



**MIDLAND PARK PUBLIC SCHOOLS**  
*Midland Park, New Jersey*  
**CURRICULUM**

# **Introduction to Web Design**

**Prepared by:  
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*Superintendent of Schools:*

Marie C. Cirasella, Ed.D.

*Director of Curriculum, Instruction & Assessment:*

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*Approved by the Midland Park Board of Education on  
August 16, 2016*

## **Intro to Web Design**

### **Course Description:**

Intro to Web Design is a beginning web design course that covers the basic information that web designers need. Topics that will be covered include HTML, HTML5, Cascading Style Sheets, and JavaScript. Students will learn the basics of creating web pages and page layout as well as configuring text, color, and images. Best web design practices and user accessibility will also be covered. Lastly, students will learn how to obtain a domain name, web host, and how to publish a web site.

### **Suggested Course Sequence:**

- Unit 1: Internet and Web Basics - about 1 ½ weeks
- Unit 2: HTML Basics - about 1 ½ weeks
- Unit 3: Web Design Basics - about 1 ½ weeks
- Unit 4: Cascading Style Sheets Basics - about 1 ½ weeks
- Unit 5: Graphics & Text Styling Basics - about 1 ½ weeks
- Unit 6: More CSS Basics - about 1 ½ weeks
- Unit 7: Page Layout Basics - about 1 ½ weeks
- Unit 8: More on Links, Layout, and Mobile - about 1 ½ weeks
- Unit 9: Table Basics - about 1 week
- Unit 10: Form Basics - about 2 weeks
- Unit 11: Media and Interactivity Basics - about 2 weeks
- Unit 12: Web Publishing Basics - about 2 week

**Prerequisite:** None

<b>Content Area: Computer Science</b>	
<b>Unit Title: Intro to Web Design - Unit 1 - Internet and Web Basics</b>	
<b>Grade Level: 9-12</b>	
<p><b>Unit Summary:</b> This unit provides an introduction to the internet and the web. It also is a foundation for the information that web developers need to know. This unit also gets students started with their first web page. Students will be introduced to Hypertext Markup Language (HTML), the language used to create web pages.</p> <p><b>Interdisciplinary Connections:</b> Math: integers, decimals, and other mathematical referenced and connections. English: connections to basic forms of speech (nouns, verbs, adjectives), vocabulary and research skills.</p> <p><b>21<sup>st</sup> Century Themes and Skills:</b> Creativity and Innovation, Communication and Collaboration, Critical Thinking &amp; Problem Solving, Information, Media, and Technology Skills, Life and Career Skills.</p> <p>CRP2. Apply appropriate academic and technical skills.</p> <p>CRP4. Communicate clearly and effectively</p> <p>CRP5. Consider the environmental, social, and economic impacts of decisions.</p> <p>CRP6. Demonstrate creativity and innovation.</p> <p>CRP7. Employ valid and reliable research strategies.</p> <p>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.</p> <p>CRP11. Use technology to enhance productivity.</p>	
<b>Standards (Content and Technology):</b>	
<b>CPI#:</b>	<b>Statement:</b>
8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review
8.1.12.D.1	Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
8.2.12.B.3	Analyze ethical and unethical practices around intellectual property rights as influenced by human wants and/or needs
8.2.12.E.1	Demonstrate an understanding of the problem-solving capacity of computers in our world.
8.2.12.E.2	Analyze the relationships between internal and external computer components
8.2.12.E.3	Use a programming language to solve problems or accomplish a task (e.g., robotic functions, website designs, applications, and games)
8.2.12.E.4	Use appropriate terms in conversation (e.g., troubleshooting, peripherals, diagnostic software, GUI, abstractions, variables, data types and conditional statements).
<p><b>Unit Essential Question(s):</b></p> <ul style="list-style-type: none"> <li>● How did the internet and the web begin?</li> <li>● How do you create a basic web page?</li> </ul>	<p><b>Unit Enduring Understandings:</b></p> <ul style="list-style-type: none"> <li>● Understand the evolution of the internet and the web.</li> <li>● Know how to create a basic web page.</li> </ul>
<p><b>Unit Learning Targets/Objectives:</b></p> <p><i>Students will...</i></p> <ul style="list-style-type: none"> <li>● Describe the evolution of the Internet and the Web</li> <li>● Explain the need for web standards</li> <li>● Describe universal design</li> <li>● Identify benefits of accessible web design</li> <li>● Identify reliable re-sources of information on the Web</li> <li>● Identify ethical uses of the Web</li> <li>● Describe the purpose of web browsers and web servers</li> </ul>	



- Identify Internet protocols
- Define URIs and domain names
- Describe HTML, XHTML, and HTML5
- Create your first web page
- Use the body, head, title, and meta elements
- Name, save, and test a web page

**Formative Assessments:**

- Teacher observations
- Practice programs
- Discussions

**Summative/Benchmark Assessment(s):**

- Projects
- Tests
- Chapter Reviews/Quizzes
- Chapter Assignments
- Labs

**Resources/Materials** (copy hyperlinks for digital resources):

- TextBook: *Basics of Web Design HTML5 & CSS3* by Terry Felke-Morris
- [http://wps.pearsoned.com/ecs\\_felke\\_bwdHTML5\\_CSS3\\_3/?key=237711749512943134362016](http://wps.pearsoned.com/ecs_felke_bwdHTML5_CSS3_3/?key=237711749512943134362016)
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**Modifications:**

Special Education Students

- Allow errors
- Rephrase questions, directions, and explanations
- Allow extended time to answer questions, and permit drawing, as an explanation
- Accept participation at any level, even one word
- Consult with Case Managers and follow IEP accommodations/modifications

At-Risk Students

- Provide extended time to complete tasks
- Consult with Guidance Counselors and follow I&RS procedures/action plans
- Consult with classroom teacher(s) for specific behavior interventions
- Provide rewards as necessary

English Language Learners

- Assign a buddy, same language or English speaking
- Allow errors in speaking
- Rephrase questions, directions, and explanations
- Allow extended time to answer questions
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Gifted and Talented Students

- Provide extension activities
- Build on students' intrinsic motivations
- Consult with parents to accommodate students' interests in completing tasks at their level of engagement

Lesson Name/ Topic	Lesson Objective(s)	Time frame (day(s) to complete)
The Internet and the Web	<ul style="list-style-type: none"> <li>● Learn how the internet started and how it has grown</li> <li>● Learn how the World Wide Web was created</li> </ul>	This Chapter will take about 7 days. 2-3 days will be used to share and discuss the information in the chapter with students



<b>Web Standards and Accessibility</b>	<ul style="list-style-type: none"> <li>● Learn about the World Wide Web Consortium</li> <li>● Learn about web standards and accessibility</li> </ul>	4-5 days will be used for practice programs and end of chapter lab.
<b>Web Browsers and Web Servers</b>	<ul style="list-style-type: none"> <li>● Learn about networks, web clients, and web servers</li> </ul>	
<b>Internet Protocols</b>	<ul style="list-style-type: none"> <li>● Learn about protocols for email, hypertext transfer, file transfer, transmission control, and the internet.</li> <li>● Learn about IP addresses</li> </ul>	
<b>Uniform Resource Identifiers and Domain Names</b>	<ul style="list-style-type: none"> <li>● Learn about URI's and URL's</li> <li>● Learn about domain names and the different types of top-level domain names</li> <li>● Understand how the domain name system works</li> </ul>	
<b>Information on the Web</b>	<ul style="list-style-type: none"> <li>● Learn how to tell if information on the web is reliable and how you can use that information</li> <li>● Learn about ethical use of information on the web</li> </ul>	
<b>HTML Overview</b>	<ul style="list-style-type: none"> <li>● Learn about HTML, XML, XHTML and HTML5</li> </ul>	
<b>Under the Hood of a Web Page</b>	<ul style="list-style-type: none"> <li>● Learn the different parts of a webpage</li> </ul>	
<b>Your First Web Page</b>	<ul style="list-style-type: none"> <li>● To create a web page</li> </ul>	
<b>WebSite Project</b>	<ul style="list-style-type: none"> <li>● To create your own website following specific parameters</li> </ul>	1 day

**Teacher Notes:** Program time may vary depending on the complexity of the programs given.

**Additional Resources**

Click links below to access additional resources used to design this unit:

