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| **Subject:** | Computer Science | **Course/Grade Level:** | Web Design II for Developers / 10th-12th |
| **Focus Statement:** | **This course will focus creating more sophisticated websites. Students will choose to focus on the programming end of web applications or the design end of those applications and will collaborate to create web applications for use by the school and community.** | | |

Outcome 1:

| **CTE.WEBII.1** | | **Students will analyze the history of web standards and compare and contrast early standards to the standards of today.** | | | |
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| **Pacing:** | | **Local Code:** | **Components:** | **Web Standards Curriculum Referenced** | **Local ILT Standards Referenced** |
| **Instruct** | **Assess** | | **Students will:** | | |
| NA | NA | CTE.WEBII.1.1 | Explain the browser wars and how they shaped early web standards. | WEB.1.1 | |
| NA | NA | CTE.WEBII.1.2 | Explain how the Internet's origins led to the development of early web standards. | WEB.1.1 | |
| NA | NA | CTE.WEBII.1.3 | Dissect a request/response cycle to retrieve data on the Internet. | WEB.1.2 | |
| NA | NA | CTE.WEBII.1.4 | Compare and contrast client-side and server-side languages. | WEB.1.2 | |
| NA | NA | CTE.WEBII.1.5 | Defend why content and design are separated into HTML and CSS. | WEB.1.3 | |
| NA | NA | CTE.WEBII.1.6 | Demonstrate how Javascript is used to add behavior to a web page. | WEB.1.3 | |

Outcome 2:

| **CTE.WEBII.2** | | **Students will be able to create a web page using HTML tags.** | | | |
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| **Pacing:** | | **Local Code:** | **Components:** | **Web Standards Curriculum Referenced** | **Local ILT Standards Referenced** |
| **Instruct** | **Assess** | | **Students will:** | | |
| NA | NA | CTE.WEBII.2.1 | Demonstrate the syntax of HTML elements. | WEB.2.1 | |
| NA | NA | CTE.WEBII.2.2 | Compare and contrast inline and block-level elements. | WEB.2.1 | |
| NA | NA | CTE.WEBII.2.3 | Show how to use special character references. | WEB.2.1 | |
| NA | NA | CTE.WEBII.2.4 | Compare and contrast HTML and XHTML. | WEB.2.2 | |
| NA | NA | CTE.WEBII.2.5 | Debate the importance of various elements within the <head> tag. | WEB.2.3 | |
| NA | NA | CTE.WEBII.2.6 | Show how to create a properly-formed favicon for use on a website. | WEB.2.4 | |
| NA | NA | CTE.WEBII.2.7 | Show how to create forms to gather input from a website visitor. | WEB.3.6 | |
| NA | NA | CTE.WEBII.2.8 | Show how to implement HTML5 form elements. | WEB.3.7 | |
| NA | NA | CTE.WEBII.2.9 | Show how to implement HTML5 structural tags. | WEB.3.8 | |
| NA | NA | CTE.WEBII. 2.10 | Show how to validate an HTML page. | WEB.3.10 | |

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| NA | NA | CTE.WEBII. 2.11 | Defend why the validation errors of an HTML page that does not validate do not need to be corrected. | WEB.3.10 | |
| NA | NA | CTE.WEBII. 2.12 | Show how accessibility is important for a web site. | WEB.4.1 | |
| NA | NA | CTE.WEBII. 2.13 | Show how to test for accessibility problems on a web site. | WEB.4.2 | |

Outcome 3:

| **CTE.WEBII.3** | | **Students will be style a web page using CSS.** | | | |
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| **Pacing:** | | **Local Code:** | **Components:** | **Web Standards Curriculum Referenced** | **Local ILT Standards Referenced** |
| **Instruct** | **Assess** | | **Students will:** | | |
| NA | NA | CTE.WEBII.3.1 | Demonstrate how to use element, ID, and class selectors. | WEB.5.1 | |
| NA | NA | CTE.WEBII.3.2 | Demonstrate how to group selectors and combine selectors. | WEB.5.1 | |
| NA | NA | CTE.WEBII.3.3 | Demonstrate how to use advanced CSS selectors. | WEB.5.2 | |
| NA | NA | CTE.WEBII.3.4 | Show how inheritance affects the style of elements on a web site. | WEB.5.3 | |
| NA | NA | CTE.WEBII.3.5 | Demonstrate how to use CSS for page layout. | WEB.5.5 | |
| NA | NA | CTE.WEBII.3.6 | Demonstrate how to use CSS sprites to minimize HTTP requests. | WEB.5.6 | |
| NA | NA | CTE.WEBII.3.7 | Demonstrate how to style forms. | WEB.5.9 | |

