BIG IDEAS

Products can be **designed for life cycle**.	Personal design interests require the evaluation and refinement of skills.	Tools and technologies can be adapted for specific purposes.

Learning Standards

Curricular Competencies

Students are expected to be able to do the following:

Applied Design

Understanding context

- Conduct **user-centred research** to understand design opportunities and barriers

Defining

- Choose a design opportunity and point of view
- Identify potential users, intended impact, and possible unintended negative consequences
- Make inferences about premises and **boundaries** that define the design space

Ideating

- Take creative risks to identify gaps to explore as design space
- Generate ideas to create a range of possibilities and add to others' ideas in ways that create additional possibilities
- Critically analyze how competing social, ethical, and sustainability considerations impact designed solutions to meet global needs for preferred futures
- Prioritize ideas for prototyping and **designing with users**

Prototyping

- Identify and use a variety of **sources of inspiration** and **information**
- Choose an appropriate form, scale, and level of detail for prototyping, and plan procedures for prototyping multiple ideas
- Analyze the **design for life cycle**
- Construct prototypes, making changes to tools, materials, and procedures as needed
- Record **iterations** of prototyping

Content

Students are expected to know the following:

- **media technologies**
- **media production** to enhance, alter, or shape the technical elements of a project
- development, maintenance, and **evolution of voice** in storytelling
- **ethical, moral, and legal considerations** of using media arts technology to reproduce and distribute images, and how to deal with these issues in the design process
- **image-development strategies** and **image manipulation** in order to create, respond to, or challenge design problems
- role of media arts in reflecting, sustaining, and challenging beliefs and traditions
- ways in which content and form influence and are influenced by historical, social, and cultural contexts
- ways that innovative technologies reflect the complexity of social, environmental, and ethical concerns of the 21st century
- **developments in media arts** that incorporate the audience as active participants in the construction and evolution of content
- characteristics and influences of various artists, movements, and periods

Learning Standards (continued)

Curricular Competencies	Content
Testing • Identify feedback most needed and possible **sources of that feedback** • Develop an **appropriate test** of the prototype • Gather feedback from users over time to critically evaluate their design and make changes to product design or processes • Iterate the prototype or abandon the design idea *Making* • Identify appropriate tools, technologies, materials, processes, **potential funding sources**, and time needed for production, and where/how these could be available • Use project management processes when working individually or collaboratively to coordinate production *Sharing* • **Share** their progress while making to increase feedback, collaboration, and, if applicable, marketing • Decide on how and with whom to share or promote their **product**, creativity, and, if applicable, intellectual property • Critically evaluate their design thinking and processes, and their ability to work effectively both as individuals and collaboratively in a group, including the ability to implement project management processes • Identify new design issues, including how they or others might build on their concept **Applied Skills** • Demonstrate an awareness of safety issues for themselves, co-workers, and users in both physical and digital environments • Identify and evaluate their skills and skill levels, in relation to their project or design interests, and develop specific plans to learn or refine their skills over time **Applied Technologies** • Explore existing, new, and emerging tools, **technologies**, and systems and evaluate their suitability for their design interests • Analyze the role and impact of technologies in societal change, and the personal, social, and environmental impacts, including unintended negative consequences, of their choices of technology use • Analyze how cultural beliefs, values, and ethical positions affect the development and use of technologies	• ways to use **elements of design** and **principles of design** to convey a message, create an effect, and/or influence personal preference • **technical, stylistic, symbolic, and cultural influences** and their intentional use to target audiences • use of form, content, and visual and sound effects to achieve a specific emotional response in a target audience • choice of media use in the social advocacy of First Peoples in Canada

Big Ideas – Elaborations

- **designed for life cycle:** taking into account in the design process, economic costs, and social and environmental impacts of the product, from the extraction of raw materials to eventual reuse or recycling of component materials

APPLIED DESIGN, SKILLS, AND TECHNOLOGIES – Media Arts
Grade 12

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
- **Defining:** setting parameters
- **boundaries:** limiting factors, such as available technology, expense, environmental impact, issues of appropriation, and knowledge that is considered sacred
- **Ideating:** forming ideas or concepts
- **designing with users:** working with users at all stages of the design process
- **sources of inspiration:** may include experiences; traditional cultural knowledge and approaches, including those of First Peoples; places, including the land and its natural resources and analogous settings; and people, including users, experts, and thought leaders
- **information:** for example, other people as experts (e.g., First Peoples Elders), secondary sources, collective pools of knowledge in communities, collaborative atmospheres
- **design for life cycle:** including the 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 that feedback:** may include peers; users; keepers of traditional cultural knowledge and approaches, including those of First Peoples; and other experts
- **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
- **potential funding sources:** It is not the intent, and not appropriate, for students to have to raise funds in order to complete their school project. Students may, however, wish to investigate sources of funding for the commercial development of their products.
- **share:** may include showing to others, use by others, giving away, or marketing and selling
- **product:** for example, a physical product, a process, a system, a service, or a designed environment
- **technologies:** things 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., performance art, collaborative work, sound art, network art, kinetic art, biotechnical art, 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:** regulatory issues relating to duplication, copyright, appropriation of imagery, sound, and video
- **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:** the transformation or alteration of original images using a variety of methods and techniques
- **developments in media arts:** 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:** colour, form, line, shape, space, texture, tone, value
- **principles of design:** 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