TextBook: *Adobe Dreamweaver Revealed* by Sherry Bishop

<https://login.cengage.com/cb/login.htm>

<b>Content Area: Computer Science</b>	
<b>Unit Title: Intro to Web Design - Unit 2 - HTML Basics</b>	
<b>Grade Level: 9-12</b>	
<p><b>Unit Summary:</b> In this unit students will continue to study HTML. They will also learn how to configure the structure and formatting of text on a web page using HTML elements and hyperlinks will be explored. Lastly, students will configure the anchor element to connect web pages to each other with hyperlinks.</p>	
<p><b>Interdisciplinary Connections:</b> Math: integers, decimals, and other mathematical referenced and connections. English: connections to basic forms of speech (nouns, verbs, adjectives), vocabulary and research skills.</p>	
<p><b>21<sup>st</sup> Century Themes and Skills:</b> Creativity and Innovation, Communication and Collaboration, Critical Thinking &amp; Problem Solving, Information, Media, and Technology Skills, Life and Career Skills.</p> <p>CRP2. Apply appropriate academic and technical skills.</p> <p>CRP4. Communicate clearly and effectively</p> <p>CRP5. Consider the environmental, social, and economic impacts of decisions.</p> <p>CRP6. Demonstrate creativity and innovation.</p> <p>CRP7. Employ valid and reliable research strategies.</p> <p>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.</p> <p>CRP11. Use technology to enhance productivity.</p>	
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8.2.12.E.4	Use appropriate terms in conversation (e.g., troubleshooting, peripherals, diagnostic software, GUI, abstractions, variables, data types and conditional statements).
<p><b>Unit Essential Question(s):</b></p> <ul style="list-style-type: none"> <li>● How do you configure the body of a web page?</li> <li>● How do you validate a web page?</li> </ul>	<p><b>Unit Enduring Understandings:</b></p> <ul style="list-style-type: none"> <li>● Students will know how to properly configure the body of a web page.</li> <li>● Students will understand how to validate a web page.</li> </ul>
<p><b>Unit Learning Targets/Objectives:</b></p> <p><i>Students will...</i></p> <ul style="list-style-type: none"> <li>● Configure the body of a web page with heading, paragraphs, divs, lists, and blockquotes</li> <li>● Configure special entity characters, line breaks, and horizontal rules</li> <li>● Configure text with phrase elements</li> <li>● Test a web page for valid syntax</li> <li>● Configure a web page using new HTML5 header, nav, main, and footer elements</li> <li>● Use the anchor element to link from page to page</li> <li>● Configure absolute, relative, and e-mail hyperlinks</li> </ul>	

**Formative Assessments:**

- Teacher observations
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- Discussions

**Summative/Benchmark Assessment(s):**

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Lesson Name/ Topic	Lesson Objective(s)	Time frame (day(s) to complete)
<b>Heading Element</b>	● Learn how to use heading elements	This Chapter will take about 7 days. 2-3 days will be used to share and discuss the information in the chapter with students 4-5 days will be used for practice programs and end of chapter lab.
<b>Paragraph Element</b>	● Learn how to use paragraph elements	
<b>Line Break and Horizontal Rule</b>	● Learn how to use line breaks ● Learn what the horizontal rule is and how to use it	
<b>Blockquote Element</b>	● Learn how to use the blockquote element	



<b>Phrase Elements</b>	● Learn how to use phrase elements
<b>Ordered List</b>	● Learn how to use ordered lists
<b>Unordered Lists</b>	● Learn how to use unordered list
<b>Description List</b>	● Learn how to use description lists
<b>Special Entity Characters</b>	● Learn how to use special entity characters
<b>HTML Syntax Validation</b>	● Learn how to validate your web pages
<b>Structural Elements</b>	● Learn about new structural elements <ul style="list-style-type: none"> <li><input type="radio"/> Div</li> <li><input type="radio"/> Header</li> <li><input type="radio"/> Nav</li> <li><input type="radio"/> Main</li> <li><input type="radio"/> Footer</li> </ul>
<b>Practice with Structural Elements</b>	● Practice using the learned structural elements
<b>Anchor Element</b>	● Learn how to use the anchor element to specify a hyperlink
<b>Practice with Hyperlinks</b>	● Practice using hyperlinks
<b>E-mail Hyperlinks</b>	● Learn how to create email hyperlinks
<b>Lab Assignment</b>	● Create a small webpage for a company

**Teacher Notes:** Program time may vary depending on the complexity of the programs given.

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<b>Unit Title: Intro to Web Design - Unit 3 - Web Design Basics</b>	
<b>Grade Level: 9-12</b>	
<p><b>Unit Summary:</b> In this unit students will learn recommended website design practices. The topics that will be covered include site organization, site navigation, page design, choosing a color scheme, text design, graphic design, and accessibility considerations.</p> <p><b>Interdisciplinary Connections:</b> Math: integers, decimals, and other mathematical referenced and connections. English: connections to basic forms of speech (nouns, verbs, adjectives), vocabulary and research skills.</p> <p><b>21<sup>st</sup> Century Themes and Skills:</b> Creativity and Innovation, Communication and Collaboration, Critical Thinking &amp; Problem Solving, Information, Media, and Technology Skills, Life and Career Skills.</p> <p>CRP2. Apply appropriate academic and technical skills.</p> <p>CRP4. Communicate clearly and effectively</p> <p>CRP5. Consider the environmental, social, and economic impacts of decisions.</p> <p>CRP6. Demonstrate creativity and innovation.</p> <p>CRP7. Employ valid and reliable research strategies.</p> <p>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.</p> <p>CRP11. Use technology to enhance productivity.</p>	
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<p><b>Unit Essential Question(s):</b></p> <ul style="list-style-type: none"> <li>• How do you organize a website?</li> <li>• How do you design a website?</li> </ul>	<p><b>Unit Enduring Understandings:</b></p> <ul style="list-style-type: none"> <li>• Students will understand the best way to organize different websites.</li> <li>• Students will understand how to pick color, layouts and graphics for websites.</li> </ul>
<p><b>Unit Learning Targets/Objectives:</b></p> <p><i>Students will...</i></p> <ul style="list-style-type: none"> <li>• Describe the most common types of website organization</li> <li>• Describe principles of visual design</li> <li>• Design for your target audience</li> <li>• Create clear, easy-to-use navigation</li> <li>• Improve the readability of the text on your web pages</li> </ul>	

- Use graphics appropriately on web pages
- Choose a color scheme for your website
- Apply the concept of universal design to web pages
- Describe web page layout design techniques
- Describe the concept of responsive web design
- Apply best practices of web design

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Gifted and Talented Students

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Lesson Name/ Topic	Lesson Objective(s)	Time frame (day(s) to complete)
<b>Your Target Audience</b>	<ul style="list-style-type: none"> <li>● Learn why websites should appeal to a target audience</li> <li>● Learn how different browsers view websites</li> </ul>	½ day



	<ul style="list-style-type: none"> <li>● Learn how screen resolution affect how websites are viewed</li> </ul>	
<b>Project: Topic Approval</b>	<ul style="list-style-type: none"> <li>● Review website topics with students for approval</li> </ul>	½ days
<b>Website Organization</b>	<ul style="list-style-type: none"> <li>● Learn the different ways to organize websites                             <ul style="list-style-type: none"> <li>○ Hierarchical</li> <li>○ Linear</li> <li>○ Random</li> </ul> </li> </ul>	This Chapter will take about 7 days. 2-3 days will be used to share and discuss the information in the chapter with students 4-5 days will be used for practice programs and end of chapter lab
<b>Principles of Visual Design</b>	<ul style="list-style-type: none"> <li>● Learn the four visual design principles                             <ul style="list-style-type: none"> <li>○ Repetition: Repeat Visual Components Throughout the Design</li> <li>○ Contrast: Add Visual Excitement and Draw Attention</li> <li>○ Proximity: Group Related Items</li> <li>○ Alignment: Align Elements to Create Visual Unity</li> </ul> </li> </ul>	
<b>Design to Provide for Accessibility</b>	<ul style="list-style-type: none"> <li>● Learn how to design websites so they are accessible for all</li> <li>● Learn what the legal requirements are for accessibility</li> </ul>	
<b>Use of Text</b>	<ul style="list-style-type: none"> <li>● Learn how to use text properly in your websites</li> </ul>	
<b>Web Color Palette</b>	<ul style="list-style-type: none"> <li>● Learn how to pick a color palette for your website</li> <li>● Learn how certain palates are more accessible than others.</li> </ul>	
<b>Design for your Target Audience</b>	<ul style="list-style-type: none"> <li>● Learn how to design for your target audience</li> </ul>	
<b>Choosing a Color Scheme</b>	<ul style="list-style-type: none"> <li>● Learn about the different color schemes and how to choose one.</li> </ul>	
<b>Use of Graphics and Multimedia</b>	<ul style="list-style-type: none"> <li>● Learn how to use graphics in your design</li> <li>● Learn how to use animation and multimedia</li> </ul>	
<b>More Design Considerations</b>	<ul style="list-style-type: none"> <li>● What else needs to be considered when designing a website.</li> </ul>	
<b>Navigation Design</b>	<ul style="list-style-type: none"> <li>● Learn about navigation and how to pick the best one for your site.</li> </ul>	

