

**INTRODUCTION TO WEB DESIGN [GRADES 10-12]
LEVEL 1**

EWING PUBLIC SCHOOLS
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In accordance with The Ewing Public Schools' Policy 2230, Course Guides, this curriculum has been reviewed and found to be in compliance with all policies and all affirmative action criteria.

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Preface

Introduction to Web Design

This course is an online curriculum and introduces students to basic web design using HTML5 (Hypertext Markup Language) and CSS3 (Cascading Style Sheets). The course does not require any prior knowledge of HTML or web design. However, the course does require access to a desktop/laptop computer to complete assignments and to view course materials.

Throughout the course, students are introduced to planning and designing effective web pages; implementing web pages by writing HTML5 and CSS3 code; enhancing web pages with the use of page layout techniques, text formatting, graphics, images, multimedia and producing a functional, multi-page website. Students will be introduced to Adobe Photoshop to create web graphics as well as Adobe Dreamweaver to use as a visual editor.

Furthermore, students will be using JavaScript and PHP/MySQL Databases to create advance interfaces, forms, content management systems and to add other advanced functionalities to web sites. There are 8 portfolio projects, number labs and activities to support positive growth in learning. The final exam is the WD Certification Exam that is administered online.

Purpose

The primary objective of this course is to help students prepare for entry-level positions in the Web Design career field. In addition, the curriculum helps students gain confidence with web scripting languages such as HTML5, CSS3, JavaScript and PHP/MySQL Database.

After completing the Introduction to Web Design course, students will be able to complete the following tasks:

- Describe the components of a personal computer
- Explain and create web graphics
- Describe and encode HTML5 and CSS3 to create and style a web site.
- Describe and encode basic JavaScript for web site development.
- Describe and implement PHP/MySQL Scripting
- Recognize and understand HTML web page elements
- Understand and apply effective web design principles
- Enhance web pages using text formatting, color, graphics, images and multimedia
- Incorporate forms into web pages
- Understand and apply CSS to format web page elements
- Plan, design and publish a multi-page website
- Assess customer needs, analyze appropriate course of action for web development options, and provide service or recommendations.

Web Design Certification Exam

The certification exam is intended to recognize students with the highest level of knowledge of the content presented in the IE Class curriculum and likely to be successful in an entry level web design position. This exam is the final exam and is worth the school policy percentage of the students' final grade.

There is no fee in offering the exam. The certification exam does not endorse nor test knowledge on any third party commercial products. The exam consists of 100 multiple choice, 4-options, questions from the following categories in the indicated proportions. Students must **score an 80%** on the exam to receive a certificate.

Basic Internet History & Computer Knowledge	10%
Web Graphics Concepts	10%
HTML 5 & CSS 3	50%
JavaScript & PHP/MySQL	25%
Website Administration	5%

Standards

Technology Standards:

- 8.1.12.A.1** Create a personal digital portfolio which reflects personal and academic interests, achievements and career aspirations by using a variety of digital tools and resources.
- 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.A.3** Collaborate in online courses, learning communities, social networks or virtual worlds to discuss a resolution to a problem or issue.
- 8.1.12.D.1** Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
- 8.1.12.E.2** Analyze the relationships between internal and external computer components.
- 8.1.12.E.3** Use a programming language to solve problems or accomplish a task (e.g., robotic functions, website designs, applications and games).
- 8.1.12.E.3** Use appropriate terms in conversation (e.g., troubleshooting, peripherals, diagnostic software, GUI, abstraction, variables, data types and conditional statements).

21st Century Life & Career Skills Standards:

- 9.4.12.K.(3).1** Prepare specifications for digital communication products to communicate specifications to various audiences.
- 9.4.12.K.(3).2** Create and implement a digital communication product to meet customer needs
- 9.4.12.K.(3).3** Gather and analyze customer requirements for digital communications to best meet consumer needs.
- 9.4.12.K.(3).4** Define the scope of work in a written form to summarize and meet customer requirements for digital communication.
- 9.4.12.K.(3).5** Identify and implement quality assurance processes to deliver quality digital communication products and services.
- 9.4.12.K.(3).6** Consider intellectual property issues when creating Web pages and comply with intellectual property rights statutes and regulations.
- 9.4.12.K.(3).7** Iterate through the design and development process to create a uniform Web-based or digital product
- 9.4.12.K.(3).8** Participate in a user-focused design and development process to produce Web-based and digital communication solutions.
- 9.4.12.K.(3).9** Design and employ the use of motion graphics to create a visual Web-based or digital design.
- 9.4.12.K.(3).10** Demonstrate the effective use of tools, including tools for product development, product management and production, to complete Web-based or digital communication projects.
- 9.4.12.K.(3).11** Employ knowledge of Web design, programming and administration to develop and maintain Web-based applications.

Unit 1: Foundations [10 Days]

Why Is This Unit Important?

The foundation will provide a general understanding of computers, how the internet works, the web design process, how to acquire web hosting and publish to it and other concepts that any web designer should be familiar with.

Enduring Understandings:

1. The purpose of HTML is a tool to create an effective form of communication both in form and function.
2. Netiquette is both professionally and personally important for safety and respect.
3. Cyber threats are constantly changing therefore Internet Safety is for a person's best interest to do their best to protect their assets and integrity.
4. History of the computer gives insight of its origination and perspective on the rapid advancements over time.
5. Understand the difference between the Internet and the World Wide Web.
6. The functions of the Internet and how it performs from the back end of communication protocols to the front end of a web browser.
7. The design process is the building blocks to developing an appealing web site.
8. Chosen colors affect the audiences' opinion and should be used in conjunction with color theory to achieve the goal of the web site.
9. Understand the difference between fair use and public domain when working with copyrighted material.
10. Web Design jobs serve all industries and specialties.

Essential Questions:

1. Why is it important to know the different names and functions of the components inside a personal computer?
2. Why are these skills important to know?
3. How will these skills benefit me in future?
4. Why is it important to follow Copyright Guidelines?
5. How does it benefit a web designer to understand web server administration?
6. What are the current prospects of a career in Web Design?

Acquired Knowledge (Concepts, Principles and Information):

1. Understand proper netiquette on networks and Internet and computer safety and acceptable use of policies.
2. Identify computer hardware components and software.
3. Explain web site development, layout of components and design.
4. Explain copyright guidelines for commercial web design.
5. Manage fundamental tasks for web servers.
6. Research web design industry careers.

Acquired Skills (Ability to use information and applied in context):

1. Prepare for the course by creating a proper file system.
2. Utilize proper netiquette on networks and Internet and computer safety and acceptable use of policies.
3. Identify computer hardware components and software.
4. Explain web site development, layout of components and design.
5. Evaluate web projects and how to develop a Quality Assurance Plan.
6. Implement basic color theory in the RGB color scale.
7. Explain copyright guidelines for commercial web design.
8. Manage fundamental tasks for web servers.
9. Research web design industry careers.

Major Assessments:Formative Assessments:

1. Lesson 1:
 - a. Lecture Notes Worksheet
 - b. Lesson Worksheet
2. Lesson 2:
 - a. Lecture Notes Worksheet
 - b. Lesson Worksheet
3. Lesson 3:
 - a. Lecture Notes Worksheet
 - b. Lesson Worksheet
 - c. Crossword
 - d. Web Search Activity
4. Lesson 4:
 - a. Lecture Notes Worksheet
 - b. Lesson Worksheet
 - c. Crossword
 - d. Web Site Planning
 - e. Design Evaluation
 - f. Quality Assurance Plan
5. Lesson 5:
 - a. Lecture Notes Worksheet
 - b. Lesson Worksheet
6. Lesson 6:
 - a. Lecture Notes Worksheet
 - b. Lecture Worksheet
 - c. Crossword
7. Lesson 7:
 - a. Lecture Notes Worksheet
 - b. Lesson Worksheet
 - c. Simulation Activity
8. Lesson 8:
 - a. Lecture Notes Worksheet
 - b. Lesson Worksheet
 - c. Personal Inventory
 - d. Career Exploration

Summative Assessments:

1. Unit 1: Lessons 1-8: Quiz: 10 multiple choice questions per lesson
2. Unit 1: Exam: 50 multiple choice questions per unit

Instructional Materials:

IE Class Web Design Curriculum: Unit 1 [ieclass.com]

List of Applicable NJCCS and Standards/CPIs/Technology Standards:

- 8.1.12.D.1
- 8.1.12.E.2-3

Unit 2: Web Graphics [14 Days]

Why Is This Unit Important?

Web graphics are an integral part of a web site to create an aesthetically pleasing experience. In addition web graphics aid in the communication process of the overarching goal of a web site.

Enduring Understandings:

1. Proficiently navigate the software through the menu, tools, panels and filters.
2. When and how it is best to utilize crop and resize an image.
3. When and how it is best to utilize selection of regions and manipulate image areas.
4. When and how it is best to utilize text and automation
5. When and how it is best to utilize image masks.
6. The benefits and efficiency of working with layers.
7. When and how it is best to utilize colorize images.
8. When and how to create animated GIFs to add motion graphics to a web site.