Outcome 4:

| **CTE.WEBII.4** | | **Students will be able to create a web application using client-side and server-side programming languages.** | | | |
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| **Pacing:** | | **Local Code:** | **Components:** | **Web Standards Curriculum Referenced** | **Local ILT Standards Referenced** |
| **Instruct** | **Assess** | | **Students will:** | | |
| NA | NA | CTE.WEBII.4.1 | Compare and contrast Javascript with various Javascript libraries. | WEB.6.1 | |
| NA | NA | CTE.WEBII.4.2 | Debate the pros and cons of Javascript. | WEB.6.3 | |
| NA | NA | CTE.WEBII.4.3 | Illustrate various uses of Javascript by showing example websites that use Javascript in different ways. | WEB.6.3 | |
| NA | NA | CTE.WEBII.4.4 | Show how to embed Javascript code on a web page. | WEB.6.4 | |
| NA | NA | CTE.WEBII.4.5 | Show how to link to an external Javascript file. | WEB.6.4 | |
| NA | NA | CTE.WEBII.4.6 | Analyze given embedded and external Javascript code for speed, security, and legibility. | WEB.6.4 | |
| NA | NA | CTE.WEBII.4.7 | Distinguish between good and bad variable names. | WEB.6.5 | |
| NA | NA | CTE.WEBII.4.8 | Show how to declare variables securely in Javascript. | WEB.6.5 | |
| NA | NA | CTE.WEBII.4.9 | Show how to comment Javascript code. | WEB.6.5 | |
| NA | NA | CTE.WEBII. 4.10 | Optimize Javascript code by optimizing loop conditions and keeping DOM access to a minimum. | WEB.6.5 | |
| NA | NA | CTE.WEBII. 4.11 | Show how to make a website's functionality available to users without Javascript. | WEB.6.5 WEB.6.14 | |

Outcome 5:

| **CTE.WEBII.5** | | **Students will be able to produce Javascript code that traverses and manipulates the Document Object Model (DOM).** | | | |
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| **Pacing:** | | **Local Code:** | **Components:** | **Web Standards Curriculum Referenced** | **Local ILT Standards Referenced** |
| **Instruct** | **Assess** | | **Students will:** | | |
| NA | NA | CTE.WEBII.5.1 | Distinguish between parent and child elements in the DOM. | WEB.6.9 | |
| NA | NA | CTE.WEBII.5.2 | Interpret a DOM relationship and draw the resulting web page. | WEB.6.9 | |
| NA | NA | CTE.WEBII.5.3 | Show how to find specific elements or groups of elements using Javascript. | WEB.6.9 | |
| NA | NA | CTE.WEBII.5.4 | Show how to hide and show elements using Javascript. | WEB.6.10 | |
| NA | NA | CTE.WEBII.5.5 | Create new HTML elements using Javascript. | WEB.6.10 | |
| NA | NA | CTE.WEBII.5.6 | Change CSS using Javascript. | WEB.6.11 | |
| NA | NA | CTE.WEBII.5.7 | Compare and contrast the various levels of Javascript events. | WEB.6.12 | |
| NA | NA | CTE.WEBII.5.8 | Show how to check for event-specific properties. | WEB.6.12 | |
| NA | NA | CTE.WEBII.5.9 | Show how to stop event bubbling. | WEB.6.12 | |
| NA | NA | CTE.WEBII. 5.10 | Show how to use animation to focus the user's attention on elements. | WEB.6.13 | |

Outcome 6:

| **CTE.WEBII.6** | | **Students will be able to develop a website using responsive design.** | | | |
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| **Pacing:** | | **Local Code:** | **Components:** | **Web Standards Curriculum Referenced** | **Local ILT Standards Referenced** |
| **Instruct** | **Assess** | | **Students will:** | | |
| NA | NA | CTE.WEBII.6.1 | Illustrate why responsive design is necessary by showing examples of websites that do not use responsive design. | | |
| NA | NA | CTE.WEBII.6.2 | Create a website using responsive design that has at least three levels. | | |
| NA | NA | CTE.WEBII.6.3 | Show that a website is responsively designed by testing it on a variety of devices and browser window sizes. | | |

Outcome 7:

| **CTE.WEBII.7** | | **Students will show how to send data from the user and a client-side language to a server-side language. Students should also connect the server-side language to a database and send results back to the client-side language.** | | | |
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| **Pacing:** | | **Local Code:** | **Components:** | **Web Standards Curriculum Referenced** | **Local ILT Standards Referenced** |
| **Instruct** | **Assess** | | **Students will:** | | |
| NA | NA | CTE.WEBII.7.1 | Show how to send data from Javascript to a server-side language. | | |
| NA | NA | CTE.WEBII.7.2 | Show how to validate data sent from the user. | | |
| NA | NA | CTE.WEBII.7.3 | Show how to take user input and perform a database query. | | |
| NA | NA | CTE.WEBII.7.4 | Show how to send results from a server-side language back to Javascript. | | |