<b>Wireframes and Page Layout</b>	<ul style="list-style-type: none"> <li>● Learn what a wireframe is and how it is use.</li> <li>● Learn the different page layouts</li> </ul>	
<b>Fixed and Fluid Layouts</b>	<ul style="list-style-type: none"> <li>● Learn what a fixed layout is</li> <li>● Learn what a fluid layout is</li> </ul>	
<b>Design for a Mobile Web</b>	<ul style="list-style-type: none"> <li>● Learn how to design for mobile web</li> </ul>	
<b>Responsive Web Design</b>	<ul style="list-style-type: none"> <li>● Learn about responsive web design</li> </ul>	
<b>Web Design Best Practices Checklist</b>	<ul style="list-style-type: none"> <li>● Review a checklist for students to use in their webdesign</li> </ul>	
<b>Lab Assignment</b>	<ul style="list-style-type: none"> <li>● Create a small webpage for a company</li> </ul>	

**Teacher Notes:** Program time may vary depending on the complexity of the programs given.

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<b>Unit Title: Intro to Web Design - Unit 4 - Cascading Style Sheets Basics</b>	
<b>Grade Level: 9-12</b>	
<p><b>Unit Summary:</b> In this unit students will learn about Cascading Style Sheets (CSS). Web designers use CSS to separate the presentation style of a web page from the information on the web page. CSS is used to configure, text, color, and page layout. This unit introduces students to CSS on the Web as they learn how to configure color for web pages.</p> <p><b>Interdisciplinary Connections:</b> Math: integers, decimals, and other mathematical referenced and connections. English: connections to basic forms of speech (nouns, verbs, adjectives), vocabulary and research skills.</p> <p><b>21<sup>st</sup> Century Themes and Skills:</b> Creativity and Innovation, Communication and Collaboration, Critical Thinking &amp; Problem Solving, Information, Media, and Technology Skills, Life and Career Skills.</p> <ul style="list-style-type: none"> <li>CRP2. Apply appropriate academic and technical skills.</li> <li>CRP4. Communicate clearly and effectively</li> <li>CRP5. Consider the environmental, social, and economic impacts of decisions.</li> <li>CRP6. Demonstrate creativity and innovation.</li> <li>CRP7. Employ valid and reliable research strategies.</li> <li>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.</li> <li>CRP11. Use technology to enhance productivity.</li> </ul>	
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8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review
<p><b>Unit Essential Question(s):</b></p> <ul style="list-style-type: none"> <li>● What are Cascading Style Sheets?</li> <li>● How do you configure color on web pages?</li> </ul>	<p><b>Unit Enduring Understandings:</b></p> <ul style="list-style-type: none"> <li>● Students will understand what Cascading Style Sheets are and they will start using them.</li> <li>● Students will understand how to configure color on web pages.</li> </ul>
<p><b>Unit Learning Targets/Objectives:</b></p> <p><i>Students will...</i></p> <ul style="list-style-type: none"> <li>● Describe the purpose of Cascading Style Sheets</li> <li>● List advantages of using Cascading Style Sheets</li> <li>● Configure color on web pages with Cascading Style Sheets</li> <li>● Configure inline styles</li> <li>● Configure embedded style sheets</li> </ul>	



- Configure external style sheets
- Configure web page areas with element name, class, id, and descendant selectors
- Describe the order of precedence in CSS
- Test your Cascading Style Sheets for valid syntax

**Formative Assessments:**

- Teacher observations
- Practice programs
- Discussions

**Summative/Benchmark Assessment(s):**

- Projects
- Tests
- Chapter Reviews/Quizzes
- Chapter Assignments
- Labs

**Resources/Materials** (copy hyperlinks for digital resources):

- TextBook: *Basics of Web Design HTML5 & CSS3* by Terry Felke-Morris
- [http://wps.pearsoned.com/ecs\\_felke\\_bwdHTML5\\_CSS3\\_3/?key=237711749512943134362016](http://wps.pearsoned.com/ecs_felke_bwdHTML5_CSS3_3/?key=237711749512943134362016)
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**Modifications:**

Special Education Students

- Allow errors
- Rephrase questions, directions, and explanations
- Allow extended time to answer questions, and permit drawing, as an explanation
- Accept participation at any level, even one word
- Consult with Case Managers and follow IEP accommodations/modifications

At-Risk Students

- Provide extended time to complete tasks
- Consult with Guidance Counselors and follow I&RS procedures/action plans
- Consult with classroom teacher(s) for specific behavior interventions
- Provide rewards as necessary

English Language Learners

- Assign a buddy, same language or English speaking
- Allow errors in speaking
- Rephrase questions, directions, and explanations
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Gifted and Talented Students

- Provide extension activities
- Build on students' intrinsic motivations
- Consult with parents to accommodate students' interests in completing tasks at their level of engagement

Lesson Name/ Topic	Lesson Objective(s)	Time frame (day(s) to complete)
<b>Cascading Style Sheets Overview</b>	<ul style="list-style-type: none"> <li>● Learn what Cascading Style Sheets are.</li> <li>● What are the advantages of Cascading Style Sheets</li> <li>● What are the methods of configuring CSS</li> </ul>	This Chapter will take about 7 days. 2-3 days will be used to share and discuss the information in the chapter with students 4-5 days will be used for practice programs and end of chapter lab

<b>CSS Selectors and Declarations</b>	<ul style="list-style-type: none"> <li>● Learn style rule basis</li> <li>● Learn how to configure background and text color</li> </ul>	
<b>CSS Syntax for Color Values</b>	<ul style="list-style-type: none"> <li>● Learn how to use CSS syntax and specific color values</li> </ul>	
<b>Configure Inline CSS</b>	<ul style="list-style-type: none"> <li>● Learn to configure CSS using the inline method</li> </ul>	
<b>Configure Embedded CSS</b>	<ul style="list-style-type: none"> <li>● Learn to configure CSS using the embedded method</li> </ul>	
<b>Configure External CSS</b>	<ul style="list-style-type: none"> <li>● Learn to configure CSS using the external method</li> </ul>	
<b>CSS Selectors: Class, ID, and Descendant</b>	<ul style="list-style-type: none"> <li>● Learn what a class selector is and how to use it</li> <li>● Learn what an id selector is and how to use it</li> <li>● Learn what an descendant selector is and how to use it</li> </ul>	
<b>Span Element</b>	<ul style="list-style-type: none"> <li>● Learn what a span element is and how to use it.</li> </ul>	
<b>Practice with CSS</b>	<ul style="list-style-type: none"> <li>● Practice using CSS</li> </ul>	
<b>The Cascade</b>	<ul style="list-style-type: none"> <li>● Learn what the cascade is and how to use it in web design</li> </ul>	
<b>Practice with the Cascade</b>	<ul style="list-style-type: none"> <li>● Practice using the cascade</li> </ul>	
<b>CSS Syntax Validation</b>	<ul style="list-style-type: none"> <li>● Practice validating web pages with CSS</li> </ul>	
<b>Lab Assignment</b>	<ul style="list-style-type: none"> <li>● Create a small webpage for a company</li> </ul>	

**Teacher Notes:** Program time may vary depending on the complexity of the programs given.

**Additional Resources**

Click links below to access additional resources used to design this unit:

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<https://login.cengage.com/cb/login.htm>