Essential Questions:

1. What are the consequences of increasing the size of a raster image compared to a vector image?
2. Why is it important to understand raster image file types?
3. When is it not appropriate to save an image as a GIF? Why?

Acquired Knowledge:

1. Proficiently navigate the software through the menu, tools, panels and filters.
2. Describe the process to crop and resize of an image.
3. Describe the process to selection of regions and manipulate image areas.
4. Describe the process to create and manipulate text as well as automation.
5. Describe the process to create and manipulate image masks.
6. Describe the process of working with layers.
7. Describe the process to colorize images.
8. Describe the process to create animated GIFs to add motion graphics to a web site.

Acquired Skills:

1. Operate the software through the menu, tools, panels and filters.
2. Execute crop and resize of an image.
3. Execute selection of regions and manipulate image areas.
4. Create and manipulate text as well as automation.
5. Create and manipulate image masks.
6. Create and manipulate layers.
7. Execute colorize images.
8. Create animated GIFs.

Major Assessments:Formative Assessments:

1. Lesson 1:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 1-1
 - d. Lab 1-2
 - e. Lab 1-3
2. Lesson 2:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 2-1
 - d. Lab 2-2
3. Lesson 3:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 3-1
 - d. Lab 3-2
4. Lesson 4:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 4-1
 - d. Lab 4-2
 - e. Lab 4-3
 - f. Lab 4-4
5. Lesson 5:
 - a. Guided Practice
 - b. Lab 5-1
 - c. Lab 5-2
6. Lesson 6:
 - a. Guided Practice
 - b. Lab 6-1
 - c. Lab 6-2
7. Lesson 7:
 - a. Guided Practice
 - b. Lab 7-1
 - c. Lab 7-2
 - d. Lab 7-3
 - e. Lab 7-4
8. Lesson 8:
 - a. Guided Practice
 - b. Lab 8-1
 - c. Lab 8-2
9. Lesson 9:
 - a. Guided Practice
 - b. Lab 9-1
 - c. Lab 9-2
 - d. Lab 9-3

Summative Assessments:

1. Unit 2: Lessons 1-9:
 - a. Quiz: 10 combination multiple choice and/or true and false questions per lesson
2. Unit 2: Exam:
 - a. 50 combination multiple choice and/or true and false questions per unit

Instructional Materials:

IE Class Web Design Curriculum: Unit 2 [ieclass.com]

NJCC & Standards/Technology Standards:

- 8.1.12.A.1
- 8.1.12.A.3
- 8.1.12.D.1
- 8.1.12.E.3

Unit 3: Basic HTML5 with CSS3 [17 Days]

Why Is This Unit Important?

Hypertext Markup Language and Cascading Style Sheets are the standard language for web browsers are a necessity and for the structure and style of a web site to be visible. The coding of a site requires HTML in order to exist.

Enduring Understandings:

1. Identify HTML Tags and structure.
2. Describe the process of creating lists.
3. Differentiate page layout design container structure and attributes.
4. Identify properties of styling text content.
5. Compare site structure and links.
6. Understand how to work with images in a web site.
7. Indicate margins and borders.
8. Explain creating basic tables.

Essential Questions:

1. What was the reason for HTML5 discontinuing some of the tags that were used in previous versions of HTML?
2. What are the benefits of using an embedded style sheet?
3. Describe what the overflow style property does?
4. Compare and contrast the following font styles: serif, sans serif, monospace and script.
5. Explain why an external style sheet is an effective method of styling for large web sites?
6. Which style properties and values would achieve a background image to be placed once in the center of the page?
7. Which style property would be used to round all four corners of an element?
8. The cells of the table are defined by what set of tags?

Acquired Knowledge:

1. Recognize HTML Tags and structure.
2. Describe the process to creating lists.
3. Describe the process to page layout design container structure and attributes.
4. Describe the process to styling text content.
5. Describe the process of site structure and links.
6. Describe the process to with images in a web site.
7. Describe the process of defining margins and borders.
8. Describe the process of creating basic tables.

Acquired Skills:

1. Employ HTML Tags and structure.
2. Create and manipulate lists.
3. Compose page layout design container structure and attributes.
4. Create and manipulate styling text content.
5. Develop site structure and links.

6. Embed images in a web site.
7. Define margins and borders.
8. Create and manipulate basic tables.
9. Create a web site that includes an external style sheet, site structure and design, nav element, header element, article elements and ordered or unordered list, incorporate colors, font and text styles.
10. Create a web site that includes an external style sheet, site structure and design, nav element, header element, article elements, selection element, data table, list, graphic banners, embed images, incorporate colors, font/text styles, borders, spacing and positioning.

Major Assessments:

Formative Assessments:

1. Lesson 1:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 1-1
 - d. Lab 1-2
 - e. Lab 1-3
 - f. Lab 1-4
 - g. Lab 1-5
 - h. Lab 1-6
 - i. Lesson 1 Error Detection
2. Lesson 2:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 2-1
 - d. Lab 2-2
 - e. Lab 2-3
 - f. Lab 2-4
 - g. Lab 2-5
 - h. Lab 2-6
3. Lesson 3:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 3-1
 - d. Lab 3-2
 - e. Lab 3-3
 - f. Lab 3-4
4. Lesson 4:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 4-1
 - d. Lab 4-2
 - e. Lab 4-3
 - f. Lab 4-4
5. Lesson 5:
 - a. Guided Practice
 - b. Lesson Worksheet

- c. Lab 5-1
 - d. Lab 5-2
 - e. Lab 5-3
 - f. Lab 5-4
 - g. Lab 5-5
 - h. Lab 5-6
6. Lesson 6:
- a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 6-1
 - d. Lab 6-2
 - e. Lab 6-3
 - f. Lab 6-4
 - g. Lab 6-5
 - h. Lab 6-6
7. Lesson 7:
- a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 7-1
 - d. Lab 7-2
 - e. Lab 7-3
 - f. Lab 7-4
8. Lesson 8:
- a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 8-1
 - d. Lab 8-2
 - e. Lab 8-3
 - f. Lab 8-4

Summative Assessments:

1. Design Portfolio Project 1
2. Design Portfolio Project 2
3. Unit 3: Lessons 1-8:
 - Quiz: 10 combination multiple choice and/or true and false questions per lesson
4. Unit 3: Exam:
 - 50 combination multiple choice and/or true and false questions per unit

Instructional Materials:

IE Class Web Design Curriculum: Unit 3 [ieclass.com]

NJCC & Standards/Technology Standards:

- 8.1.12.A.1-3
- 8.1.12.B.2
- 8.1.12.D.1
- 8.1.12.E.3

NJCC & Standards/21st Century Life & Career Skills Standards:

- 9.4.12.K.(3).1, 3-11

Unit 4: Advanced HTML Design [13 Days]

Why Is This Unit Important?

The use of advanced HTML design develops a more sophisticated and more effective web site. Understanding how to use classes, ID and page layout gives the student more control over the placement and presentation of their product. The implementation of styling navigations bars, embedding media, transforming elements and transitions as well as the use of filters create a more aesthetically pleasing product. Collectively these concepts and skills enable a student to create a more advanced web site.

Enduring Understandings:

1. Identify HTML classes and IDs.
2. Describe the process of designing with color.
3. Explain how to define page positioning.
4. Differentiate properties of styling navigation bars.
5. Explain how to embed media.
6. Explain how to transform elements and transitions.
7. Differentiate filter effects.

Essential Questions:

1. What is the purpose of a style ID?
2. What does the position property define?
3. Why is it necessary to define the background element individually for each of the browser categories?
4. When creating a navigation bar, why is the natural layout of the navigation n bar vertical?
5. Why is it necessary to always include at list two audio types when embedding audio onto your web page?
6. When applying a transition using only the h transition: property, what are the required values that should be defined?
7. What properties of an image can be altered with filters?

Acquired Knowledge:

1. Enumerate HTML classes and IDs.
2. Describe the process of designing with color.
3. Describe the process of page positioning.
4. Describe the process of styling navigation bars.
5. Describe the process to embed media.
6. Describe the process to transform elements and transitions.
7. Describe the process to filter effects.

Acquired Skills:

1. Identify HTML classes and IDs.
2. Employ designing with color.
3. Manipulate properties of page positioning.

4. Encode to style navigation bars.
5. Encode to embed media.
6. Encode to transform elements and transitions.
7. Implement filter effects.

