

# WEB PROGRAMMING AND DESIGN

## 2006

### COURSE DESCRIPTION:

This course will enable students to understand fundamental Web design principles, to gain knowledge of Web creation skills, and to become an expert at evaluating Web sites, for the purpose of becoming an effective Web site creator.

Topics addressed by this course include Web basics, computer basics, online basics, HTML basics, Planning a Web site, Developing content and layout, selecting color and design, using Web graphics, adding multimedia to a web site, adding interactivity to a web site, project planning, developing a web site, adding web site functionality, publishing a web site, maintaining a web site, HTML tables and frames, HTML scripting and interactivity, and an introduction to the JAVA programming language.

### CORE CURRICULUM CONTENT STANDARDS:

- STANDARD 4.1** (NUMBER AND NUMERICAL OPERATIONS) ALL STUDENTS WILL DEVELOP NUMBER SENSE AND WILL PERFORM STANDARD NUMERICAL OPERATIONS AND ESTIMATIONS ON ALL TYPES OF NUMBERS IN A VARIETY OF WAYS.
- STANDARD 4.2** (GEOMETRY AND MEASUREMENT) ALL STUDENTS WILL DEVELOP SPATIAL SENSE AND THE ABILITY TO USE GEOMETRIC PROPERTIES, RELATIONSHIPS, AND MEASUREMENT TO MODEL, DESCRIBE AND ANALYZE PHENOMENA.
- STANDARD 4.3** (PATTERNS AND ALGEBRA) ALL STUDENTS WILL REPRESENT AND ANALYZE RELATIONSHIPS AMONG VARIABLE QUANTITIES AND SOLVE PROBLEMS INVOLVING PATTERNS, FUNCTIONS, AND ALGEBRAIC CONCEPTS AND PROCESSES.
- STANDARD 4.4** (DATA ANALYSIS, PROBABILITY, AND DISCRETE MATHEMATICS) ALL STUDENTS WILL DEVELOP AN UNDERSTANDING OF THE CONCEPTS AND TECHNIQUES OF DATA ANALYSIS, PROBABILITY, AND DISCRETE MATHEMATICS, AND WILL USE THEM TO MODEL SITUATIONS, SOLVE PROBLEMS, AND ANALYZE AND DRAW APPROPRIATE INFERENCES FROM DATA.
- STANDARD 4.5** (MATHEMATICAL PROCESSES) ALL STUDENTS WILL USE MATHEMATICAL PROCESSES OF PROBLEM SOLVING, COMMUNICATION, CONNECTIONS, REASONING, REPRESENTATIONS, AND TECHNOLOGY TO SOLVE PROBLEMS AND COMMUNICATE MATHEMATICAL IDEAS.

## **CUMULATIVE PROGRESS INDICATORS:**

### **STANDARD 4.1 - MATHEMATICS**

Building upon knowledge and skills gained in preceding grades, by the end of Grade 12, students will:

#### **A. Number Sense**

1. Extend understanding of the number system to all real numbers.
2. Compare and order rational and irrational numbers.
3. Develop conjectures and informal proofs of properties of number systems and sets of numbers.

#### **B. Numerical Operations**

1. Extend understanding and use of operations to real numbers and algebraic procedures.
2. Develop, apply, and explain methods for solving problems involving rational and negative exponents.
3. Perform operations on matrices.
  - Addition and subtraction
  - Scalar multiplication
4. Understand and apply the laws of exponents to simplify expressions involving numbers raised to powers.

#### **C. Estimation**

1. Recognize the limitations of estimation, assess the amount of error resulting from estimation, and determine whether the error is within acceptable tolerance limits.

### **STANDARD 4.2 - MATHEMATICS**

Building upon knowledge and skills gained in preceding grades, by the end of Grade 12, students will:

#### **A. Geometric Properties**

1. Use geometric models to represent real-world situations and objects and to solve problems using those models (e.g., use Pythagorean Theorem to decide whether an object can fit through a doorway).
2. Draw perspective views of 3D objects on isometric dot paper, given 2D representations (e.g., nets or projective views).
3. Apply the properties of geometric shapes.
  - Parallel lines . transversal, alternate interior angles, corresponding angles
  - Triangles
    - a. Conditions for congruence
    - b. Segment joining midpoints of two sides is parallel to and half the length of the third side
    - c. Triangle Inequality
  - Minimal conditions for a shape to be a special quadrilateral
  - Circles . arcs, central and inscribed angles, chords, tangents
  - Self-similarity
4. Use reasoning and some form of proof to verify or refute conjectures and theorems.
  - Verification or refutation of proposed proofs
  - Simple proofs involving congruent triangles
  - Counterexamples to incorrect conjectures

