BRITISH COLUMBIA
Ministry of Education

BIG IDEAS

User needs and interests drive the design process.	Social, ethical, and sustainability considerations influence design.	Complex tasks require different technologies and tools at different stages.	Multi-stage design projects benefit from collaborative work environments.

Learning Standards

Curricular Competencies	Content
Students are expected to be able to do the following:	*Students are expected to know the following:*
Applied Design	• design opportunities
Understanding context	• relationship between web structure and content, HTML, style and design, cascading style sheets (CSS), and website **functionality and interactivity**
• Engage in a period of **research** and **empathetic observation**	• advantages/disadvantages of websites and **content management systems** (CMS)
Defining	• website design **planning tools**
• Identify potential users, societal impacts, and other relevant contextual factors for a chosen design opportunity	• HTML text editing software, WYSIWYG HTML editors user interface (**UI**) and user experience (**UX**)
• Identify criteria for success, intended impact, and any **constraints** or possible unintended impacts	• World Wide Web Consortium (**W3C**) standards and **responsive** and **optimized** web design
Ideating	• **domain and hosting options**
• Take creative risks in generating ideas and add to others' ideas in ways that enhance them	• copyright, Creative Commons, fair use protocols for media and content, and ethics of **cultural appropriation**
• Screen ideas against criteria and constraints	• **accessibility** and **functionality** in web design
• Collaborate on idea generation and maintain an open mind about potentially viable ideas	• **writing** for the web
Prototyping	• principles of creative web design
• Identify and use **sources of inspiration** and information	• **security and privacy** implications
• Choose a form for prototyping and develop a **plan** that includes key stages and resources	• principles of **database** creation and management
• Prototype, making changes to tools, designs, and procedures as needed	• **career options** in web development and the **interpersonal skills** necessary for success in this field
• Record **iterations** of prototyping	

Learning Standards (continued)

Curricular Competencies	Content
Testing • Identify **sources of feedback** • Develop an **appropriate test** of the prototype • Conduct the test, collect and compile data, evaluate data, and decide on changes • Iterate the prototype or abandon the design idea ***Making*** • Identify and use appropriate tools, **technologies**, and processes for production • Make a step-by-step plan for production and carry it out, making changes as needed ***Sharing*** • Decide on how and with whom to **share product** and processes • Demonstrate the product to potential users, providing a rationale for selected solution, modifications, and procedures, using appropriate terminology • Critically reflect on design thinking and processes, and identify new design goals • Assess ability to work effectively both as individuals and collaboratively in a group, including ability to share and maintain an efficient cooperative work space **Applied Skills** • Demonstrate an awareness of precautionary and emergency safety procedures in both physical and digital environments • Identify the skills needed 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	