Major Assessments:

Formative Assessments:

1. Lesson 1:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 1-1
 - d. Lab 1-2
 - e. Lab 1-3
 - f. Lab 1-4
 - g. Lab 1-5
2. Lesson 2:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 2-1
 - d. Lab 2-2
 - e. Lab 2-3
 - f. Lab 2-4
3. Lesson 3:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 3-1
 - d. Lab 3-2
 - e. Lab 3-3
 - f. Lab 3-4
 - g. Lab 3-5
4. Lesson 4:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 4-1
 - d. Lab 4-2
 - e. Lab 4-3
 - f. Lab 4-4
5. Lesson 5:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 5-1
 - d. Lab 5-2
 - e. Lab 5-3
 - f. Lab 5-4
6. Lesson 6:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 6-1
 - d. Lab 6-2

- e. Lab 6-3
- f. Lab 6-4
- 7. Lesson 7:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 7-1
 - d. Lab 7-2
 - e. Lab 7-3
 - f. Lab 7-4
- 8. Lesson 8:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 8-1
 - d. Lab 8-2
 - e. Lab 8-3
 - f. Lab 8-4

Summative Assessments:

- 1. Design Portfolio Project 3
- 2. Design Portfolio Project 4
- 3. Unit 4: Lessons 1-8:
 - o Quiz: 10 combination multiple choice and/or true and false questions per lesson
- 4. Unit 4: Exam:
 - o 50 combination multiple choice and/or true and false questions per unit

Instructional Materials:

IE Class Web Design Curriculum: Unit 4 [ieclass.com]

NJCC & Standards/Technology Standards:

- 8.1.12.A.1-3
- 8.1.12.B.2
- 8.1.12.D.1
- 8.1.12.E.3

NJCC & Standards/21st Century Life & Career Skills Standards:

- 9.4.12.K.(3).1, 3-11

Unit 5: Dreamweaver [9 Days]

Why Is This Unit Important?

Adobe Dreamweaver is industry standard software that features tools and resources greater than standard text editor software. Becoming proficient in Adobe Dreamweaver will benefit in computer aided error-checking of code, design and code view for immediate viewing of coding and a user friendly interface to organize site elements.

Enduring Understandings:

1. Review Dreamweaver workspace.
2. Distinguish different types of documents.
3. Review image navigation features.
4. Summarize templates.
5. Explain Spry Widgets.
6. Differentiate automated style sheets.

Essential Questions:

1. Why is it important for a good website designer to know HTML even if they are using a WYSIWYG editor such as Dreamweaver?
2. Which view on the Property Inspector would you assign a formatting tag, such as a heading, to selected text on your document?
3. Changing the color of selected text can be accomplished on which view of the Property Inspector?
4. Which view of the Property Inspector allows you to apply a CSS class or ID to selected text?

Acquired Knowledge:

1. Label Dreamweaver workspace.
2. Define different types of documents.
3. Specify image navigation features.
4. Identify templates.
5. Specify Spry Widgets.
6. Describe automated style sheets.

Acquired Skills:

1. Utilize Dreamweaver workspace.
2. Utilize different types of documents.
3. Develop and utilize image navigation.
4. Develop and utilize templates.
5. Implement Spry Widgets.
6. Adapt automated style sheets.

Major Assessments:Formative Assessments:

1. Lesson 1:
 - a. Lesson Worksheet
2. Lesson 2:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 2-1
 - d. Lab 2-2
3. Lesson 3:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 3-1
 - d. Lab 3-2
4. Lesson 4:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 4-1
 - d. Lab 4-2
5. Lesson 5:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 5-1
 - d. Lab 5-2
6. Lesson 6:
 - a. Guided Practice
 - b. Lesson Worksheet
 - c. Lab 6-1
 - d. Lab 6-2

Summative Assessments:

1. Design Portfolio Project 5
2. Unit 5: Lessons 1-6:
 - Quiz: 10 combination multiple choice and/or true and false questions per lesson
3. Unit 5: Exam:
 - 50 combination multiple choice and/or true and false questions per unit

Instructional Materials:

IE Class Web Design Curriculum: Unit 5 [ieclass.com]

NJCC & Standards/Technology Standards:

- 8.1.12.A.1-3
- 8.1.12.B.2
- 8.1.12.D.1
- 8.1.12.E.3

NJCC & Standards/21st Century Life & Career Skills Standards:

- 9.4.12.K.(3).1, 3-11

Unit 6: JavaScript [13 Days]

Why Is This Unit Important?

The JavaScript focus will teach general programming concepts, yet keeping the design emphasis. JavaScript is a tool for creating attractive and efficiently designed web sites.

Enduring Understandings:

1. Understand process of program development.
2. Indicate principles of JavaScript.
3. Differentiate variable and functions.
4. Describe how to process data.
5. Explain the importance of custom windows.
6. Discuss JavaScript Arrays
7. Summarize how to control structures.
8. Explain the meaning of canvas graphics.

Essential Questions:

1. What is the difference in a server-side scripting language and a client-side scripting language?
2. What type of web applications can be created using server-side scripting languages?
3. When displaying a variable value, why would you NOT place quotes around the variable?
4. Program flow where one line is executed after another is called what?
5. How would you compare and contrast selection statement and repetition statement?

Acquired Knowledge:

1. Identify and define the process of program development.
2. Identify and define principles of JavaScript.
3. Specify variable and functions.
4. Describe how to process data.
5. Explain custom windows.
6. Recognize JavaScript Arrays
7. Describe controlling structures.
8. Identify and define canvas graphics.

Acquired Skills:

1. Apply the process of program development.
2. Apply the principles of JavaScript.
3. Demonstrate variables and functions.
4. Employ processing data.
5. Develop custom windows.
6. Discuss JavaScript Arrays
7. Execute controlling structures.
8. Develop canvas graphics.

Major Assessments:Formative Assessments:

1. Lesson 1:
 - a. Crossword
 - b. Guided Practice
 - c. Lesson Worksheet
 - d. Algorithm Worksheet
2. Lesson 2:
 - a. Lab 2-1
 - b. Lab 2-2
 - c. Lab 2-3
 - d. Lab 2-4
 - e. Lab 2-5
 - f. Lab 2-6
3. Lesson 3:
 - a. Lesson Worksheet
 - b. Lab 3-1
 - c. Lab 3-2
4. Lesson 4:
 - a. Lesson Worksheet
 - b. Lab 4-1
 - c. Lab 4-2
 - d. Lab 4-3
 - e. Lab 4-4
 - f. Lab 4-5
5. Lesson 5:
 - a. Lab 5-1
 - b. Lab 5-2
 - c. Lab 5-3
 - d. Lab 5-4
6. Lesson 6:
 - a. Lab 6-1
 - b. Lab 6-2
7. Lesson 7:
 - a. Lab 7-1
 - b. Lab 7-2
 - c. Lab 7-3
 - d. Lab 7-4
8. Lesson 8:
 - a. Lesson 8-A Weeks
 - b. Lab 8-1
 - c. Lab 8-2
 - d. Lesson 8-B Weeks
 - e. Lesson 8-3
 - f. Lab 8-4
 - g. Lab 8-5
 - h. Lab 8-6
9. Lesson 9:
 - a. Lab 9-1

- b. Lab 9-2
- c. Lab 9-3

Summative Assessments:

1. Design Portfolio Project 6
2. Design Portfolio Project 7
3. Unit 6: Lessons 1-9:
 - Quiz: 10 combination multiple choice and/or true and false questions per lesson
4. Unit 6: Exam:
 - 50 combination multiple choice and/or true and false questions per unit

Instructional Materials:

IE Class Web Design Curriculum: Unit 6 [ieclass.com]

NJCC & Standards/Technology Standards:

- 8.1.12.A.1-3
- 8.1.12.B.2
- 8.1.12.D.1
- 8.1.12.E.3

NJCC & Standards/21st Century Life & Career Skills Standards:

- 9.4.12.K.(3).1, 3-11

Unit 7: PHP/MySQL Scripting [14 Days]

Why Is This Unit Important?

Web design concepts using PHP, including form processing, user management and expand on the concepts of dynamic and database driven web sites.

Enduring Understandings:

1. Understand how PHP works and the concepts of PHP.
2. Review forms variables and functions.
3. Distinguish functions within code.
4. Describe program control.
5. Identify repetition statements
6. Review data file handling
7. Discuss MySQL Databases
8. Identify working with Strings.
9. Discuss cookies and sessions.

Essential Questions:

1. Why PHP code must be 'pre-processed' before sending to the browser? Explain.
2. What built in PHP function returns the current date and time?
3. What is the order of operations as they pertain to PHP?
4. Why would you enclose a variable within curly braces {} when you output it within a string?
5. A Boolean variable has what to possible values?
6. Approximately how many prewritten PHP function are there?

Acquired Knowledge:

1. Explain PHP works and the concepts of PHP.
2. Specify forms variables and functions.
3. Identify functions within code.
4. Describe program control.
5. Identify repetition statements
6. Cite data file handling
7. Specify MySQL Databases
8. Identify working with Strings.
9. Describe cookies and sessions.