<b>Content Area: Computer Science</b>	
<b>Unit Title: Intro to Web Design - Unit 5 - Graphics &amp; Text Styling Basics</b>	
<b>Grade Level: 9-12</b>	
<p><b>Unit Summary:</b> This unit introduces configuring text with CSS while working with visual elements. This unit focuses on adding graphics to a web page and how to modify for visitors who may have vision problems or not be able to access certain graphics.</p> <p><b>Interdisciplinary Connections:</b> Math: integers, decimals, and other mathematical referenced and connections. English: connections to basic forms of speech (nouns, verbs, adjectives), vocabulary and research skills. Art: graphics</p> <p><b>21<sup>st</sup> Century Themes and Skills:</b> Creativity and Innovation, Communication and Collaboration, Critical Thinking &amp; Problem Solving, Information, Media, and Technology Skills, Life and Career Skills.</p> <p>CRP2. Apply appropriate academic and technical skills.  CRP4. Communicate clearly and effectively  CRP5. Consider the environmental, social, and economic impacts of decisions.  CRP6. Demonstrate creativity and innovation.  CRP7. Employ valid and reliable research strategies.  CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.  CRP11. Use technology to enhance productivity.</p>	
<b>Standards (Content and Technology):</b>	
<b>CPI#:</b>	<b>Statement:</b>
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8.1.12.D.1	Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
8.2.12.B.3	Analyze ethical and unethical practices around intellectual property rights as influenced by human wants and/or needs
8.2.12.E.1	Demonstrate an understanding of the problem-solving capacity of computers in our world.
8.2.12.E.3	Use a programming language to solve problems or accomplish a task (e.g., robotic functions, website designs, applications, and games
8.2.12.E.4	Use appropriate terms in conversation (e.g., troubleshooting, peripherals, diagnostic software, GUI, abstractions, variables, data types and conditional statements).
8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review
<p><b>Unit Essential Question(s):</b></p> <ul style="list-style-type: none"> <li>• How do you use graphics in web design properly?</li> <li>• How do you configure text using CSS?</li> </ul>	<p><b>Unit Enduring Understandings:</b></p> <ul style="list-style-type: none"> <li>• Students will understand how to use graphics properly and in different ways.</li> <li>• Students will understand how to configure text using CSS.</li> </ul>
<p><b>Unit Learning Targets/Objectives:</b>  <i>Students will...</i></p> <ul style="list-style-type: none"> <li>• Describe types of graphics used on the Web</li> <li>• Apply the image element to add graphics to web pages</li> <li>• Configure images as backgrounds on web pages</li> <li>• Configure images as hyperlinks</li> <li>• Configure image maps</li> </ul>	



- Configure bullets in unordered lists with images
- Configure multiple background images with CSS3
- Configure text typeface, size, weight, and style with CSS
- Align and indent text with CSS

**Formative Assessments:**

- Teacher observations
- Practice programs
- Discussions

**Summative/Benchmark Assessment(s):**

- Projects
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**Modifications:**

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At-Risk Students

- Provide extended time to complete tasks
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- Consult with classroom teacher(s) for specific behavior interventions
- Provide rewards as necessary

English Language Learners

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Gifted and Talented Students

- Provide extension activities
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Lesson Name/ Topic	Lesson Objective(s)	Time frame (day(s) to complete)
Web Graphics	● Learn about the different type of graphic images	This Chapter will take about 7 days. 2-3 days will be used to share and discuss the information in the chapter with students 4-5 days will be used for practice programs and end of chapter lab
Image Element	● Learn how to use the image element to configure graphics	
Image Hyperlinks	● Learn how to make an image a hyperlink	

<b>Configure Background Images</b>	● Learn how to configure an image to be the background of a web page.	
<b>Position Background Images</b>	● Learn how to position background images	
<b>CSS3 Multiple Background Images</b>	● Learn how to use multiple background images	
<b>Fonts with CSS</b>	● Learn how to use the font-family property	
<b>CSS Text Properties</b>	● Learn how to use all the CSS text properties.	
<b>Practice with Graphics and Text</b>	● Practice using graphics and text	
<b>Configure List Markers with CSS</b>	● Learn how to use list markers	
<b>The Favorites Icon</b>	● Learn how to configure a favorites icon	
<b>Image Maps</b>	● Learn what an image map is and how to use them	
<b>Lab Assignment</b>	● Create a small webpage for a company	

**Teacher Notes:** Program time may vary depending on the complexity of the programs given.

**Additional Resources**

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<https://login.cengage.com/cb/login.htm>

<b>Content Area: Computer Science</b>	
<b>Unit Title: Intro to Web Design - Unit 6 - More CSS Basics</b>	
<b>Grade Level: 9-12</b>	
<p><b>Unit Summary:</b> This unit will allow students to learn more about Cascading Style Sheets. Students will begin to work with the CSS box model and configure margin, border, and padding. Students will also explore new CSS3 properties.</p> <p><b>Interdisciplinary Connections:</b> Math: integers, decimals, and other mathematical referenced and connections. English: connections to basic forms of speech (nouns, verbs, adjectives), vocabulary and research skills.</p> <p><b>21<sup>st</sup> Century Themes and Skills:</b> Creativity and Innovation, Communication and Collaboration, Critical Thinking &amp; Problem Solving, Information, Media, and Technology Skills, Life and Career Skills.</p> <p>CRP2. Apply appropriate academic and technical skills.  CRP4. Communicate clearly and effectively  CRP5. Consider the environmental, social, and economic impacts of decisions.  CRP6. Demonstrate creativity and innovation.  CRP7. Employ valid and reliable research strategies.  CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.  CRP11. Use technology to enhance productivity.</p>	
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<b>Unit Essential Question(s):</b> <ul style="list-style-type: none"> <li>How do you use more complicated CSS elements?</li> </ul>	<b>Unit Enduring Understandings:</b> <ul style="list-style-type: none"> <li>Students will understand how to use the CSS box model and configure margin, border, and padding</li> </ul>
<b>Unit Learning Targets/Objectives:</b> <i>Students will...</i> <ul style="list-style-type: none"> <li>Describe and apply the CSS box model</li> <li>Configure width and height with CSS</li> <li>Configure margin, border, and padding with CSS</li> <li>Center web page content with CSS</li> <li>Apply shadows with CSS3</li> <li>Configure rounded corners with CSS3</li> <li>Apply CSS3 properties to background images</li> <li>Configure opacity, RGBA color, HSLA color, and gradients with CSS3</li> </ul>	



**Formative Assessments:**

- Teacher observations
- Practice programs
- Discussions

**Summative/Benchmark Assessment(s):**

- Projects
- Tests
- Chapter Reviews/Quizzes
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Gifted and Talented Students

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Lesson Name/ Topic	Lesson Objective(s)	Time frame (day(s) to complete)
<b>Project: Planning Analysis Sheet</b>	<ul style="list-style-type: none"> <li>● Create an analysis sheet for each students website</li> </ul>	1 days
<b>Width and Height with CSS</b>	<ul style="list-style-type: none"> <li>● Learn about the width property</li> <li>● Learn about the height property</li> </ul>	This Chapter will take about 7 days. 2-3 days will be used to share and discuss the information in the chapter with students
<b>The Box Model</b>	<ul style="list-style-type: none"> <li>● Learn what the box model is.</li> <li>● Learn how to use the box model with content, padding, borders, and margins.</li> </ul>	4-5 days will be used for practice programs and end of chapter lab

<b>Margin and Padding with CSS</b>	<ul style="list-style-type: none"> <li>● Learn how to use the margin property</li> <li>● Learn how to use the padding property</li> </ul>
<b>Borders with CSS</b>	<ul style="list-style-type: none"> <li>● Learn how to use the border property</li> </ul>
<b>CSS3 Rounded Corners</b>	<ul style="list-style-type: none"> <li>● Learn how to use the border-radius property</li> </ul>
<b>Center Page Content with CSS</b>	<ul style="list-style-type: none"> <li>● Learn how to center an entire page of content together instead of each line</li> </ul>
<b>CSS3 Box Shadow and Text Shadow</b>	<ul style="list-style-type: none"> <li>● Learn how to use the box-shadow property</li> <li>● Learn how to use the text-shadow property</li> </ul>
<b>CSS3 Background Clip and Origin</b>	<ul style="list-style-type: none"> <li>● Learn how to use the background-clip property</li> <li>● Learn how to use the background-origin property</li> </ul>
<b>CSS3 Background Resize and Scale</b>	<ul style="list-style-type: none"> <li>● Learn how to use the background-size property</li> </ul>
<b>Practice with CSS3 Properties</b>	<ul style="list-style-type: none"> <li>● Practice using some of the properties from this chapter.</li> </ul>
<b>CSS3 Opacity</b>	<ul style="list-style-type: none"> <li>● Learn about the opacity property</li> </ul>
<b>CSS3 RGBA Color</b>	<ul style="list-style-type: none"> <li>● Learn how to configure color using RGBA</li> </ul>
<b>CSS3 HSLA Color</b>	<ul style="list-style-type: none"> <li>● Learn how to configure color using HSLA</li> </ul>
<b>CSS3 Gradients</b>	<ul style="list-style-type: none"> <li>● Learn how to use different gradients with CSS3</li> </ul>
<b>Lab Assignment</b>	<ul style="list-style-type: none"> <li>● Create a small webpage for a company</li> </ul>

