

# Web Development 10

**Credits:** 4    **Type:** Online

## Course Description:

Web Development is an entry-level high school course that walks students through the many processes, systems, and tools needed to create a functional and well-designed website. As students design, share, and adapt their knowledge about working in a digital platform, they gain perspective on the long-term implications of life in a digital, connected world and they develop skills to responsibly take ownership of these technologies to enhance learning and benefit society.

Web Development builds on students' natural curiosity, inventiveness, and desire to create and work in practical ways. It gives them skills to be able to carve out a place in the world for them to create, be heard, and produce meaningful experiences.

## Major Units and Topics:

- Intro to Web Development
- HTML Basics
- HTML Customization
- Design
- CSS Intro
- Design and Layout
- Structural Building Blocks
- Responsive Website Design
- Advanced RWD Layout
- Considerations for Publishing a Website
- Applying Your Learning

## Assessment Requirements:

- Response questions
- Guided research and website building activities
- Each lesson is designed to take approximately 45-60 minutes
- Students must complete all lessons and assignments
- Final website project



### Learning Standards Overview:

<b>Curricular Competencies</b> <i>Students are expected to be able to do the following:</i>	<b>Unit 1</b>	<b>Unit 2</b>	<b>Unit 3</b>	<b>Unit 4</b>	<b>Unit 5</b>	<b>Unit 6</b>	<b>Unit 7</b>	<b>Unit 8</b>	<b>Unit 9</b>	<b>Unit 10</b>	<b>Unit 11</b>
Engage in a period of research and empathetic observation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Identify potential users, societal impacts, and other relevant contextual factors for a chosen design opportunity			✓	✓				✓	✓	✓	✓
Identify criteria for success, intended impact, and any constraints or possible unintended impacts			✓	✓					✓	✓	✓
Take creative risks in generating ideas and add to others' ideas in ways that enhance them		✓	✓	✓	✓			✓	✓		✓
Screen ideas against criteria and constraints				✓				✓	✓		✓
Collaborate on idea generation and maintain an open mind about potentially viable ideas				✓				✓	✓		✓
Identify and use sources of inspiration and information				✓			✓	✓	✓		✓
Choose a form for prototyping and develop a plan that includes key stages and resources									✓		✓
Prototype, making changes to tools, designs, and procedures as needed	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Record iterations of prototyping	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
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	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
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									✓		✓
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						✓			✓		✓
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	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
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				✓	✓				✓	✓	✓

<b>Content Standards</b> <i>Students are expected to know the following:</i>	<b>Unit 1</b>	<b>Unit 2</b>	<b>Unit 3</b>	<b>Unit 4</b>	<b>Unit 5</b>	<b>Unit 6</b>	<b>Unit 7</b>	<b>Unit 8</b>	<b>Unit 9</b>	<b>Unit 10</b>	<b>Unit 11</b>
Design opportunities	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Relationship between web structure and content, HTML, style and design, cascading style sheets (CSS), and website functionality and interactivity	✓	✓	✓	✓	✓	✓	✓		✓		✓
Advantages/disadvantages of websites and content management systems (CMS)	✓										
Website design planning tools							✓	✓	✓		✓
HTML text editing software, WYSIWYG HTML editors user interface (UI) and user experience (UX)	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
World Wide Web Consortium (W3C) standards and responsive and optimized web design	✓							✓	✓		✓
Domain and hosting options										✓	✓



Copyright, Creative Commons, fair use protocols for media and content, and ethics of cultural appropriation			✓				✓				✓
Accessibility and functionality in web design			✓				✓	✓	✓		✓
Writing for the web			✓				✓				✓
Principles of creative web design		✓	✓	✓	✓	✓	✓	✓	✓		✓
Security and privacy implications										✓	✓
Principles of database creation and management										✓	
Career options in web development and the interpersonal skills necessary for success in this field											✓