Acquired Skills:

1. Demonstrate how PHP works and the concepts of PHP.
2. Create and manipulate forms variables and functions.
3. Create and manipulate functions within code.
4. Create and manipulate program control.
5. Create and manipulate repetition statements
6. Create and manipulate data file handling
7. Create and manipulate MySQL Databases

8. Create and manipulate working with Strings.
9. Create and manipulate cookies and sessions.

Major Assessments:

Formative Assessments:

1. Lesson 1:
 - a. Lesson Worksheet
 - b. Lab 1-1
 - c. Lab 1-2
2. Lesson 2:
 - a. Lesson Worksheet
 - b. Lab 2-1
 - c. Lab 2-2
 - d. Lab 2-3
3. Lesson 3:
 - a. Lesson Worksheet
 - b. Lab 3-1
 - c. Lab 3-2
4. Lesson 4:
 - a. Lab 4-1
 - b. Lab 4-2
 - c. Lab 4-3
5. Lesson 5:
 - a. Lab 5-1
 - b. Lab 5-2
 - c. Lab 5-3
 - d. Lab 5-4
6. Lesson 6:
 - a. Lab 6-1
 - b. Lab 6-2
7. Lesson 7:
 - a. Lab 7-1
 - b. Lab 7-2
8. Lesson 8:
 - a. Lab 8-1
 - b. Lab 8-2
9. Lesson 9:
 - a. Lab 9-1
 - b. Lab 9-2

Summative Assessments:

1. Design Portfolio Project 8
2. Unit 7: Lessons 1-9:
 - Quiz: 10 combination multiple choice and/or true and false questions per lesson
3. Unit 7: Exam:
 - 50 combination multiple choice and/or true and false questions per unit

Instructional Materials:

IE Class Web Design Curriculum: Unit 7 [ieclass.com]

NJCC & Standards/Technical Standards:

- 8.1.12.A.1-3
- 8.1.12.B.2
- 8.1.12.D.1
- 8.1.12.E.2-3

NJCC & Standards/21st Century Life & Career Skills Standards:

- 9.4.12.K.(3).1-11, 13

Glossary

UNIT 1	LESSON 1
HTML	A formatting language that tells your browser how the web page and its content should be structured.
tags	Are the HTML instructions that tell your web browser how to format text or what to insert into your web page.
< >	A tag consists of a left and right bracket
Netiquette	Refers to proper etiquette when communicating online and using any type of network system, including, but not limited to, accessing Internet, email messages, and social networks, respecting other people's privacy.
Acceptable Use Policy	The AUP serves as a written agreement between you, your parents, and the school. It is important that any organization that uses a network establish an AUP, especially if they allow access to the Internet.
predators	These are individuals that try to take advantage of teens and kids that might not suspect their true intentions.
Carpal Tunnel Syndrome	Is a nerve injury resulting from excessive and inappropriate typing posture.
UNIT 1	LESSON 2
computers	Are tools that receive information, store it, manipulate it, and produce an output.
Charles Babbage	Was an English scientist in the early 1800s and is considered to be the Father of the Computer.
Analytical Engine	Which could read data in from punch cards, had an internal storage called a 'The Store', it also had a control unit that could be programmed to tell the Analytical Engine what to do and in what order, and it could process arithmetic calculations in 'The Mill'.
Herman Hollerith	Worked for the US Census during 1880 and when the 1880 census was taken, much of the next decade was spent trying to tabulate the results of the census. Hollerith worked on a solution that could process census data much faster and more efficiently. and thus created a Tabulating Machine.
Tabulating Machine	Individuals entered their personal information onto individual punch cards. Census employees fed those cards into Hollerith's machine. The US Census Bureau was able to calculate the 1890 census in just 6 weeks thanks to Hollerith's Tabulating Machine.
ENIAC	Originally designed to calculate artillery firing tables, but the war ended before the ENIAC was completed. The ENIAC was unique because it was the first computer that could be programmed for a specific purpose and include internal memory. It contained 18,000 vacuum tubes.
TRADIC	Which contained 800 transistors and could perform a million operations per second. This development was a tremendous advancement for computers in speed, size, and power consumption.
transistor	Worked like the vacuum tube in acting like an on/off switch representing 1 and 0.
Apollo Guidance System Computer	NASA used the integrated circuit in the development of its Guidance computers on the Apollo Lunar Orbiter and Lander.
integrated circuit	Consisted of a network of transistors on a single chip.

microprocessor	Which not only provided the calculating power, but also included a control unit, clock, the power to interact with memory and storage devices, receive and modify data, and interact with input and output components.
hardware	Any physical part of the computer that you can touch.
input devices	Are computer hardware components that receive information from the user, or some other external source, and send that data to the Central Processing Unit (CPU) of your computer for processing.
output devices	Return information from the CPU back to the user, or some other receiving device.
software	System software interacts with the hardware and manages all aspects of your computer system. Application software generally interacts with the user and system software.
operating system	Works with, and manages, your computer's hardware.
internal component	A component located inside of the computer case
video card	Is used to process the graphics portion of the processing load.
sound card	Are now capable of producing 3D sound, which incorporates perspective dimension into the sound.
ROM (Read Only Memory)	Stores permanent information that does not change
RAM (Random Access Memory)	Is used to store temporary information that is needed by your computer.
primary memory	Stores data on chips that are located inside your computer
secondary memory	Consists of memory stored on hard drives, floppy drives, flash drives, SD cards, and any storage device that can be removed.
modem	Allows you to connect your computer to other computers through the use of your phone or cable line and converts digital communication to audio and back to digital, thus the Modulation / Demodulation term.
network interface cards	A computer component that enables your computer to connect to a wired network.
wireless network card	Network card which connects to a network through radio signals.
UNIT 1	LESSON 3
Arpanet	In 1965 the US Department of Defense's Advanced Research Projects Agency (ARPA) began working with the RAND Corporation to develop the first Internet prototype
Protocols	An established set of rules was created for the different types of information that would be sent over the internet.
TCP	Transmission Control Protocol, was selected as the method of communication among computers on the Internet because there are no restrictions on its use and no royalties that would need to be paid thus giving developers the freedom to design applications based on its standards.
packets	Information that is to be sent across the internet is to be broken into data packets no more than 1500 characters in size.
IP	Comes into play by assigning each computer on the Internet a unique Internet Protocol Address, and the packets contain the address of both the sending and receiving computer.
port	Is like a door that data can travel into or out of your computer.
domain name	The part of the URL following the www is the domain name.
domain name lookup	Is performed which converts domain names to specific IP addresses.

name server	Is a database that links domain names to IP Addresses allowing your web site to be accessed by an easy to remember domain name.
top level domain	The TLD is the extension separated by a period after the name. TLDs identify the type of organization publishing the web site.
world wide web	that we know of today refers to the web pages and web sites that are linked together creating this electronic web of interconnected information.
Internet Service Provider	ISP allowing members to access the World Wide Web and content outside of their own network.
search engine	Is a program that systematically searches the Web for documents on a specific topic.
UNIT 1	LESSON 4
top-down design	Approach involves designing a web site based on the designer's expertise, experience, familiarity with general design concepts.
bottom-up design	Approach on the other had is designing a web site based on the site user's needs.
Quality Assurance Plan	Is a document created by the web designer, or design team, along with the client outlining the purpose and goals, and design plan of the site to be designed.
Client Needs Assessment	Is to define specifically what the mission or purpose of the site is and what content should be included on the site.
UNIT 1	LESSON 5
primary colors of light	Red, green and blue
pixel	Extremely small dots that make up everything you see on your computer screen.
value	Relative lightness or darkness
saturation	Purity of a color, of any primary color through a color code to create almost any custom color.
harmony	Refers to the pleasing effect the web site has on the eye.
secondary colors	Two primary colors in equal amounts
Intermediate colors	Mixing a primary color with a secondary color such as blue and green.
monochromatic	A color scheme with the use of one color in a range from black to white of that color
analogous	Three to five colors next to each other on the color wheel
complementary	Two colors that are across from each other on the color wheel
split complementary	Color scheme is a variation of the complementary scheme; however, instead of using a color's direct complement, it uses the colors adjacent to the complement.
triadic	Color scheme uses three equal distance colors on the color wheel. This color scheme offers rich color options.
tetradic (double complementary)	Color scheme consists of two sets of complementary colors.
UNIT 1	LESSON 6
copyright	Is a form of protection provided by the laws of the United States to the authors of "original works of authorship," including literary, dramatic, musical, artistic, and certain other intellectual works.
intellectual property theft	Using copyrighted material without permission or authorization