**Teacher Notes:** Program time may vary depending on the complexity of the programs given.

**Additional Resources**

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<b>Content Area: Computer Science</b>	
<b>Unit Title: Intro to Web Design - Unit 7 - Page Layout Basics</b>	
<b>Grade Level: 9-12</b>	
<p><b>Unit Summary:</b> In this unit students will expand on the page layout information that they have already learned. Students will explore floating and positioning elements with CSS. They will be introduced to a technique for configuring images called CSS sprites. Lastley, students will learn to use CSS to add interactivity to hyperlinks with pseudo-classes.</p> <p><b>Interdisciplinary Connections:</b> Math: integers, decimals, and other mathematical referenced and connections. English: connections to basic forms of speech (nouns, verbs, adjectives), vocabulary and research skills. Art: graphics</p> <p><b>21<sup>st</sup> Century Themes and Skills:</b> Creativity and Innovation, Communication and Collaboration, Critical Thinking &amp; Problem Solving, Information, Media, and Technology Skills, Life and Career Skills.</p> <p>CRP2. Apply appropriate academic and technical skills.  CRP4. Communicate clearly and effectively  CRP5. Consider the environmental, social, and economic impacts of decisions.  CRP6. Demonstrate creativity and innovation.  CRP7. Employ valid and reliable research strategies.  CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.  CRP11. Use technology to enhance productivity.</p>	
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8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review
<p><b>Unit Essential Question(s):</b></p> <ul style="list-style-type: none"> <li>● How do you use floating and positioning elements with CSS?</li> <li>● What are CSS sprites?</li> </ul>	<p><b>Unit Enduring Understandings:</b></p> <ul style="list-style-type: none"> <li>● Students will understand how to use floating and positioning elements with CSS.</li> <li>● Students will understand what CSS sprites are.</li> </ul>
<p><b>Unit Learning Targets/Objectives:</b>  <i>Students will...</i></p> <ul style="list-style-type: none"> <li>● Configure float with CSS</li> <li>● Configure fixed positioning with CSS</li> <li>● Configure relative positioning with CSS</li> <li>● Configure absolute positioning with CSS</li> <li>● Create two-column page layouts with CSS</li> <li>● Configure navigation in unordered lists and style with CSS</li> </ul>	



- Add interactivity to hyperlinks with CSS pseudo-classes
- Configure CSS sprites

**Formative Assessments:**

- Teacher observations
- Practice programs
- Discussions

**Summative/Benchmark Assessment(s):**

- Projects
- Tests
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Lesson Name/ Topic	Lesson Objective(s)	Time frame (day(s) to complete)
<b>Project: Site FlowChart</b>	● Create a site flowchart for each students website	1 days
<b>Normal Flow</b>	● Learn what normal flow is	This Chapter will take about 7 days. 2-3 days will be used to share and discuss the information in the chapter with students 4-5 days will be used for practice programs and end of chapter lab
<b>Float</b>	● Learn what the float property is and how to use it.	
<b>Clear a Float</b>	● Learn what the clear property is and how to use it with float	

	<ul style="list-style-type: none"> <li>● Learn how to clear a float with a line break</li> </ul>	
<b>Overflow</b>	<ul style="list-style-type: none"> <li>● Learn what the overflow property is and how to use it</li> <li>● Learn how to clear a float with the overflow property</li> <li>● Learn the difference between the clear property and the overflow property</li> <li>● Learn how to configure scrollbars with the overflow property</li> </ul>	
<b>Basic Two-Column Layout</b>	<ul style="list-style-type: none"> <li>● Learn about the two-column layout</li> </ul>	
<b>Vertical Navigation with an Unordered List</b>	<ul style="list-style-type: none"> <li>● Learn how to configure a vertical navigation bar with an unordered list</li> <li>● Learn how to configure an unordered list with CSS</li> <li>● Learn about the text-decoration property</li> </ul>	
<b>Horizontal Navigation with an Unordered List</b>	<ul style="list-style-type: none"> <li>● Learn how to configure a horizontal navigation bar with an unordered list</li> <li>● Learn about the CSS display property</li> </ul>	
<b>CSS Inter-activity with Pseudo-Classes</b>	<ul style="list-style-type: none"> <li>● Learn what a pseudo-class is and how to use them with CSS</li> </ul>	
<b>Practice with CSS Two-Column Layout</b>	<ul style="list-style-type: none"> <li>● Practice using a two-column layout with CSS</li> </ul>	
<b>Positioning with CSS</b>	<ul style="list-style-type: none"> <li>● Learn about the position property and how to use it.</li> <li>● Learn about static, fixed, relative, and absolute positioning.</li> </ul>	
<b>Practice with Positioning</b>	<ul style="list-style-type: none"> <li>● Practice the different positioning styles.</li> </ul>	
<b>CSS Sprites</b>	<ul style="list-style-type: none"> <li>● Learn what a CSS sprite is and how to use it</li> </ul>	
<b>Lab Assignment</b>	<ul style="list-style-type: none"> <li>● Create a small webpage for a company</li> </ul>	

**Teacher Notes: Program time may vary depending on the complexity of the programs given.**

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<b>Content Area: Computer Science</b>	
<b>Unit Title: Intro to Web Design - Unit 8 - More on Links, Layout, and Mobile</b>	
<b>Grade Level: 9-12</b>	
<p><b>Unit Summary:</b> In this unit students will explore relative hyperlinks and named fragment hyperlinks, captioning a figure, and more new HTML5 structural elements, ensuring compatibility with older browsers. Students will also learn about styling for print and styling for mobile browsers.</p> <p><b>Interdisciplinary Connections:</b> Math: integers, decimals, and other mathematical referenced and connections. English: connections to basic forms of speech (nouns, verbs, adjectives), vocabulary and research skills.</p> <p><b>21<sup>st</sup> Century Themes and Skills:</b> Creativity and Innovation, Communication and Collaboration, Critical Thinking &amp; Problem Solving, Information, Media, and Technology Skills, Life and Career Skills.</p> <p>CRP2. Apply appropriate academic and technical skills.  CRP4. Communicate clearly and effectively  CRP5. Consider the environmental, social, and economic impacts of decisions.  CRP6. Demonstrate creativity and innovation.  CRP7. Employ valid and reliable research strategies.  CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.  CRP11. Use technology to enhance productivity.</p>	
<b>Standards (Content and Technology):</b>	
<b>CPI#:</b>	<b>Statement:</b>
8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review
8.1.12.D.1	Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
8.2.12.B.3	Analyze ethical and unethical practices around intellectual property rights as influenced by human wants and/or needs
8.2.12.E.1	Demonstrate an understanding of the problem-solving capacity of computers in our world.
8.2.12.E.3	Use a programming language to solve problems or accomplish a task (e.g., robotic functions, website designs, applications, and games
8.2.12.E.4	Use appropriate terms in conversation (e.g., troubleshooting, peripherals, diagnostic software, GUI, abstractions, variables, data types and conditional statements).
8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review
<p><b>Unit Essential Question(s):</b></p> <ul style="list-style-type: none"> <li>● How do you use relative hyperlinks and named fragment hyperlinks?</li> <li>● How do you ensure compatibility with older browsers when using newer elements?</li> </ul>	<p><b>Unit Enduring Understandings:</b></p> <ul style="list-style-type: none"> <li>● Students will understand how to use relative hyperlinks and named fragment hyperlinks</li> <li>● Students will be given tools to ensure that their websites are compatibility with older browsers while using new HTML5 elements.</li> </ul>
<p><b>Unit Learning Targets/Objectives:</b>  <i>Students will...</i></p> <ul style="list-style-type: none"> <li>● Code relative hyperlinks to web pages in folders within a website</li> <li>● Configure a hyperlink to a named fragment internal to a web page</li> <li>● Configure images with captions using the HTML5 figure and figcaption elements</li> <li>● Configure a collection of images to float across a web page</li> <li>● Configure web pages with new HTML5 section, article, and time elements</li> </ul>	

