

Hinsdale High School
Hinsdale, New Hampshire

Teacher: C. Hoyer

Course Name: Web Design

Objective: Students will learn how to design Web sites. Included are site planning, page layout, graphic design and the use of markup languages.

| Topics/Activities/Content | Standards | Assessment/Skills |
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| <p>An Introduction to the Environment and the Tools</p> <p>Using lecture/discussion/demonstration and a PowerPoint presentation, the student will be able to:</p> <ul style="list-style-type: none"> • Define the Internet and the World Wide Web <ul style="list-style-type: none"> ○ Networks ○ Internet2 ○ W3C (World Wide Web Consortium) • Describe how data moves from one computer to another over the Internet • Differentiate between a Web page and a Web site • Describe a Home page and explain why it is important the page be named index.html • Locate and access information on the World Wide Web <ul style="list-style-type: none"> ○ Dial-up ○ Dedicated Lines <ul style="list-style-type: none"> ▪ ISND lines | <p>Topic: Web Site Basics Standard: Demonstrate knowledge of Web page basics</p> <ul style="list-style-type: none"> • Identify the function of URLs (Uniform Resource Locators) • Recognize the structure of a URL • Copy URLs from a Web browser to an Internet Programming text document • Identify the parts or division of a file called index.html on a Web server <p>Topic: Web Site Basics Standard: Demonstrate knowledge of Internet programming basics</p> <ul style="list-style-type: none"> • Compare the advantages and disadvantages of running your own server versus using a server provider • Recognize the importance of Internet programming standards • Identify hardware requirements for a server • Demonstrate knowledge of how bandwidths affect data transmission and on-screen | <p>Students will demonstrate mastery of content by taking notes during lecture/discussion/demonstrations/presentations and by completing assigned projects as independent practice.</p> <p>Students will also successfully pass an objective test and an application test. A checklist will be used to grade the application test.</p> |

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| | <ul style="list-style-type: none"> ▪ DSL ▪ T-Carrier Lines ○ Cable Television Lines ○ Fixed Wireless • Discuss the publish switched telephone network and its effect on Web design • Describe an Internet Service Provider • Identify Web design browser-related issues <ul style="list-style-type: none"> ○ Uniform Resource Locator (URL) <ul style="list-style-type: none"> ▪ Protocol (HTTP – Hypertext Transfer Protocol) ▪ Domain name ▪ IP address • Describe the different Web page viewing devices available • Identify the different types of Web sites • How to search the Internet <ul style="list-style-type: none"> ○ Google (full-text search engine) ○ Yahoo! (subject/directory search engine) • Discuss the impact of the Internet and the Web <ul style="list-style-type: none"> ○ Communication ○ Education | <p>image</p> <ul style="list-style-type: none"> • Identify authoring programs specifically design for Internet programming production (e.g., Adobe PageMill, Corel Xara, Microsoft FrontPage) • Locate free Internet programming authoring programs on the Internet • Compare/contrast features, strengths, and weaknesses of different authoring programs <p>Topic: Web Site Basics</p> <p>Standard: Differentiate among different types of Web sites.</p> <ul style="list-style-type: none"> • Keep up-to-date with new and emerging trends related to Internet programming • Identify different functions of business Web sites • Differentiate between “brochure ware” and e-commerce sites. <p>Topic: Web Site Basics</p> <p>Standard: Demonstrate an acute awareness of the necessity for electronic Web site security.</p> <ul style="list-style-type: none"> • Identify security issues related to client-side processing • Demonstrate knowledge of Internet security issues • Identify available Internet security systems • Demonstrate acute awareness of virus | |

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| | <ul style="list-style-type: none"> ○ Entertainment ○ Business • Differentiate among the different types of Web sites <ul style="list-style-type: none"> ○ Personal ○ Organization/Topical ○ Commercial • Describe the various tools for creating Web pages and Web sites <ul style="list-style-type: none"> ○ HTML (Hypertext Markup Language) ○ XML (eXtensible Markup Language) ○ XHTML (eXtensible HTML) ○ WML (Wireless Markup Language) ○ Cascading Style Sheets ○ Scripting Languages <ul style="list-style-type: none"> ▪ Javascript ▪ Active Server Pages (ASP) ▪ Hypertext Preprocessor (PHP) ▪ MySql ○ WYSIWYG Editors <ul style="list-style-type: none"> ▪ Microsoft FrontPage ▪ Macromedia Dreamweaver ▪ Adobe GoLive | <p>protection techniques.</p> | |