public domain	Is that repository of all works that, for whatever reason, is not protected by copyright.
fair use guidelines	Allow for limited amounts of certain copyrighted works to be used for educational purposes without obtaining permission.
UNIT 1	LESSON 7
register	The company that will register a domain name
web server	Is a computer that is permanently connected to the Internet that has specifically been setup to allow web sites to be stored and accessed from other computers on the Internet.
Apache	Most common web server application
localhost	To access the files through the web server
shared server	Is a server that hosts multiple web sites for many different companies and individuals.
dedicated server	Dedicated servers only host your site and you are typically given full control of the server, but the price is usually much higher.
upload	Transfer files to the server
ftp client	The ftp stands for file transfer protocol the program will establish a secure connection with the web server allowing you to transfer files back and forth.
UNIT 1	LESSON 8
freelance	Meaning that the web designer is not permanently employed by a single business, but the business contracts with them to complete a specific project.
web designer	Someone who builds a website from scratch for a company and then turns the site over to someone else to maintain.
webmaster	Someone who maintains a website for an organization.
web programmer	Someone who primarily focuses on the programming aspect of web design.
web application developer	This person specialized in developing applications that run online.
portfolio	A collection of work used to present your skills and knowledge
resume	A summary of your education, skills, experience, and your interests and goals.
UNIT 2	LESSON 1
raster	Sometimes called bitmaps, are made up of a bunch of small colored dots called pixels.
vector	Images are based on mathematically defined points called vectors connected by lines and curves.
pixelated	An image appears to have large blocks of colors and lacks clarity
antialiasing	Process of softening hard edges in an image so it appears smoother.
.bmp	A Windows based image type. Generally can display millions of different colors making it good for photographs. This image type should be converted to a JPG or GIF before being used on a web page.
.jpg	A compressed file type that is capable of displaying millions of different colors. An ideal image type for displaying photographs, or images taken with a digital camera.
.tiff	Generally a very large file type, ideal for print, and sometime used by digital cameras. Can display millions of colors making it ideal for photographs. Because of its large file size, tiff images should be converted to jpg types before being used on a web page.

.gif	An image type developed by CompuServe at the early days of the Internet. The image type is ideal for web pages because it is small and only displays 256 different colors. Many logos and graphics with limited colors are in GIF format. The GIF images are also capable of having a transparent color so the background of the web page can show through, and also being animated when placed onto a web page. GIMP does have an animation tool that you will be introduced to later in this unit.
.png	The PNG file type is an advanced version of the GIF image type. It is capable of displaying up to 16 million colors, and also partial transparency, for fades from one color to complete transparency. PNG images can also be animated.
.xcf	GIMP's native format. This format will retain all the layers, selections, and elements of the image, but it cannot be displayed on a web page. A copy of any image created in GIMP should also be saved in an XCF format so the image can easily be edited or modified.
Pencil & Brush Tool	The Pencil and Brush tools basically do the same thing, except the Brush uses antialiasing and the pencil does not. They each allow you to freehand draw on your image. You have the option to change the opacity (transparency) of the lines, brush size, color, and even set the line strokes to fade out. Holding the Ctrl button down allows you to easily select another color used on your image, and holding the Shift key allows you to create perfectly straight lines.
Erase Tool	The Erase tool allows you to remove parts of an image, essentially erase. With the erase tool you can also select a brush style and size. The Erase tool is used for touching up and cleaning up images. You can also use the Shift key with the Erase tool to create straight areas to erase.
Airbrush Tool	The Airbrush is a drawing tool that emulates the effects of an airbrush. As you hold the left mouse button down, you are essentially 'spraying' paint onto your canvas. The longer you hold the button down in one place, the darker the spray will become. The Airbrush tool is useful for creating soft areas of color to an image. Holding the Ctrl button down allows you to easily select another color used on your image, and holding the Shift key allows you to create perfectly straight lines.
Ink Tool	The Ink tool simulates an ink pen. From the Toolbox options, you can adjust the settings of the Ink tool to change the shape, opacity, and sensitivity of the strokes. Holding the Ctrl button down allows you to easily select another color used on your image, and holding the Shift key allows you to create perfectly straight lines.
Clone Tool	The Clone tool allows you to select an area of your image and reproduce it, either as a stamp, or by drawing. To use the Clone tool, choose what you want to clone, and then select a brush size. Hold the Ctrl button down and left-click on the area you want to clone. Then left-click on your canvas to create an exact reproduction of the cloned area, or draw like you would with any other drawing tools.
Blur/Sharpen Tool	The Blur/Sharpen tool allows you to soften or harden sections of an image. You can select between the Blur and Sharpen from the Toolbox options. The sharpen tool will increase the contrast in the areas where it's used.
Smudge Tool	The Smudge tool can in essence smear the color on an image. The Smudge tool can be used to blending two elements on an image.

Burn/Dodge Tool	The Burn/Dodge tool can be used to lighten or darken areas of an image where it is used. You can select between Burn and Dodge from the Toolbox options. The Burn option will darken on whatever it is used on and the Dodge will lighten whatever it is used on.
Blend Tool	The Blend tool will fill a continuous area or selection with a gradient blend from one color to another.
Bucket Fill Tool	The Bucket Fill tool will fill a continuous area or selection with a solid color or pattern.
UNIT 2	LESSON 2
crop	To cut away or trim part of an image.
resize	To adjust the scale of the image proportionally
PPI	Pixels per inch
dpi	Dots per inch
UNIT 2	LESSON 3
filter	Component of a graphic editor, that receives an image, modifies it, and outputs it in a different form.
Blur	The Blur category contains filters that blur images, or a selected region of an image.
Enhance	The Enhance filters are used to repair any image's imperfections.
Distorts	The Distorts category contains a number of different filters that can significantly alter an image.
Light & Shadow	The Light & Shadow filters include filters that apply various illumination effects to the image, and the Glass Title filter gives the image the appearance of being looked at through glass squares.
Noise	Noise is little speckles on an image giving it an imperfect look. The Noise filters can be used to add various levels of noise.
Edge - Detect	The Edge-Detect filter searches for borders between different colors and will apply various styles to the images with the borders enhanced.
Generic	The Generic category contains filters that do not fit into any of the other categories.
Combine	The combine filters combine two or more images into a single image.
Artistic	Artistic filters create artistic effects like cubism, oil painting, canvas.
Map	Map filters use an object named map to modify an image: you map the image to the object. So, you can create 3D effects by mapping your image to another previously embossed image ('Bumpmap' Filter) or to a sphere ('Map Object' filter). You can also map a part of the image elsewhere into the same image ('Illusion' and 'Make Seamless' filters), bend a text along a curve ('Displace' filter).
Render	Most GIMP filters work on a layer by transforming its content, but the filters in the 'Render' group are a bit different. They create patterns from scratch, in most cases replacing anything that was previously in the layer.
Web	Web is mostly used on images used for web sites. The filter Image Map is used to add clickable 'hot spots' on the image (see Lesson 6). The filter Semi-Flatten is used to simulate semi-transparency in image formats without alpha channel. The Slice Filter slices an image so it may be reassembled in an HTML table on a web site.
Animation	The animation category contains filters to help optimize animation, and filters which give the illusion of animation, such as the ripple filter.

UNIT 2	LESSON 4
selected region	An area enclosed by a marquee is the selection
masks	A region that is used to protect or to modify
Rectangle Tool	Creates rectangular selections or masks on an image. You can make multiple selections by pressing the shift key while selecting different areas of the image. Holding the Ctrl button will deselect a specific region.
Ellipse Tool	Works just like the rectangle tool except it creates ellipse shaped selections on an image rather than rectangle.
Lasso Tool	Allows you to draw out your own selected region.
Magic Wand	Selects continuous regions of the same color on an image.
UNIT 2	LESSON 5
text tool	A tool used to add text to your composition
layer	A method of organizing your layout for each component
canvas	The area the is visible for the viewer when exported
group	Selecting more than one item and designating it as a group of uniform application
UNIT 2	LESSON 6
image maps	Designating regions of an image to be a hyperlink
UNIT 2	LESSON 7
merge down	Combining layers in the descending order
UNIT 2	LESSON 8
colorization	Is the process of painting an image with artificial colors
UNIT 2	LESSON 9
frame rate	Length of time that each frame is displayed
motion graphics	A term used to describe graphics that use technology to give the illusion of movement, rather than photographic film animations.
.gif	A file type that is small for web and capable of animation
frame rate	Each layer is a frame
UNIT 3	LESSON 1
HTML	HTML Stands for H yper T ext M arkup L anguage. HTML defines how a web page is to be structured. HTML consists of structural instructions.
CSS	CSS Stands for C ascading S tyle S heets. It is the tool that you will use to define the layout of your web pages, add the colors, fonts, and the aesthetic features to your web site.
<!DOCTYPE html>	The DOCTYPE declaration should be included on your labs so your browser interprets all the HTML 5 features.
Container Element	Tags that are available to you to help you define the content on your web page
header	The header element is generally used to define the header of the body element; however it can also be used to define the header of another element.
section	The section element is generally used to group elements, or it can be used to divide content within an element.

