <b>information</b></li> <li>• Choose an appropriate form, scale, and level of detail for prototyping, and plan procedures for prototyping multiple ideas</li> <li>• Analyze the design for the life cycle and evaluate its <b>impacts</b></li> <li>• Construct prototypes, making changes to tools, materials, and procedures as needed</li> <li>• Record <b>iterations</b> of prototyping</li> </ul> <p><b>Testing</b></p> <ul style="list-style-type: none"> <li>• Identify feedback most needed and possible <b>sources of feedback</b></li> <li>• Develop an <b>appropriate test</b> of the prototype</li> <li>• Collect feedback to critically evaluate design and make changes to design processes and production</li> <li>• Iterate the prototype or abandon the design idea</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>• Identify appropriate tools, technologies, materials, processes, and time needed for production</li> <li>• Use <b>project management processes</b> when working individually or collaboratively to coordinate production</li> </ul> <p><b>Sharing</b></p> <ul style="list-style-type: none"> <li>• <b>Share</b> progress while creating to increase opportunities for feedback and collaboration</li> <li>• Decide on how and with whom to share or promote product, creativity, and, if applicable, <b>intellectual property</b></li> <li>• Consider how others might build upon the design concept</li> <li>• Critically reflect on their design thinking and processes, and identify new design goals</li> <li>• Assess ability to work effectively both as individuals and collaboratively while implementing project management processes</li> </ul>	

Learning Standards (continued)

Curricular Competencies	Content
<p><b>Applied Skills</b></p> <ul style="list-style-type: none"> <li>• Apply safety procedures for themselves, co-workers, and users in both physical and digital environments</li> <li>• Identify and assess skills needed for design and production interests, and develop specific plans to learn or refine them over time</li> <li>• Develop competency and proficiency in task-specific skills involving manual dexterity and software processes</li> </ul> <p><b>Applied Technologies</b></p> <ul style="list-style-type: none"> <li>• Explore existing, new, and emerging tools, <b>technologies</b>, and systems to evaluate suitability for their design and production interests</li> <li>• Evaluate impacts, including unintended negative consequences, of choices made about technology use</li> <li>• Analyze the role technologies play in societal change</li> <li>• Examine how cultural beliefs, values, and ethical positions affect the development and use of technologies</li> </ul>	