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| <ul style="list-style-type: none"> • Identify Web design roles <ul style="list-style-type: none"> ○ Creative roles ○ Hi-Tech roles ○ Oversight roles | | |
| <p>Introduction to HTML/XHTML</p> <p>Using lecture/discussion/demonstration, PowerPoint presentations, and independent practice, the student will be able to:</p> <ul style="list-style-type: none"> • Define Hypertext Markup Language (HTML) and the standards used for Web development • Define Extensible Hypertext Markup Language (XHTML) and describe its relationship to HTML • Describe tools used to create HTML documents • Create a Web page using Notepad and XHTML containing <ul style="list-style-type: none"> ○ Different level headings ○ Paragraph and line breaks ○ Bulleted and number lists ○ Formatted text | <p>Topic: Markup Language Text</p> <p>Standard: Demonstrate the ability to manipulate markup language text.</p> <ul style="list-style-type: none"> • Demonstrate knowledge of Internet programming codes for formatting page layout • Demonstrate knowledge of standard Internet programming coding • Demonstrate knowledge of special Internet programming feature codes (tags) • Make text modifications using a text editor • Place different level headings within a document using appropriate Internet programming tags • Insert paragraph breaks into the text of a document using appropriate Internet programming tags • Insert a stylized footer at the bottom of a page • Format text • Create lists | <p>Students will demonstrate mastery of content by taking notes during lecture/discussion/demonstrations/presentations and by completing assigned projects as independent practice.</p> <p>Students will also successfully pass an objective test and an application test. A checklist will be used to grade the application test.</p> |
| <p>DDC Learning Microsoft FrontPage 2000</p> <p>Using lecture/discussion/demonstration, PowerPoint presentations, and independent practice, the student will be able to:</p> <ul style="list-style-type: none"> • Create a new page, understand text characteristics of Web | <p>Topic: Layout and Design</p> <p>Standard: Demonstrate the fundamentals of Web page layout/design and site preparation</p> <ul style="list-style-type: none"> • Open up a workspace to create a new | <p>Students will demonstrate mastery of content by taking notes during lecture/discussion/demonstrations/presentations and by completing assigned projects as independent practice.</p> |

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| <p>pages (format, font, alignment), create hyperlinks, insert horizontal lines and symbols, and create page banners.</p> <ul style="list-style-type: none"> • Place images on a Web page, insert inline and background images, modify image properties, and create thumbnails and alternative representations. • Design a basic table, modify table properties, and use a table for complex page layout . • Use FrontPage Web themes and customize themes. • Publish a FrontPage Web to a server (www.tripod.com), use the FrontPage 'publish' function . • Demonstrate the difference between linear and hierarchical site structure, design a navigation scheme for a Web site, create a table of contents, insert navigation bars, and create an image map . • Demonstrate the use of shared borders in a Web site, create a Web site using frames, understand frames page structure, and use the different frames pages available in FrontPage. • Explain what are style sheets, understand the difference between the three types of style sheets (external, embedded and inline), and understand the browser compatibility issues associated with style sheets . • Understand the importance of collecting user feedback and data, create a guest book, understand form elements, create a page containing a form and different form elements, understand form handlers and their properties, and add keywords to make the site searchable . • Understand the special effects that FrontPage offers, create a Web page that contains a hit counter, marquee, hover button, page transition, and banner ad • Create a Web page with background audio and inline video • Understand scripting basics and create a client-side script – JavaScript. | <p>Internet programming document</p> <ul style="list-style-type: none"> • Demonstrate knowledge of the advantages of creating short multiple Web pages rather than a single, long Web page • Identify how different browser affect the look of a Web page • Determine logical points to split information into Web pages • Compare/contrast the features and functions of software editors available for designing Web pages <p>Topic: Layout and Design</p> <p>Standard: Format page layout</p> <ul style="list-style-type: none"> • Create the basic Internet programming structure for a Web page using a text editor • Demonstrate knowledge of how to use standard word processing and page layout programs to produce an Internet application. <p>Topic: Layout and Design</p> <p>Standard: Control alignments, white spaces, and borders to enhance the look of a Web page</p> <ul style="list-style-type: none"> • Create a template file using a text editor • Make appropriate changes to the template file to create individual pages • Create various types of hard rule lines for page dividers (e.g., different thicknesses and widths, with and without 3-D shading). | <p>Students will also successfully pass an objective test and an application test administered after each lesson. A checklist will be used to grade the application test.</p> |

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| | <ul style="list-style-type: none"> • Organize information using frames <p>Topic: Layout and Design</p> <p>Standard: Add appropriate color to a formatted Web page</p> <ul style="list-style-type: none"> • Create a solid color background • Calculate the hexadecimal code for a color value • Change the color of text and hypertext link items <p>Topic: Layout and Design</p> <p>Standard: Manipulate graphics and multimedia in Web design</p> <ul style="list-style-type: none"> • Create a textured background using a graphic file • Demonstrate knowledge of the characteristics and uses of plug-ins • Display interlaced images • Add graphics/images <p>Topic: Layout and Design</p> <p>Standard: Insert and link inline graphics</p> <ul style="list-style-type: none"> • Create a layout scheme integrating text and pictures <p>Topic: Layout and Design</p> <p>Standard: Insert multimedia files</p> | |