article	The article is where the primary content of your web site is written. It should be self-contained content. The article will generally define the content and information on the web page. An article may include, but definitely not limited to, paragraphs, illustrations, table data, etc.
nav	The nav element should contain your web site's primary navigation.
aside	The content in the aside is considered additional content that is 'aside' the primary content on the page or content that should not be taken out of context.
footer	The footer content should contain the information that would be at the bottom of a web page, generally copyright information, or any other information that should be displayed at the foot of a web page.
div	The div is the original container element. Originally the above-mentioned containers did not exist; everything was contained within a div element. The div element now can be used to create containers that do not necessarily fit into the above mentioned categories, or to simply group content together.
Heading Tags	Are used as headings for different sections on a web page. <h1> ~ </h1> <h2> ~ </h2> <h3> ~ </h3> <h4> ~ </h4> <h5> ~ </h5> <h6> ~ </h6>
Paragraph Tags	Are created with the <p> and </p> tags. Paragraphs tags should define the paragraphs on your web page.
Line Breaks	Are inserted into your web document using the tag.
Opportunity Line Breaks	Can be added with the <wbr> tag before long lines of continuous text, such as a web url to tell the browser that if a line break is needed, it should be here.
Horizontal Rule	Tags draw a horizontal line or divider on your web page. The horizontal rule is inserted into your document using the <hr> tag.
 ~ 	Important text that is bold
 ~ 	Emphasized text that is italicized
<mark> ~ </mark>	Highlights important text in browsers
encapsulate	(Surround) the text that they are formatting. If more than one tag is formatting the text, then the closing tags must be written in <u>reverse order</u> from how they were opened.
Block Elements	Define the container elements and structure of your web page. Containers defined by block tags can be assigned a height and width, and positioned on the web page.
Inline Elements	Will not change the layout and are used to format small areas of content, such as individual letters, words, or a sentence at the most.
attribute	Is a feature that you can apply to an element that will allow you to apply formatting content within the element.
inline style sheet	A CSS or cascading style sheets style that is written directly on the element it affects.
hexadecimal, or hex,	Format which is the one we will use most often. The format for the hexadecimal method is shown below.
cross browser compatible	A web page that performs the same in all browsers
HTML1	Was used from 1989-94, was very limited in what it could do; there were very few tags and no style aspects.
HTML2	1995 was officially introduced which now allowed developers to include forms and tables, and also define the background color of the web pages.

HTML3.2	1997 At this point the WC3, the organization that oversees the HTML language was disagreeing on the revisions to HTML 3.0, so after everything was settled, they had reached 3.2 when it they decided to release the new version. HTML 3.2 now included Cascading Style Sheets.
HTML4.1	1999 This version of HTML of HTML was the first to fully integrate CSS and promote the separation of presentation styling from the actual content.
XHTML	2000 This version quickly became the fad of some beginner developers but was never really accepted by professional developers, especially those that were integrating scripting languages into their web sites such as PHP, which was rapidly growing in popularity.
HTML5	2011 was released which incorporates the many of the features of HTML 4.1 and XHTML. With HTML5, websites are expected to be structured by HTML and completely styled by style sheets.
<center>	Centered content
	Formatted fonts through HTML rather than CSS.
	This tag bolded text. It has been replaced by the tag and font-weight style property.
<i>	This text italicized text and has been replaced by the tag.
<applet>	This tag defined Java Applets which have been deprecated.
<u>	This tag underlined text and has been replaced by the text-decoration style property.
<frame>	This tag created frames. Frames are not part of HTML5. A similar feature is available through PHP's include() and require() functions.
Unit 3	Lesson 2
Unordered list	Creates bullets before each item
Ordered list	Use numbers rather than bullets.
Definition list	Does not use bullets or numbers, but uses indentations or tabs.
Nested list	Is created when you place one list inside of another list.
Embedded Style Sheet	Allow you to write commonly used style rules one time in the head region of your document.
UNIT 3	LESSON 3
text-align	Text can be justified, or aligned to the left, right, or center of whatever container it is written
parent & child	An article is placed inside a section, the section is said to be parent element and the article is said to be the child element.
grandchild	If the child element contains another element such as a heading, it would be the grandchild of the section element, and the child of the article element.
width:	Set specific sizes to block elements by applying the width: style properties.
height:	Set specific sizes to block elements by applying the height: style properties.
min-height:	If you want to set a minimum height to allow the container to grow to accommodate its content.
Absolute	Measurements have specific size specifications.
Relative	Is based on parent container.
padding:	Style property add spacing around the element's content
float:	Style property will allow you to align any block element, to the <i>left</i> or <i>right</i> and allow other elements to be placed on the same line.

clear: left;	Does not allow elements on the left side.
clear: right;	Does not allow elements on the right side.
clear: both;	Does not allow elements on either side.
clear: inherit;	Inherits the clear property from the parent container.
clear: none;	Allows elements on both sides. Default setting
hidden	To hide content that does not fit into a container
scroll	To maintain the layout structure and show all the information in the container.
auto	Will only add a scrollbar if it is needed.
visible	The content will spill outside the container area, thus making it visible.
UNIT 3	LESSON 4
Sans Serif	Font will create block style fonts.
Serif	A bit more of a formal style of font that has serifs on the ends of the letters.
Monospace	Looks like a typewriter and has equal space allotted per letter
Script	Has the appearance of handwriting.
Fancy	Not standard and is generally a font found on a website and installed.
font-family:	Defines the font of the text which the style is being applied to
font-variant:	The font-variant allows you to set a particular font to small caps, or back to normal text.
font-weight:	The font-weight property defines the level of bold that is applied to the text.
font-size:	Modifies the size of the font
font-style:	Sets a font to italics or back to normal.
text-decoration:	Adds or removes a line above, below, or through text
text-align:	Specifies the horizontal alignment of text.
text-indent:	Specifies the first line indentation of a block of text.
text-transform:	Modifies the case of text, from upper case, to lower case, or vice versa. Capitalize will make the first letter of each word uppercase.
letter-spacing:	Specifies the spacing between letters. This process is referred to as kerning.
line-height:	Sets the space between lines of text on a document.
word-spacing:	Sets the amount of space between words.
text-shadow:	Style property can be added to any container with text, such as a heading, span, div, etc.
pseudo-element	Allows you to specify a style for an element that will only be applied under specific conditions.
:hover	Applies a defined style to an element only when the mouse is over it.
:first-letter	Applies a defined style to the first letter of an element.
:first-child { }	Applies the defined style to first instance of the element where it is used as the first child element to another element. In the example below, the style would only be applied to the first listed item.
:nth-child(n) { }	Allows you to define a style for multiple instances of an element where it is the nth instance of that element, specific numbers, or odd or even can be used as the n condition.

:first-of-type { }	Applies the defined style to the first instance of the element where it is used as a child to another element. The example here would apply the style to the first instance of each paragraph where it is used as a child to another element regardless of whether or not any other child elements precede it.
:before { }	Adds content before every instance of an element. The content that is to be added must be defined in the style definition.
:after { }	Adds content after every instance of an element. The content that is to be added must be defined in the style definition.
UNIT 3	LESSON 5
hyperlinks	The technology used to link to other web pages, are what made the World Wide Web into what it is today.
a	You can set the default link properties by defining a style for the anchor tag.
a:visited	This pseudo-element will define the style for the links that you have already visited.
a:active	This pseudo-element will define the style for the links that you have just clicked on and are currently selected.
a:hover	This pseudo-element will define the style for the links as your mouse 'hovers' over them.
UNIT 3	LESSON 6
background-image:	Defines the file name of the image that should be imported.
background-repeat:	Defines how the background image should be repeated.
background-attachment:	Specifies whether a background image is fixed in place or scrolls with the document.
background-position:	Specifies where on the document the background image should be placed. Two values may be sent to this property, the first will be the horizontal placement, and the second will be the vertical placement.
background-size:	Defines the display size of a background image. Requires two values, the width and height that the image should be displayed each separated only by a space.
UNIT 3	LESSON 7
margin	Specifies a margin to be applied to all four sides of an element.
margin-left	Specifies a margin to be applied only to the left side of an element.
margin-right	Specifies a margin to be applied only to the right side of an element.
margin-top	Specifies a margin to be applied only to the top of an element.
margin-bottom	Specifies a margin to be applied only to the bottom of an element.
border-style:	Defines the line style of the border.
border-color:	Defines the color of the border.
border-width:	Defines the width of the border.
border-radius:	Defines radius of the curvature of the corners of the element.
border-top-left-radius:	Sets the corner radius for the top left corner of the element
border-top-right-radius:	Sets the corner radius for the top right corner of the element
border-bottom-left-radius:	Sets the corner radius for the bottom left corner of the element
border-bottom-right-radius:	Sets the corner radius for the bottom right corner of the element
UNIT 3	LESSON 8