- Apply techniques to ensure backward compatibility with older browsers
- Configure web pages for printing with CSS
- Describe mobile web design best practices
- Configure web pages for mobile display using the viewport meta tag
- Apply responsive web design techniques with CSS3 media queries and flexible images

**Formative Assessments:**

- Teacher observations
- Practice programs
- Discussions

**Summative/Benchmark Assessment(s):**

- Projects
- Tests
- Chapter Reviews/Quizzes
- Chapter Assignments
- Labs

**Resources/Materials** (copy hyperlinks for digital resources):

- TextBook: *Basics of Web Design HTML5 & CSS3* by Terry Felke-Morris
- [http://wps.pearsoned.com/ecs\\_felke\\_bwdHTML5\\_CSS3\\_3/?key=237711749512943134362016](http://wps.pearsoned.com/ecs_felke_bwdHTML5_CSS3_3/?key=237711749512943134362016)
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**Modifications:**

Special Education Students

- Allow errors
- Rephrase questions, directions, and explanations
- Allow extended time to answer questions, and permit drawing, as an explanation
- Accept participation at any level, even one word
- Consult with Case Managers and follow IEP accommodations/modifications

At-Risk Students

- Provide extended time to complete tasks
- Consult with Guidance Counselors and follow I&RS procedures/action plans
- Consult with classroom teacher(s) for specific behavior interventions
- Provide rewards as necessary

English Language Learners

- Assign a buddy, same language or English speaking
- Allow errors in speaking
- Rephrase questions, directions, and explanations
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Gifted and Talented Students

- Provide extension activities
- Build on students' intrinsic motivations
- Consult with parents to accommodate students' interests in completing tasks at their level of engagement

Lesson Name/ Topic	Lesson Objective(s)	Time frame (day(s) to complete)
More on Relative Linking	● Learn more about relative linking	This Chapter will take about 7 days. 2-3 days will be used to share and discuss the information in the chapter with students
Fragment Identifiers	● Learn what a fragment identifier is and how to use them	4-5 days will be used for practice programs and end of chapter lab



<b>Figure and Figcaption Elements</b>	<ul style="list-style-type: none"> <li>● Learn about the figure element</li> <li>● Learn about the figcaption element</li> <li>● Learn about captioning a figure</li> </ul>	
<b>Practice with Floating Figures</b>	<ul style="list-style-type: none"> <li>● Practice designing a web page with floating figures</li> </ul>	
<b>More HTML5 Elements</b>	<ul style="list-style-type: none"> <li>● Learn about the section element</li> <li>● Learn about the article element</li> <li>● Learn about the aside element</li> <li>● Learn about the time element</li> </ul>	
<b>HTML5 Compatibility with Older Browsers</b>	<ul style="list-style-type: none"> <li>● Learn how to keep HTML5 elements compatible with older browsers</li> <li>● Learn how to configure CSS block display</li> <li>● Learn about HTML5 shim</li> </ul>	
<b>CSS for Print</b>	<ul style="list-style-type: none"> <li>● Learn how to create web pages that are printable</li> <li>● Review print styling best practices</li> </ul>	
<b>Mobile Web Design</b>	<ul style="list-style-type: none"> <li>● Learn more about mobile web design</li> <li>● Review mobile web design considerations</li> <li>● Review optimize layouts for mobile use</li> <li>● Review optimize navigation for mobile use</li> <li>● Review optimize graphics for mobile use</li> <li>● Review optimize text for mobile use</li> </ul>	
<b>Viewport Meta Tag</b>	<ul style="list-style-type: none"> <li>● Learn what a viewport meta tag is and how they are useful with mobile devices.</li> </ul>	
<b>CSS3 Media Queries</b>	<ul style="list-style-type: none"> <li>● Learn what a media query is and how to use them</li> </ul>	
<b>Practice with Media Queries</b>	<ul style="list-style-type: none"> <li>● Practice using media queries</li> </ul>	
<b>Flexible Images</b>	<ul style="list-style-type: none"> <li>● Learn about flexible images and how to use them</li> </ul>	
<b>Testing Mobile Display</b>	<ul style="list-style-type: none"> <li>● Learn how to test how web sites display on mobile devices</li> </ul>	
<b>Lab Assignment</b>	<ul style="list-style-type: none"> <li>● Create a small webpage for a company</li> </ul>	

**Teacher Notes: Program time may vary depending on the complexity of the programs given.**



**Additional Resources**

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**Content Area: Computer Science**

**Unit Title: Intro to Web Design - Unit 9- Table Basics**

**Grade Level: 9-12**

**Unit Summary: In this unit students will become familiar with coding HTML tables to organize information on a web page.**

**Interdisciplinary Connections:** Math: integers, decimals, and other mathematical referenced and connections. English: connections to basic forms of speech (nouns, verbs, adjectives), vocabulary and research skills.

**21<sup>st</sup> Century Themes and Skills:** Creativity and Innovation, Communication and Collaboration, Critical Thinking & Problem Solving, Information, Media, and Technology Skills, Life and Career Skills.

CRP2. Apply appropriate academic and technical skills.

CRP4. Communicate clearly and effectively

CRP5. Consider the environmental, social, and economic impacts of decisions.

CRP6. Demonstrate creativity and innovation.

CRP7. Employ valid and reliable research strategies.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

CRP11. Use technology to enhance productivity.

**Standards (Content and Technology):**

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**Unit Essential Question(s):**

- **How do you use tables to help in the design and organization of web pages?**

**Unit Enduring Understandings:**

- Students will understand how to use tables to help organize web pages.

**Unit Learning Targets/Objectives:**

*Students will...*

- Describe the recommended use of a table on a web page
- Configure a basic table with the table, table row, table header, and table cell elements
- Configure table sections with the thead, tbody, and tfoot elements
- Increase the accessibility of a table
- Style an HTML table with CSS
- Describe the purpose of CSS structural pseudo-classes

**Formative Assessments:**

- Teacher observations
- Practice programs
- Discussions

**Summative/Benchmark Assessment(s):**

- Projects
- Tests
- Chapter Reviews/Quizzes
- Chapter Assignments
- Labs

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At-Risk Students

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English Language Learners

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Gifted and Talented Students

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- Consult with parents to accommodate students' interests in completing tasks at their level of engagement

Lesson Name/ Topic	Lesson Objective(s)	Time frame (day(s) to complete)
<b>Table Overview</b>	<ul style="list-style-type: none"> <li>● Learn how to use a table</li> <li>● Learn how to use table elements</li> <li>● Learn how to use the border attribute</li> <li>● Learn how to use table captions</li> </ul>	This Chapter will take about 5 days. 1-2 days will be used to share and discuss the information in the chapter with students 3-4 days will be used for practice programs and end of chapter lab
<b>Table Rows, Cells, and Headers</b>	<ul style="list-style-type: none"> <li>● Learn how to use the table row element</li> <li>● Learn how to use the table data element</li> <li>● Learn how to use the table header element</li> </ul>	



<b>Span Rows and Columns</b>	<ul style="list-style-type: none"> <li>● Learn how to use the colspan attribute</li> <li>● Learn how to use the rowspan attribute</li> </ul>	
<b>Configure an Accessible Table</b>	<ul style="list-style-type: none"> <li>● Learn how to configure an accessible table</li> </ul>	
<b>Style a Table with CSS</b>	<ul style="list-style-type: none"> <li>● Learn how to style a table with CSS</li> </ul>	
<b>CSS3 Structural Pseudo-classes</b>	<ul style="list-style-type: none"> <li>● Learn how to use structural pseudo-class selectors</li> <li>● Learn how to configure the first letter of a word to be different</li> </ul>	
<b>Configure Table Sections</b>	<ul style="list-style-type: none"> <li>● Learn how to configure sections of a table</li> </ul>	
<b>Lab Assignment</b>	<ul style="list-style-type: none"> <li>● Create a small webpage for a company</li> </ul>	

**Teacher Notes:** Program time may vary depending on the complexity of the programs given.

**Additional Resources**

Click links below to access additional resources used to design this unit:

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<https://login.cengage.com/cb/login.htm>

