BRITISH
COLUMBIA
Ministry of Education

BIG IDEAS

User needs and interests drive the design process.	Social, ethical, and sustainability considerations impact design.	Complex tasks require different technologies and tools at different stages.

Learning Standards

Curricular Competencies	Content
Students are expected to be able to do the following:	*Students are expected to know the following:*
Applied Design	• project design opportunities
Understanding context	• importance of woodwork in historical and current cultural contexts of First Nations, Métis, or Inuit communities, and other cultural contexts
• Engage in a period of research and **empathetic observation**	
Defining	• ethics of **cultural appropriation** in design process
• Identify potential users and relevant contextual factors for a chosen design opportunity	
• Identify criteria for success, intended impact, and any **constraints**	• identification, characteristics, properties, and uses of wood from various species
• Determine whether activity is collaborative or self-directed	• choices related to the sustainable use of wood
Ideating	• uses and creation of plans and drawings
• Take creative risks in generating ideas and add to others' ideas in ways that enhance them	• **techniques** for stock breakout and woodworking using a variety of tools and equipment, including **stationary power equipment**
• Identify and use **sources of inspiration**	
• Screen ideas against criteria and constraints	
• Critically analyze and prioritize competing **factors** to meet community needs for preferred futures	• function, uses, and role of portable and stationary power equipment in the creation of a project
• Maintain an open mind about potentially viable ideas	
Prototyping	• function and use of hand tools
• Choose a form for prototyping and develop a **plan** that includes key stages and resources	
• Evaluate a variety of materials for effective use and potential for reuse, recycling, and biodegradability	
• Prototype, making changes to tools, materials, and procedures as needed	
• Record **iterations** of prototyping	

Learning Standards (continued)

Curricular Competencies	Content
Testing • Identify **sources of feedback** • Develop an appropriate test • Conduct the test, collect and compile data, evaluate data, and decide on changes *Making* • Identify and use appropriate tools, **technologies**, materials, and processes • Make a step-by-step plan and carry it out, making changes as needed • Use materials in ways that minimize waste *Sharing* • Decide on how and with whom to **share** product and processes • Demonstrate product to users and critically evaluate its success • Identify new design goals **Applied Skills** • Demonstrate and document an awareness of precautionary and emergency safety procedures • Develop competency and proficiency in skills at various levels involving manual dexterity and woodworking techniques • Identify the skills needed, individually or collaboratively, in relation to specific projects, and develop and refine them **Applied Technologies** • Choose, adapt, and if necessary learn more about appropriate tools and technologies to use for tasks • Evaluate **impacts**, including unintended negative consequences, of choices made about technology use • Evaluate the influences of land, natural resources, and culture on the development and use of tools and technologies	

- **empathetic observation:** may include experiences; traditional cultural knowledge and approaches of First Peoples and those of other cultures; places, including the land and its natural resources and analogous settings; people, including users, experts, and thought leaders
- **constraints:** limiting factors such as task or user requirements, materials, expense, environmental impact
- **sources of inspiration:** may include personal experiences, exploration of First Peoples perspectives and knowledge, the natural environment, places, cultural influences, social media, users and experts
- **factors:** including social, ethical, and sustainability
- **plan:** for example, pictorial drawings, sketches, flow charts
- **iterations:** repetitions of a process with the aim of approaching a desired result
- **sources of feedback:** may include First Nations, Métis, or Inuit community experts; keepers of other traditional cultural knowledge and approaches; peers, users, and other experts
- **technologies:** tools that extend human capabilities
- **share:** may include showing to others or use by others, giving away, or marketing and selling
- **impacts:** personal, social, and environmental

- **cultural appropriation:** use of a cultural motif, theme, "voice", image, knowledge, story, song, or drama, shared 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
- **techniques:** for example, shaping, laminating, turning, joining, finishing
- **stationary power equipment:** for example, jointer, planer, lathe, mitre saw, table saw, band saw, thickness sander, drill press, scroll saw, mortise machine, radial arm saw, panel saw