table	Are used to organize and display information in a tabular structure
<table>	Defines the starting and ending point of the table, as well as any styles that will apply to the entire table such as the table's width, height, background color, etc.
<tr>	Define the rows of the table. Rows run horizontally across the table and group together each of the table cells in the row.
<td>	The table data tags define the individual cells of the table. The cells must be created with a row, and there must be the same number of cells in each row.
<th>	Defines table headings
<caption>	A caption can be added above a table to give a description of what data is being shown in the table.
UNIT 4	LESSON 1
class	Is a style definition that is not written for a specific tag.
ID	Is similar to a class however with an ID you define a style for a specific instance of an element used throughout the site.
UNIT 4	LESSON 2
linear gradient	Fade from one color to another in a straight line
radial gradients	The colors flow from a point out in a circular direction
UNIT 4	LESSON 3
position	Specifies how content should behave when positioned.
top	Sets how far the top edge of an element is above or below the top edge of its parent element
left	Specifies the position of the left edge of an element.
right	Specifies the position of the right edge of an element.
bottom	Specifies the position of the bottom edge of an element.
width	Specifies the width of a block element.
height	Specifies height of a block element.
overflow	Specifies what content should do that extends beyond its block area.
vertical-align	Specifies the vertical alignment of an object within its container.
UNIT 4	LESSON 4
colspan	Merge cells across columns
rowspan	Merge cells down rows
UNIT 4	LESSON 5
anchor	To create links is an <i>inline</i> element
UNIT 4	LESSON 6
embed audio	mp3, wav, ogg types
<audio>	Audio can be embedded onto your web page by using this tag
<source>	Tag provides the audio file and information on the file type to the browser.
<video>	Embed a video onto your web page.
preload='none'	Nothing will be preloaded
preload='metadata'	Only information about the video will be downloaded, such as the video length and size.

preload='auto'	This is the default setting. The browser will decide what to do, generally preloads the video.
UNIT 4	LESSON 7
linear	The effect is applied at the same speed from the start to finish of the transition.
ease	The transition will start slow, speed up, and then slow down.
ease-in	The transition will start slow and speed up
ease-out	The transition will start fast and slow down at the end.
ease-in-out	The transition will start slow and end slow.
UNIT 4	LESSON 8
filter:	Style property followed by the filter style function you wish to apply to the element.
UNIT 5	LESSON 1
web authoring software	There are other types of web authoring software that can provide many more tools in the development of web pages, one of which being Dreamweaver.
Document Tabs	Allow you to easily work with and switch between multiple documents.
Menu Bar	Provides access to the most common menu items.
Workspace Bar	Allows you to select between various workspace layouts. The default is <i>Designer</i> .
Documents Views	Buttons allowing you to switch between different views. Live View is the new with CS6 and allows you to see how your document will appear in a browser without having to save and open in the browser. It is capable of executing JavaScript and most client side scripting.
Panel Groups	Provides quick access to the Insert items, CSS properties, and the site profiles.
Document Workspace	This is the current document you are working on.
Coding Toolbar	Provides various tools to assist when writing in HTML code.
Property Inspector	Gives quick access to the formatting of content. Is split between HTML and CSS markup.
FTP Toolbar	Allows you to manage the uploading and downloading of files to your web server.
Site Profile	Allow you to manage the website as well as multiples of websites.
UNIT 5	LESSON 2
Code View	Will display the HTML code that makes up the web document.
Design View	Show what your page will look like in a web browser, yet allow you to edit the page.
WYSIWUG	What You See Is What You Get editor
UNIT 5	LESSON 3
Image Maps	Allow you to specify specific parts of image to be linked to another document.
Hotspots	Specific areas of the image can be selected and made into a link.
Image Rollovers	Is a procedure for swapping out one image source for another when the mouse moves over the image.
UNIT 5	LESSON 4

templates	Special Dreamweaver files that define the structure and styles for all the web pages of a site.
editable region	you will only be able to edit the parts of the page that you have marked as an
UNIT 5	LESSON 5
Spry widget	Combines HTML, CSS and JavaScript code to create an interactive layout consisting of drop-down menus, collapsible panels, tabbed panels, and an accordion panel feature.
UNIT 5	LESSON 6
New Style Rule	Button to have Dreamweaver write the style rules for you by entering your specifications for the style.
UNIT 6	LESSON 1
program	Is a sequence of instruction that makes a computer perform a desired task.
Binary Code	Computers only know two basic instructions, 1 (indicating on), and 0 (indicating off). The entire machine code only consists of these 1s and 0s.
Assembly	With this new language, the programmer could write their instructions in a more English-like code.
Compiler	The code written by the programmer is then translated into a binary language that the computer can understand, or sometimes referred to as object code, using a program
high-level languages	Some computer languages, including JavaScript and PHP, are very close to the English language.
interpreter	In our case your browser, to read each line of code and execute it as it is read.
server-side	Scripting languages which are interpreted on a web server.
client-side scripting languages	Which is interpreted within the browser.
algorithm	A step-by-step procedure to how a particular problem should be solved.
top-down design	The process of determining the broad major tasks to solve a problem
pseudo code	Which is not code-like style of writing that can easily be translated into programming code.
syntax errors	Errors in the code that prevent the program from running should be corrected.
logic errors	Errors that cause the program to produce incorrect results should be fixed.
UNIT 6	LESSON 2
form	To collect data from a web page
script	Web based program, for processing.
action	Attribute defines the URL of the script where the form data should be sent.
method	There are two possible method values, get and post.
<input>	Creates the input text field
type	Attribute specifies which type of input field should be created on the form.
text	The text input element will allow for a single line of text, such as a name or address, to be entered. The <i>text</i> field is the default input type.

password	The password field is similar to the text field, except it does not display the information being entered. The information entered into the password field is in no way encrypted. It is only masked so if someone is watching over your shoulder cannot see what you're typing.
radio	The radio input elements, called Radio Buttons create a small circle that can be selected. Radio buttons are used with a list and the user is asked to select a single item in a list of choices. All the radio buttons in the group should contain the same name, yet have different values. The user will select which value should be sent to the script.
checkbox	The checkbox will allow the user to select whether or not a particular choice is true or false. If the user selects the item a true value will be sent to the script, otherwise a false value will be sent to the script.
button	The button will allow for a function or method to be executed. An <i>event handler</i> must be added as an attribute for the button to have any functionality.
submit	The submit button will send all the data entered into the form to the script specified by the <i>action</i> attribute in the opening FORM tag.
reset	The reset button will clear all the data in the form.
hidden	The hidden field will allow for extra information to be sent to a script. The user does not enter data into a hidden field. The hidden field will not show up on the screen, but is processed when the form is submitted.
UNIT 6	LESSON 3
statement	Is line of code that performs a specific action.
object oriented programming	JavaScript is based on the a programming concept
properties	Sometimes called data members, which defines information about an object, and methods.
methods	Are the actions that the object can perform. For example, a car may be red which is property, but it can drive forward a given number of pixels which is a method of the car.
parameters	Used to provide the method with any information it might need to do its job.
document.write('text');	Writes text content to the document.
document.write(property);	Writes the value of a property to the document.
document.location	Returns or modifies the location of a document.
document.body.style.backgroundColor	Returns or modifies the background color of the document.
document.body.style.color	Returns or modifies the text color of the document.
document.lastModified	Returns the date document was last modified
document.referrer	Returns the URL the document was referred from.
document.title	Returns the title of the document
document.URL	Returns the URL of the current document. Does the same things as document.location.
document.domain	Returns the name of the current domain the document resides on.
UNIT 6	LESSON 4
reserved words	These are words used by JavaScript that have a predefined meaning.

Addition	+ Serves two purposes. Used to add two numeric values together. Can also be used to concatenate string (put two strings together).
Subtraction	- Subtracts numeric values.
Multiplication	* Multiplies numeric values
Division	/ Divides numeric values. If the divisor and dividend are both integers (whole numbers), the quotient will be a whole number with the decimal cut off.
Modulus	% Divides two integers and only gives the remainder as the result. For example $3\%7$ would result in 1. The modulus operator does not work with real numbers.
Event Handlers	Are attributes that are added to standard HTML tags that can be used to call, or execute, JavaScript functions when a specific even occurs.
onabort	Executes code when the user aborts loading an image.
onclick	Executes code when the user clicks on a regular, radio, or submit buttons.
onmouseover	Executes code when the mouse is over a particular object, area, or link.
onmouseout	Executes code when the mouse leaves a particular object, area, or link.
onload	Executes code when a window or image finishes loading.
onabort	Executes code when the user aborts loading an image.
onblur	Executes code when the window loses focus.
onchange	Executes code when input focus exits the field after the user modifies text.
onerror	Executes code when an error occurs while a document or image is being loaded.
onfocus	Executes code when a field comes in focus.
onselect	Executes code when the user selects some of the text within a text area field.
onsubmit	Executes code when the form is submitted.
onunload	Executes code when a document is exited.
window.alert()	Displays a message in an alert window.
window.confirm()	Prompts the visitor to confirm a statement with Yes or No.
window.prompt()	Prompts the visitor to enter some information.
UNIT 6	LESSON 5
abs(x)	Returns the absolute value of a number
acos(x)	Returns the arccosine of a number
asin(x)	Returns the arcsine of a number
atan(x)	Returns the arctangent of x as a numeric value between $-\pi/2$ and $\pi/2$ radians
atan2(y,x)	Returns the angle theta of an (x,y) point as a numeric value between $-\pi$ and π radians
ceil(x)	Returns the value of a number rounded upwards to the nearest integer
cos(x)	Returns the cosine of a number
exp(x)	Returns the value of E^x
floor(x)	Returns the value of a number rounded downwards to the nearest integer
log(x)	Returns the natural logarithm (base E) of a number
max(x,y)	Returns the number with the highest value of x and y
min(x,y)	Returns the number with the lowest value of x and y