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| | | <ul style="list-style-type: none"> • Add audio • Add video • Add animation <p>Topic: Layout and Design</p> <p>Standard: Create an image map</p> <ul style="list-style-type: none"> • Incorporate a graphic that acts as a hyperlink to another document • Differentiate between client-side image mapping and server-side image mapping • Create an inline image that has different portions hyperlinked to other Web pages, pictures, and other sites on the Internet <p>Topic: Markup Language Format</p> <p>Standard: Create tables in the markup language format</p> <ul style="list-style-type: none"> • Create a table with rows and columns of text in a gridded display • Create an invisible table with side-by-side columns • Create a table that has different colored cells <p>Topic: Markup Language Format</p> <p>Standard: Use markup language tags to</p> | |

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| | <p>construct forms and to control input</p> <ul style="list-style-type: none"> • Describe the behavior of Web page forms • Describe the different destinations for data entered on Web forms • Create Web forms <p>Topic: Markup Language Format</p> <p>Standard: Develop and manipulate radio buttons, checkboxes, scroll boxes, and pull-down menus</p> <ul style="list-style-type: none"> • Describe the functions of radio buttons, checkboxes, scroll boxes, and pull-down menus • Use radio buttons on a form • Use checkboxes on a form • Use scroll boxes on a form • Use pull-down menus on a form <p>Topic: Markup Language Format</p> <p>Standard: Expand the features of markup language Web pages by adding scripting</p> <ul style="list-style-type: none"> • Demonstrate knowledge of the purpose of Web content delivery enables (e.g., CGI, API, SSI) • Demonstrate knowledge of how to interface client/server • Demonstrate knowledge of client-side processing and its | |

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| | <p>advantages/disadvantages</p> <ul style="list-style-type: none"> • Demonstrate knowledge of interface design <p>Topic: Markup Language Format</p> <p>Standard: Apply Java or VB scripts, objects, event handles, functions, variables, and conditionals</p> <ul style="list-style-type: none"> • Identify standard scripting languages (e.g., JavaScript, Visual Basic Script, ActiveX) • Demonstrate knowledge of the uses and advantages/disadvantages of various scripting languages • Demonstrate knowledge of how to use a scripting language to program a site • Demonstrate knowledge of how to use advanced communication protocols | |
| <p>Shelly Cashman Macromedia DreamweaverMX – Comprehensive Concepts and Techniques</p> <p>Using lecture/discussion/demonstration, PowerPoint presentations, and independent practice, the student will be able to:</p> <ul style="list-style-type: none"> • Create a Web page • Apply a color scheme • Format and modify text elements on a Web page • Insert a horizontal rule • Define and insert a line break and special characters | <p>Topic: Layout and Design</p> <p>Standard: Demonstrate the fundamentals of Web page layout/design and site preparation</p> <ul style="list-style-type: none"> • Open up a workspace to create a new Internet programming document • Demonstrate knowledge of the advantages of creating short multiple Web pages rather than a single, long Web page • Identify how different browser affect the look of a Web page • Determine logical points to split information | <p>Students will demonstrate mastery of content by taking notes during lecture/discussion/demonstrations/presentations and by completing assigned projects as independent practice.</p> <p>Students will also successfully pass an objective test and an application test administered after each lesson. A checklist will be used to grade the application test.</p> |

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| | <ul style="list-style-type: none"> • Change a Web page title • Check spelling • Insert and absolute link • Add a background image to a Web page • Insert, resize, and align images within a Web page • Create a relative, absolute, and E-mail link • Change the color of links • Edit and delete links • Understand and plan page layout • Design a Web page using tables • Format a table • Create head content • Create a frameset and frames • Set the properties for a frame and for a frameset • Apply and modify the properties of a frame • Add Flash buttons as navigation elements • Create a form • Describe and add form objects (text fields, text areas, check boxes, radio buttons, lists, memos, and form buttons) to a form • Create a template | <p>into Web pages</p> <ul style="list-style-type: none"> • Compare/contrast the features and functions of software editors available for designing Web pages <p>Topic: Layout and Design</p> <p>Standard: Format page layout</p> <ul style="list-style-type: none"> • Create the basic Internet programming structure for a Web page using a text editor • Demonstrate knowledge of how to use standard word processing and page layout programs to produce an Internet application. <p>Topic: Layout and Design</p> <p>Standard: Control alignments, white spaces, and borders to enhance the look of a Web page</p> <ul style="list-style-type: none"> • Create a template file using a text editor • Make appropriate changes to the template file to create individual pages • Create various types of hard rule lines for page dividers (e.g., different thicknesses and widths, with and without 3-D shading). • Organize information using frames <p>Topic: Layout and Design</p> <p>Standard: Add appropriate color to a formatted Web page</p> <ul style="list-style-type: none"> • Create a solid color background • Calculate the hexadecimal code for a color | |

