

## BIG IDEAS

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

Personal design choices require self-exploration, evaluation, and the refinement of ideas and skills.

Tools and technologies can influence people's lives.

## 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 <b>user-centered research</b> and <b>empathetic observation</b></li> <li>Participate in <b>reciprocal relationships</b> throughout the design 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 decisions about premises and <b>constraints</b> that define the design space</li> </ul> <p><i>Ideating</i></p> <ul style="list-style-type: none"> <li>Identify gaps to explore a design space</li> <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 community factors may impact design</li> <li>Work with users throughout the design process</li> </ul> <p><i>Prototyping</i></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 and level of detail for prototyping, and plan procedures for prototyping multiple ideas</li> </ul>	<p><i>Students are expected to know the following:</i></p> <ul style="list-style-type: none"> <li>design opportunities</li> <li><b>media technologies</b> for image development and design and for manipulating selected visual elements</li> <li><b>media production</b> to enhance, alter, or shape the technical elements of a project</li> <li>development, maintenance, and <b>evolution of voice</b> in storytelling</li> <li><b>ethical, moral, and legal considerations</b> associated with using media arts technology for image, video, and sound development, including <b>cultural appropriation</b></li> <li><b>image-development strategies</b> and <b>image manipulation</b> in order to create, respond to, or challenge design problems</li> <li>role of media design in reflecting, sustaining, and challenging beliefs and traditions</li> <li>ways in which content and form influence and are influenced by historical, social, and cultural contexts</li> <li>ways that innovative technologies reflect the complexity of social, environmental, and ethical concerns of the 21st century</li> </ul>

Learning Standards (continued)

Curricular Competencies	Content
<ul style="list-style-type: none"> <li>• Analyze the design for the life cycle and evaluate its <b>impacts</b></li> <li>• Record and document <b>iterations</b> of prototyping</li> </ul> <p><b>Testing</b></p> <ul style="list-style-type: none"> <li>• Identify and communicate with <b>sources of feedback</b></li> <li>• Develop an <b>appropriate test</b> of the prototype</li> <li>• Apply critiques to design or processes throughout</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 critique, collaboration, and, if applicable, marketing</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> <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 interests, and develop specific plans to learn or refine them over time</li> </ul>	<ul style="list-style-type: none"> <li>• <b>developments in media design</b> that incorporate the audience as active participants in the construction and evolution of content</li> <li>• characteristics and influences of various designers, movements, and periods</li> <li>• ways to use <b>elements of design</b> and <b>principles of design</b> to convey a message, create an effect, and/or influence personal preference</li> <li>• <b>technical, stylistic, symbolic, and cultural influences</b> and their intentional use to target audiences</li> <li>• use of form, content, and visual and sound effects to achieve a specific emotional response in a target audience</li> <li>• media use for social advocacy and for exploration of First Peoples <b>perspectives</b> in Canada</li> <li>• <b>design for the life cycle</b></li> <li>• <b>interpersonal skills</b>, including ways to interact with clients</li> <li>• appropriate use of technology, including digital citizenship, etiquette, and literacy</li> </ul>

Learning Standards (continued)

Curricular Competencies	Content
<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 their suitability for design 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>	

Big Ideas – Elaborations

- **environmental impacts:** including manufacturing, packaging, and disposal, and recycling considerations

Curricular Competencies – Elaborations

- **user-centred research:** research done directly with potential users to understand how they do things and why, their physical and emotional needs, how they think about the world, and what is meaningful to them
- **empathetic observation:** may include experiences; traditional cultural knowledge and approaches; First Peoples worldviews, perspectives, knowledge, and practices; places, including the land and its natural resources and analogous settings; users, experts, and thought leaders
- **reciprocal relationships:** communicate with knowledge keepers for greater understanding of perspectives and history within the community, such as seniors, Elders, chiefs, First Nations tribal or band councils, and later career professionals
- **constraints:** limiting factors, such as available technology, expense, environmental impact, copyright
- **sources of inspiration:** may include aesthetic experiences; exploration of First Peoples perspectives and knowledge; the natural environment and places, including the land, its natural resources, and analogous settings; people, including users, experts, and thought leaders
- **information:** may include media design professionals; First Nations, Métis, or Inuit community experts; secondary sources; collective pools of knowledge in communities and collaborative atmospheres both online and offline
- **impacts:** including social and environmental impacts of extraction and transportation of raw materials, manufacturing, packaging, transportation to markets, servicing or providing replacement parts, expected usable lifetime, and reuse or recycling of component materials
- **iterations:** repetitions of a process with the aim of approaching a desired result
- **sources of feedback:** may include peers; users; First Nations, Métis, or Inuit community experts; other experts and professionals both online and offline
- **appropriate test:** includes evaluating the degree of authenticity required for the setting of the test, deciding on an appropriate type and number of trials, and collecting and compiling data
- **project management processes:** setting goals, planning, organizing, constructing, monitoring, and leading during execution
- **Share:** may include showing to others, use by others, giving away, or marketing and selling
- **intellectual property:** creations of the intellect such as works of art, invention, discoveries, design ideas to which one has the legal rights of ownership
- **technologies:** tools that extend human capabilities

Content – Elaborations

- **media technologies:** for example, video production, layout and design, graphics and images, photography (digital and traditional), new emerging media processes (e.g., sound design, network art, kinetic design, biotechnical art and design, robotic art, space art)
- **media production:** pre-production, production, and post-production
- **evolution of voice:** recognizing how their personal style evolves as they explore, understanding their personal media art-making process, and interacting with works made by others
- **ethical, moral, and legal considerations:** for example, regulatory issues relating to duplication, copyright, appropriation of imagery, sound, and video
- **cultural appropriation:** using or sharing a cultural motif, theme, “voice,” image, knowledge, story, song, or drama without permission or without appropriate context or in a way that may misrepresent the real experience of the people from whose culture it is drawn
- **image-development strategies:** for example, abstraction, compression, distortion, elaboration, exaggeration, gesture, figuration, fragmentation, free association, juxtaposition, magnification, metamorphosis, minification, multiplication, point of view, reversal, rotation, simplification, stylization, thumbnail sketch
- **image manipulation:** transformation or alteration of original images using a variety of methods and techniques
- **developments in media design:** for example, viral video, virtual gallery, interactive arts, performance art, or any practice that is shared online through social media as part of the design process
- **elements of design:** for example, colour, form, line, shape, space, texture, tone, value
- **principles of design:** for example, balance, contrast, emphasis, harmony, movement, pattern, repetition, rhythm, unity
- **technical, stylistic, symbolic, and cultural influences:** visual elements and principles of art and design that recognize the cultural precepts influencing an audience’s understanding
- **perspectives:** will vary depending on the traditions and practices of local First Peoples and individual’s views
- **design for the life cycle:** taking into account economic costs, and social and environmental impacts of the product, from the extraction of raw materials to eventual reuse or recycling of component materials
- **interpersonal skills:** for example, people skills, social skills, communication, attitudes, collaboration, follow-ups, courtesies, record keeping