pow(x,y)	Returns the value of x to the power of y
random()	Returns a random number between 0 and 1
round(x)	Rounds a number to the nearest integer
sin(x)	Returns the sine of a number
sqrt(x)	Returns the square root of a number
tan(x)	Returns the tangent of an angle
toSource()	Represents the source code of an object
valueOf()	Returns the primitive value of a Math object
UNIT 6	LESSON 6
alert()	Displays an alert box with a message and an OK button
blur()	The window loses focus
close()	Closes the window
confirm()	Displays a confirm box with a message, an OK button, and a Cancel button
focus()	Sets the focus to a specified window
moveTo()	Moves the window to a specified position
open()	Opens a new window
print()	Prints the window's document
prompt()	Displays a prompt box with a message and an input field
toolbar	Creates the standard browser toolbar buttons.
directories	Creates the standard browser directory buttons.
menubar	Create the menu at the top of the window.
scrollbars	Creates the horizontal and vertical scroll bars when the document is larger than the dimensions of the window.
resizable	Allows the window to be resized.
copyhistory	Copies the history from the parent window to the new window.
width	Specifies the width of the window in pixels
height	Specifies the height of the window in pixels
defaultStatus	Sets or retrieves the default message in the status bar
document	Returns the document object
history	Returns an object that gives you information about previously visited URLs
innerHeight	Returns the height of the windows content area.
innerWidth	Returns the width of the windows content area.
length	Returns the number of frames in the window
location	Sets or returns the location of the file displayed in the window.
name	Sets or retrieves the name of the window
screenX	Returns the x coordinate of the window.
screenY	Returns the y coordinate of the window.
screenLeft	Returns the coordinates of the left edge of the content area inside the window.
screenTop	Returns the coordinates of the top edge of the content area inside the window.
status	Sets or retrieves the message in the status bar

top	Return the topmost window object, its parent
UNIT 6	LESSON 7
data structure	A method of storing and organizing data so it can be used more efficiently.
array	Is a grouping or block of related values.
elements	Which store each of the array's values.
initializer list	Is a list of the initial values to be assigned to an array.
index number	Identifies a specific 3elements in the array.
dynamic array	Arrays that allow for additional elements after to be added after the array has been created
UNIT 6	LESSON 8
control structures	All programs can be written in terms of only three control structures, namely the sequential structure, repetition structure, and the selection structure.
comparison operators	In JavaScript are used in expressions that result in true or false.
UNIT 6	LESSON 9
canvas	The HTML5 includes various JavaScript graphic methods that can be used to paint directly onto a designated area of your web page
fillRect(x, y, w, h) method	The x and y represent the x,y coordinate of the top left corner of the rectangle. The w and h define the width and height of the rectangle.
path	Allow you to draw custom and even complex shapes.
closePath()	Method will indicate the last point of the path and connect the beginning and ending points of the path. Once you define the path, you can then stroke it or fill it.
stroke()	To create a stroke color
fill()	To create a fill color
arc()	To create curved paths
Math.PI	Access pi value
UNIT 7	LESSON 1
Open Source	Meaning that web designers have the freedom to run the program for any purpose, to study and modify the program, and to redistribute copies of the original or modified versions of the program to other parties.
MySQL	Database servers
PHP	Hypertext Preprocessor
Apache Web Server	Is the most popular and one of the most powerful web server applications available.
PHPMyAdmin	Browser based database client that will allow you to easily manage your MySQL Databases and tables.
UNIT 7	LESSON 2
variable	The computer's memory is divided into conceptual blocks that can be named and store information.
string	Variable stores textual data such as individual characters.
integer	Are whole numbers
double	Floating types or real numbers contain a decimal point.
UNIT 7	LESSON 3

function	Is a named block of code that performs a specific task.
return	Command will send a value back to the point where the function was called.
scope	Where a variable can be used in your script
UNIT 7	LESSON 4
Superglobal	Variables are special variables that can receive values from other pages in your website, or from the browser, or server.
POST	Superglobal variable generally receives its values from a web form that has been submitted.
GET	Variables can be initialized by a value passed through the URL of a link.
UNIT 7	LESSON 5
for	Loop will allow you to execute a block of code a given number of times.
while	Loop will continuously repeat the execution of a block of code so long as its condition evaluates to true.
do/while	Loop is almost like the <i>while</i> except that it is
UNIT 7	LESSON 6
fopen()	Function will open a file on the server for reading and/or writing. The fopen() function must receive two values, the name of the file to open and the mode indicating the action to be performed on the file, specifically whether the file is being opened for reading, writing, or both.
r	Read only. File pointer at the start of the file.
r+	Read/Write. File pointer at the start of the file
w	Write only. Truncates the file (overwriting it). If the file doesn't exist, fopen() will try to create it.
w+	Read/Write. Truncates the file (overwriting it). If the files doesn't exists, fopen() will try to create it.
a	Append. File pointer at the end of the file. If the file doesn't exist, fopen() will try to create it.
a+	Read/Append. File pointer at the end of the file. If the file doesn't exist, fopen() will try to create the file.
x	Create and open for write only. File pointer at the beginning of the file. If the file already exists, the fopen() function will generate an error.
x+	Create and open for read/write. File pointer at the beginning of the file. If the file already exists, the fopen() function will generate an error. If the file does not exist, try to create it.
ftouch('file.txt')	Attempts to create a file if it does not exist.
unlink('file.txt')	Deletes a file
fopen('file.txt', 'MODE')	Opens a file for reading and writing and creates a file pointer to the file.
fclose(\$fp)	Closes a file and removes the file pointer.
fwrite(\$ftp, \$info)	Writes data to a file.
filesize('file.txt')	Returns the size of a file</td>
fread(\$fp, \$size)	Reads a specific amount of information from a file.
feof(\$fp)	Returns true if the file pointer is at the end of the file.
fgets(\$fp)	Returns one line from a file until the file pointer reaches the /n new line character.
readfile('file.txt')	Outputs an entire file to the browser.

file('file.txt')	Returns the file contents to an array with each element of the array containing one line of the file.
file_exists('file.txt')	Returns true if the specified file exists.
UNIT 7	LESSON 7
database	Is a collection of data organized into tables. The table diagram below could be a simple database table.
fields	Which is a particular category of information in the table. Each field must be named.
records	Rows in databases
primary key	The ID numbers for each record are different for each record making it easy to identify a specific record by its ID number.
UNIT 7	LESSON 8
string	Is actually an array of characters.
String Concatenation	Is the process of combining, or putting more than one string together.
trim()	Removes white space at beginning and end of a string.
ltrim()	Removes white space at the beginning of a string.
rtrim()	Removes white space at the end of a string.
htmlspecialchars()	Escapes all HTML entities.
nl2br()	Inserts a tag before each new line character in a string.
strtoupper()	Converts a string to uppercase.
strtolower()	Converts a string to lowercase.
ucfirst()	Converts the first character of a string to uppercase.
ucwords()	Converts the first character of each word in a string to uppercase.
explode()	Splits a string into an array on a specified character or group of characters.
implode()	Converts an array into a string, placing a specified character or group of characters between each array element.
join()	Same as implode()
UNIT 7	LESSON 9
cookie	Is a small file created by a PHP function that is stored on the visitor's computer which is often used to identify a visitor to a web page and information about the visitor such as how many times they have visited the page.
name	REQUIRED - The name of the cookie. The name should be alphanumeric and not contain spaces.
value	REQUIRED - The value stored in the cookie.
expiration	OPTIONAL - Tells the web page how long a cookie is valid in milliseconds.
path	OPTIONAL - Restricts the availability of cookies. For example, cookies with a path attribute of '/' will be both accessible to users.ieclass.com/brent and users.ieclass.com/thomas. However, a cookie with a path attribute of '/brent' will only be made available to users.ieclass.com/brent, not users.ieclass.com/thomas.

domain	OPTIONAL - Domain name to which the cookie will be set. For example, if the value is 'www.ieclass.com', the web page will retrieve the cookie information every time the user visits www.ieclass.com For the cookie to be accessible within all sub domains of www.ieclass.com (such as news.ieclass.com, users.ieclass.com), a leading period should be used as in '.ieclass.com'.
secure	OPTIONAL - Generally should be set to 0 for normal web pages. For web pages requiring higher security such as shopping carts, the value should be set to 1.