<b>Content Area: Computer Science</b>	
<b>Unit Title: Intro to Web Design - Unit 10- Form Basics</b>	
<b>Grade Level: 9-12</b>	
<p><b>Unit Summary:</b> In this unit students will learn about forms and the many uses that they have. Students will learn how to configure forms that accept information from web page visitors.</p> <p><b>Interdisciplinary Connections:</b> Math: integers, decimals, and other mathematical referenced and connections. English: connections to basic forms of speech (nouns, verbs, adjectives), vocabulary and research skills.</p> <p><b>21<sup>st</sup> Century Themes and Skills:</b> Creativity and Innovation, Communication and Collaboration, Critical Thinking &amp; Problem Solving, Information, Media, and Technology Skills, Life and Career Skills.</p> <p>CRP2. Apply appropriate academic and technical skills.                      CRP4. Communicate clearly and effectively                      CRP5. Consider the environmental, social, and economic impacts of decisions.                      CRP6. Demonstrate creativity and innovation.                      CRP7. Employ valid and reliable research strategies.                      CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.                      CRP11. Use technology to enhance productivity.</p>	
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8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review
<p><b>Unit Essential Question(s):</b></p> <ul style="list-style-type: none"> <li>• How are forms used in web design?</li> <li>• How do you create a form?</li> </ul>	<p><b>Unit Enduring Understandings:</b></p> <ul style="list-style-type: none"> <li>• Students will understand what forms are used for.</li> <li>• Students will understand how to create a form for use in a web site.</li> </ul>
<p><b>Unit Learning Targets/Objectives:</b></p> <p><i>Students will...</i></p> <ul style="list-style-type: none"> <li>• Describe common uses of forms on web pages</li> <li>• Create forms on web pages using the form, input, textarea, and select elements</li> <li>• Associate form controls and groups using label, fieldset, and legend elements</li> <li>• Use CSS to style a form</li> <li>• Describe the features and common uses of server-side processing</li> <li>• Invoke server-side processing to handle form data</li> <li>• Configure new HTML5 form controls including the e-mail, URL, datalist, range, spinner, calendar, and color-well controls</li> </ul>	

**Formative Assessments:**

- Teacher observations
- Practice programs
- Discussions

**Summative/Benchmark Assessment(s):**

- Projects
- Tests
- Chapter Reviews/Quizzes
- Chapter Assignments
- Labs

**Resources/Materials** (copy hyperlinks for digital resources):

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At-Risk Students

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- Consult with classroom teacher(s) for specific behavior interventions
- Provide rewards as necessary

English Language Learners

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Gifted and Talented Students

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Lesson Name/ Topic	Lesson Objective(s)	Time frame (day(s) to complete)
<b>Project: Update 1</b>	● Students will be required to have part of their project completed	3 days
<b>Form Overview</b>	● Learn what forms are ● Learn about the form element ● Learn about form controls	This Chapter will take about 7 days. 2-3 days will be used to share and discuss the information in the chapter with students 4-5 days will be used for practice programs and end of chapter lab
<b>Text Box</b>	● Learn about what a text box is and how to use them ● Learn about input elements ● Learn about required attributes	
<b>Submit Button and</b>	● Learn about the submit button ● Learn about the reset button	



<b>Reset Button</b>		
<b>Check Box and Radio Button</b>	<ul style="list-style-type: none"> <li>● Learn how to use check boxes</li> <li>● Learn how to use radio buttons</li> </ul>	
<b>Hidden Field and Password Box</b>	<ul style="list-style-type: none"> <li>● Learn what a hidden field is</li> <li>● Learn what a password box is and how to use it</li> </ul>	
<b>Textarea Element</b>	<ul style="list-style-type: none"> <li>● Learn how to use the textarea element</li> </ul>	
<b>Select Element and Option Element</b>	<ul style="list-style-type: none"> <li>● Learn how to use the select element</li> <li>● Learn how to use the option element</li> </ul>	
<b>Label Element</b>	<ul style="list-style-type: none"> <li>● Learn how to use the label element</li> </ul>	
<b>Fieldset Element and Legend Element</b>	<ul style="list-style-type: none"> <li>● Learn how to use the fieldset element</li> <li>● Learn how to use the legend element</li> <li>● Review how to make forms better accessible</li> </ul>	
<b>Style a Form with CSS</b>	<ul style="list-style-type: none"> <li>● Learn how to style a form with CSS</li> <li>● Learn how to use the attribute selector</li> </ul>	
<b>Server-Side Processing</b>	<ul style="list-style-type: none"> <li>● Learn about server-side processing</li> <li>● Learn how to connect a form to server-side processing</li> <li>● Review privacy and forms</li> </ul>	
<b>Practice with Forms</b>	<ul style="list-style-type: none"> <li>● Practice designing and using a form</li> </ul>	
<b>HTML5 Text Form Controls</b>	<ul style="list-style-type: none"> <li>● Learn about e-mail address input form control</li> <li>● Learn about URL form input control</li> <li>● Learn about telephone number input form control</li> <li>● Learn about the search input form control</li> </ul>	
<b>HTML5 Datalist Element</b>	<ul style="list-style-type: none"> <li>● Learn about HTML5 datalist elements and how to use them</li> </ul>	
<b>HTML5 Slider and Spinner Controls</b>	<ul style="list-style-type: none"> <li>● Learn about the slider input form control</li> <li>● Learn about the spinner input form control</li> </ul>	
<b>HTML5 Calendar</b>	<ul style="list-style-type: none"> <li>● Learn about the calendar input form control</li> </ul>	

<b>and Color-Well Controls</b>	<ul style="list-style-type: none"> <li>● Learn about the color-well form control</li> </ul>	
<b>Practice with an HTML5 Form</b>	<ul style="list-style-type: none"> <li>● Practice using an HTML5 form</li> </ul>	
<b>Lab Assignment</b>	<ul style="list-style-type: none"> <li>● Create a small webpage for a company</li> </ul>	

**Teacher Notes:** Program time may vary depending on the complexity of the programs given.

**Additional Resources**

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<b>Content Area: Computer Science</b>	
<b>Unit Title: Intro to Web Design - Unit 11- Media and Interactivity Basics</b>	
<b>Grade Level: 9-12</b>	
<p><b>Unit Summary:</b> This unit introduces students to working with multimedia and interactive elements on web pages. Methods to add audio, video, and Flash to your web pages are introduced. Sources of these media types, the HTML code needed to place the media on a web page, and suggested uses of the media are discussed. Students will also create an interactive image gallery with CSS, a drop down menu with CSS, and explore new CSS3 properties.</p> <p><b>Interdisciplinary Connections:</b> Math: integers, decimals, and other mathematical referenced and connections. English: connections to basic forms of speech (nouns, verbs, adjectives), vocabulary and research skills.</p> <p><b>21<sup>st</sup> Century Themes and Skills:</b> Creativity and Innovation, Communication and Collaboration, Critical Thinking &amp; Problem Solving, Information, Media, and Technology Skills, Life and Career Skills.</p> <p>CRP2. Apply appropriate academic and technical skills.  CRP4. Communicate clearly and effectively  CRP5. Consider the environmental, social, and economic impacts of decisions.  CRP6. Demonstrate creativity and innovation.  CRP7. Employ valid and reliable research strategies.  CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.  CRP11. Use technology to enhance productivity.</p>	
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<b>Unit Essential Question(s):</b> <ul style="list-style-type: none"> <li>• How do you add audio or video to a website?</li> <li>• How should media be used properly?</li> </ul>	<b>Unit Enduring Understandings:</b> <ul style="list-style-type: none"> <li>• Students will understand how to add audio and video to a web page.</li> <li>• Students will understand how to use media properly in their designs.</li> </ul>
<b>Unit Learning Targets/Objectives:</b> <i>Students will...</i> <ul style="list-style-type: none"> <li>• Describe types of multimedia files used on the Web</li> <li>• Configure hyperlinks to multimedia files</li> <li>• Configure audio and video on a web page with HTML5 elements</li> <li>• Configure a Flash animation on a web page</li> <li>• Use the CSS3 transform property</li> </ul>	



- Describe features and common uses of JavaScript
- Describe features and common uses of jQuery
- Describe the purpose of HTML5 APIs such as geolocation, web storage, offline web applications, and canvas

**Formative Assessments:**

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Gifted and Talented Students

- Provide extension activities
- Build on students' intrinsic motivations
- Consult with parents to accommodate students' interests in completing tasks at their level of engagement

Lesson Name/ Topic	Lesson Objective(s)	Time frame (day(s) to complete)
<b>Project: Update 2</b>	● Students will be required to have part of their project completed	3 days
<b>Plug-ins, Containers, and Codecs</b>	● Learn about the different helper applications and plug-ins	This Chapter will take about 7 days. 2-3 days will be used to share and discuss the information in the chapter with students
<b>Configure Audio and Video</b>	● Learn about accessing audio or video file	4-5 days will be used for practice programs and end of chapter lab

