BRITISH
COLUMBIA
Ministry of Education

BIG IDEAS

Design for the life cycle includes consideration of social and **environmental impacts**.	Personal design interests require the evaluation and refinement of skills.	Tools and technologies can be adapted for specific purposes.

Learning Standards

Curricular Competencies	Content
Students are expected to be able to do the following:	*Students are expected to know the following:*
Applied Design	- specialized techniques and design related to furniture and cabinetry construction **components** specific to cabinet construction - incorporation of **non-wood materials** **hardware** selection for specific purposes **standard sizing** for specific applications - preparation of a working drawing complete with a set of procedures and steps - use of a cutting list to minimize waste **wood material** selection **machine set-ups** - types, purposes, and application of **finishes** - preparation of materials for machining, assembly, and finishing - traditional **decorative techniques** **reclamation** of used materials
Understanding context	
• Engage in a period of **user-centred research** and **empathetic observation** to understand design opportunities	
Defining	
• Establish a point of view for a chosen design opportunity	
• Identify potential users, intended impact, and possible unintended negative consequences	
• Make decisions about premises and **constraints** that define the design space, and develop criteria for success	
• Determine whether activity is collaborative or self-directed	
Ideating	
• Critically analyze how competing social, ethical, and sustainability considerations impact design	
• Generate ideas and add to others' ideas to create possibilities, and prioritize them for prototyping	
• Evaluate suitability of possibilities according to success criteria and constraints	
• Work with users throughout the design process	
Prototyping	
• Identify, critique, and use a variety of **sources of inspiration**	
• Choose an appropriate form, scale, and level of detail for prototyping, and plan procedures	
• Analyze the design for the life cycle and evaluate its **impacts**	

Learning Standards (continued)

Curricular Competencies	Content
- Visualize and construct prototypes, making changes to tools, materials, and procedures as needed - Record **iterations** of prototyping *Testing* - Identify and communicate with **sources of feedback** - Develop an appropriate test of the prototype, conduct the test, and collect and compile data - Evaluate design according to critiques, testing results, and success criteria to make changes *Making* - Identify appropriate tools, technologies, materials, processes, cost implications, and time needed - Create design, incorporating feedback from self, others, and testing prototypes - Use materials in ways that minimize waste *Sharing* - Decide how and with whom to **share** or promote design, creativity, and processes - Share the product with users and critically evaluate its success - Critically reflect on their design thinking and processes, and identify new design goals - Identify and analyze new design possibilities, including how they or others might build on their concept **Applied Skills** - Apply safety procedures for themselves, co-workers, and users in both physical and digital environments - Identify and assess skills needed for design interests, and develop specific plans to learn or refine them over time - Demonstrate competency and proficiency in skills at various levels involving manual dexterity and furniture and cabinetry construction techniques **Applied Technologies** - Explore existing, new, and emerging tools, **technologies**, and systems to evaluate suitability for their design interests - Evaluate impacts, including unintended negative consequences, of choices made about technology use - Examine and analyze the role that changing technologies play in furniture and carpentry construction	**design for the life cycle** - ethics of **cultural appropriation** in design process - future career options and opportunities in furniture and cabinetry construction **interpersonal and consultation skills** to interact with clients