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| | <ul style="list-style-type: none"> • Create a Cascading Style Sheet • Apply Cascading Style Sheet attributes to a template • Create a Web page from a template • Insert, select, resize, and move a layer • Name a layer • Align layers • Create an image map • Add and edit behaviors • Create a navigation bar • Insert a Date object • Create a nonlinear timeline • Add a behavior to a layer • Add a play button to a timeline • Create a linear timeline • Add a layer to a timeline • Show and hide a layer • Play an animation • Insert Flash text into a Web page • Insert a Flash movie into a Web page • Add a sound link to a Web page | <p>value</p> <ul style="list-style-type: none"> • Change the color of text and hypertext link items <p>Topic: Layout and Design</p> <p>Standard: Manipulate graphics and multimedia in Web design</p> <ul style="list-style-type: none"> • Create a textured background using a graphic file • Demonstrate knowledge of the characteristics and uses of plug-ins • Display interlaced images • Add graphics/images <p>Topic: Layout and Design</p> <p>Standard: Insert and link inline graphics</p> <ul style="list-style-type: none"> • Create a layout scheme integrating text and pictures <p>Topic: Layout and Design</p> <p>Standard: Insert multimedia files</p> <ul style="list-style-type: none"> • Add audio • Add video • Add animation <p>Topic: Layout and Design</p> | |

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| <ul style="list-style-type: none"> • Embed a sound file in a Web page • Insert a video into a Web page | <p>Standard: Create an image map</p> <ul style="list-style-type: none"> • Incorporate a graphic that acts as a hyperlink to another document • Differentiate between client-side image mapping and server-side image mapping • Create an inline image that has different portions hyperlinked to other Web pages, pictures, and other sites on the Internet <p>Topic: Markup Language Format</p> <p>Standard: Create tables in the markup language format</p> <ul style="list-style-type: none"> • Create a table with rows and columns of text in a grid display • Create an invisible table with side-by-side columns • Create a table that has different colored cells <p>Topic: Markup Language Format</p> <p>Standard: Use markup language tags to construct forms and to control input</p> <ul style="list-style-type: none"> • Describe the behavior of Web page forms • Describe the different destinations for data entered on Web forms • Create Web forms <p>Topic: Markup Language Format</p> <p>Standard: Develop and manipulate radio</p> | |

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| | <p>buttons, checkboxes, scroll boxes, and pull-down menus</p> <ul style="list-style-type: none"> • Describe the functions of radio buttons, checkboxes, scroll boxes, and pull-down menus • Use radio buttons on a form • Use checkboxes on a form • Use scroll boxes on a form • Use pull-down menus on a form <p>Topic: Markup Language Format</p> <p>Standard: Expand the features of markup language Web pages by adding scripting</p> <ul style="list-style-type: none"> • Demonstrate knowledge of the purpose of Web content delivery enables (e.g., CGI, API, SSI) • Demonstrate knowledge of how to interface client/server • Demonstrate knowledge of client-side processing and its advantages/disadvantages • Demonstrate knowledge of interface design <p>Topic: Markup Language Format</p> <p>Standard: Apply Java or VB scripts, objects, event handles, functions, variables, and conditionals</p> <ul style="list-style-type: none"> • Identify standard scripting languages (e.g., JavaScript, Visual Basic Script, ActiveX) • Demonstrate knowledge of the uses and | |

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| | | <p>advantages/disadvantages of various scripting languages</p> <ul style="list-style-type: none"> • Demonstrate knowledge of how to use a scripting language to program a site • Demonstrate knowledge of how to use advanced communication protocols | |
| | <p>End Project</p> | <p>Topic: End Project</p> <p>Standard: Construct a commercial Web site design</p> <ul style="list-style-type: none"> • Evaluate the Web site needs of a business • Design the Web site for a business • Create and code the Web site for a business • Implement and test the Web site for a business <p>Topic: End Project</p> <p>Standard: Increase Web site traffic through the use of Internet browsers and search engines</p> <ul style="list-style-type: none"> • Publicize the site (e.g., submit announcements to major search engines) • Collect/analyze usage statistics | <p>Students will demonstrate mastery of all of the above by a passing score on an application test consisting of creating and publishing a Web site on the subject of their choosing. A rubric will be used to grade the end project.</p> |
| | <p>Review: Mid-term and Final Exam</p> | <p>(All Standards covered during the semester)</p> | <p>Students will demonstrate a mastery of all the above by a passing score on the exams which consists of an objective test and a production/application test.</p> |