	<ul style="list-style-type: none"> <li>● Learn how to make multimedia accessible to all</li> <li>● Learn how to make multimedia compatible with different browsers</li> </ul>	
<b>Flash and the HTML5 Embed Element</b>	<ul style="list-style-type: none"> <li>● Learn about Adobe Flash</li> <li>● Learn about the embed element</li> </ul>	
<b>HTML5 Audio and Source Elements</b>	<ul style="list-style-type: none"> <li>● Learn about the audio element</li> <li>● Learn about the source element for audio</li> </ul>	
<b>HTML5 Video and Source Elements</b>	<ul style="list-style-type: none"> <li>● Learn about the video element</li> <li>● Learn about the source element for video</li> </ul>	
<b>Practice with HTML5 Video</b>	<ul style="list-style-type: none"> <li>● Practice using video on a web page</li> </ul>	
<b>Iframe Element</b>	<ul style="list-style-type: none"> <li>● Learn about the iframe element and how to use it</li> </ul>	
<b>CSS3 Transform Property</b>	<ul style="list-style-type: none"> <li>● Learn about the CSS3 rotate transform function</li> <li>● Learn about the CSS3 scale transform function</li> </ul>	
<b>CSS Transition Property</b>	<ul style="list-style-type: none"> <li>● Learn about CSS3 transitions and how to use them</li> </ul>	
<b>Practice with Transitions</b>	<ul style="list-style-type: none"> <li>● Practice using transitions</li> </ul>	
<b>CSS Drop Down Menu</b>	<ul style="list-style-type: none"> <li>● Learn how to use a CSS drop down menu</li> </ul>	
<b>JavaScript &amp; jQuery</b>	<ul style="list-style-type: none"> <li>● Learn about JavaScript</li> <li>● Learn about jQuery</li> </ul>	
<b>HTML5 APIs</b>	<ul style="list-style-type: none"> <li>● Learn about geolocation</li> <li>● Learn about web storage</li> <li>● Learn about offline web applications</li> <li>● Learn about drawing with the canvas element</li> </ul>	
<b>Lab Assignment</b>	<ul style="list-style-type: none"> <li>● Create a small webpage for a company</li> </ul>	

**Teacher Notes:** Program time may vary depending on the complexity of the programs given.

**Additional Resources**

Click links below to access additional resources used to design this unit:

TextBook: *Adobe Dreamweaver Revealed* by Sherry Bishop

<https://login.cengage.com/cb/login.htm>



<b>Content Area: Computer Science</b>	
<b>Unit Title: Intro to Web Design - Unit 12- Web Publishing</b>	
<b>Grade Level: 9-12</b>	
<b>Unit Summary: In this unit students will learn how to obtain a domain name, select a web host, and publish their website to the web.</b>	
<b>Interdisciplinary Connections:</b> Math: integers, decimals, and other mathematical referenced and connections. English: connections to basic forms of speech (nouns, verbs, adjectives), vocabulary and research skills.	
<b>21<sup>st</sup> Century Themes and Skills:</b> Creativity and Innovation, Communication and Collaboration, Critical Thinking & Problem Solving, Information, Media, and Technology Skills, Life and Career Skills.	
CRP2. Apply appropriate academic and technical skills.	
CRP4. Communicate clearly and effectively	
CRP5. Consider the environmental, social, and economic impacts of decisions.	
CRP6. Demonstrate creativity and innovation.	
CRP7. Employ valid and reliable research strategies.	
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.	
CRP11. Use technology to enhance productivity.	
<b>Standards (Content and Technology):</b>	
<b>CPI#:</b>	<b>Statement:</b>
8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review
8.1.12.D.1	Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
8.2.12.B.3	Analyze ethical and unethical practices around intellectual property rights as influenced by human wants and/or needs
8.2.12.E.1	Demonstrate an understanding of the problem-solving capacity of computers in our world.
8.2.12.E.3	Use a programming language to solve problems or accomplish a task (e.g., robotic functions, website designs, applications, and games
8.2.12.E.4	Use appropriate terms in conversation (e.g., troubleshooting, peripherals, diagnostic software, GUI, abstractions, variables, data types and conditional statements).
8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review
<b>Unit Essential Question(s):</b>	<b>Unit Enduring Understandings:</b>
<ul style="list-style-type: none"> <li>How do I publish my designed website?</li> </ul>	<ul style="list-style-type: none"> <li>Students will learn how to publish their website.</li> </ul>
<b>Unit Learning Targets/Objectives:</b>	
<i>Students will...</i>	
<ul style="list-style-type: none"> <li>Describe criteria to consider when you're selecting a web host</li> <li>Obtain a domain name for your website</li> <li>Publish a website using FTP</li> <li>Design web pages that are friendly to search engines</li> <li>Submit a website for inclusion in a search engine</li> <li>Determine whether a website meet accessibility requirements</li> <li>Evaluate the usability of website</li> </ul>	

**Formative Assessments:**

- Teacher observations
- Practice programs
- Discussions

**Summative/Benchmark Assessment(s):**

- Projects
- Tests
- Chapter Reviews/Quizzes
- Chapter Assignments
- Labs

**Resources/Materials** (copy hyperlinks for digital resources):

- TextBook: *Basics of Web Design HTML5 & CSS3* by Terry Felke-Morris
- [http://wps.pearsoned.com/ecs\\_felke\\_bwdHTML5\\_CSS3\\_3/?key=237711749512943134362016](http://wps.pearsoned.com/ecs_felke_bwdHTML5_CSS3_3/?key=237711749512943134362016)
- [https://www.pearsonhighered.com/program/Felke-Morris-Basics-of-Web-Design-HTML-5-CSS-3-3rd-Edition/P\\_GM301539.html](https://www.pearsonhighered.com/program/Felke-Morris-Basics-of-Web-Design-HTML-5-CSS-3-3rd-Edition/P_GM301539.html)

**Modifications:**

Special Education Students

- Allow errors
- Rephrase questions, directions, and explanations
- Allow extended time to answer questions, and permit drawing, as an explanation
- Accept participation at any level, even one word
- Consult with Case Managers and follow IEP accommodations/modifications

At-Risk Students

- Provide extended time to complete tasks
- Consult with Guidance Counselors and follow I&RS procedures/action plans
- Consult with classroom teacher(s) for specific behavior interventions
- Provide rewards as necessary

English Language Learners

- Assign a buddy, same language or English speaking
- Allow errors in speaking
- Rephrase questions, directions, and explanations
- Allow extended time to answer questions
- Accept participation at any level, even one word

Gifted and Talented Students

- Provide extension activities
- Build on students' intrinsic motivations
- Consult with parents to accommodate students' interests in completing tasks at their level of engagement

Lesson Name/ Topic	Lesson Objective(s)	Time frame (day(s) to complete)
Register a Domain Name	<ul style="list-style-type: none"> <li>● Learn how to pick and register a domain name</li> </ul>	This Chapter will take about 5 days. 1-2 days will be used to share and discuss the information in the chapter with students 3-4 days will be used for practice programs and end of chapter lab
Choose a Web Host	<ul style="list-style-type: none"> <li>● Learn how to choose a web host for your site</li> <li>● Learn about the different types of web hosting</li> </ul>	
Publish with File Transfer Protocol	<ul style="list-style-type: none"> <li>● Learn how to use FTP applications to publish your website</li> </ul>	

<b>Search Engine Submission</b>	<ul style="list-style-type: none"> <li>● Learn the different components of search engines</li> <li>● Learn how to list your site in a search engine</li> </ul>	
<b>Search Engine Optimization</b>	<ul style="list-style-type: none"> <li>● Learn how to optimize your website for search engines</li> </ul>	
<b>Accessibility Testing</b>	<ul style="list-style-type: none"> <li>● Learn how to test your website to see if is accessible for all</li> </ul>	
<b>Usability Testing</b>	<ul style="list-style-type: none"> <li>● Learn how to test your website to test the quality of a user's experience when interacting with a website</li> </ul>	
<b>Lab Assignment</b>	<ul style="list-style-type: none"> <li>● Create a small webpage for a company</li> </ul>	
<b>Complete Project</b>	<ul style="list-style-type: none"> <li>● Students will work on completing their website project</li> </ul>	5 days

**Teacher Notes: Program time may vary depending on the complexity of the programs given.**

**Additional Resources**

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