## **B. Transforming Shapes**

1. Determine, describe, and draw the effect of a transformation, or a sequence of transformations, on a geometric or algebraic object, and, conversely, determine whether and how one object can be transformed to another by a transformation or a sequence of transformations.
2. Recognize three-dimensional figures obtained through transformations of two-dimensional figures (e.g., cone as rotating an isosceles triangle about an altitude), using software as an aid to visualization.
3. Determine whether two or more given shapes can be used to generate a tessellation.
4. Generate and analyze iterative geometric patterns.
  - Fractals (e.g., Sierpinski's Triangle)
  - Patterns in areas and perimeters of self-similar figures
  - Outcome of extending iterative process indefinitely

## **C. Coordinate Geometry**

1. Use coordinate geometry to represent and verify properties of lines.
  - Distance between two points
  - Midpoint and slope of a line segment
  - Finding the intersection of two lines
  - Lines with the same slope are parallel
  - Lines that are perpendicular have slopes whose product is  $-1$
2. Show position and represent motion in the coordinate plane using vectors.
  - Addition and subtraction of vectors

## **D. Units of Measurement**

1. Understand and use the concept of significant digits.
2. Choose appropriate tools and techniques to achieve the specified degree of precision and error needed in a situation.
  - Degree of accuracy of a given measurement tool
  - Finding the interval in which a computed measure (e.g., area or volume) lies, given the degree of precision of linear measurements

## **E. Measuring Geometric Objects**

1. Use techniques of indirect measurement to represent and solve problems.
  - Similar triangles
  - Pythagorean theorem
  - Right triangle trigonometry (sine, cosine, tangent)
2. Use a variety of strategies to determine perimeter and area of plane figures and surface area and volume of 3D figures.
  - Approximation of area using grids of different sizes
  - Finding which shape has minimal (or maximal) area, perimeter, volume, or surface area under given conditions using graphing calculators, dynamic geometric software, and/or spreadsheets
  - Estimation of area, perimeter, volume, and surface area

## **STANDARD 4.3 - MATHEMATICS**

Building upon knowledge and skills gained in preceding grades, by the end of Grade 12, students will:

### **A. Patterns**

1. Use models and algebraic formulas to represent and analyze sequences and series.
  - Explicit formulas for  $n^{\text{th}}$  terms
  - Sums of finite arithmetic series

- Sums of finite and infinite geometric series
2. Develop an informal notion of limit.
  3. Use inductive reasoning to form generalizations.

## **B. Functions and Relationships**

1. Understand relations and functions and select, convert flexibly among, and use various representations for them, including equations or inequalities, tables, and graphs.
2. Analyze and explain the general properties and behavior of functions of one variable, using appropriate graphing technologies.
  - Slope of a line or curve
  - Domain and range
  - Intercepts
  - Continuity
  - Maximum/minimum
  - Estimating roots of equations
  - Intersecting points as solutions of systems of equations
  - Rates of change
3. Understand and perform transformations on commonly-used functions.
  - Translations, reflections, dilations
  - Effects on linear and quadratic graphs of parameter changes in equations
  - Using graphing calculators or computers for more complex functions
4. Understand and compare the properties of classes of functions, including exponential, polynomial, rational, and trigonometric functions.
  - Linear vs. non-linear
  - Symmetry
  - Increasing/decreasing on an interval

## **C. Modeling**

1. Use functions to model real-world phenomena and solve problems that involve varying quantities.
  - Linear, quadratic, exponential, periodic (sine and cosine), and step functions (e.g., price of mailing a first-class letter over the past 200 years)
  - Direct and inverse variation
  - Absolute value
  - Expressions, equations and inequalities
  - Same function can model variety of phenomena
  - Growth/decay and change in the natural world
  - Applications in mathematics, biology, and economics (including compound interest)
2. Analyze and describe how a change in an independent variable leads to change in a dependent one.
3. Convert recursive formulas to linear or exponential functions (e.g., Tower of Hanoi and doubling).

## **D. Procedures**

1. Evaluate and simplify expressions.
  - Add and subtract polynomials
  - Multiply a polynomial by a monomial or binomial
  - Divide a polynomial by a monomial
2. Select and use appropriate methods to solve equations and inequalities.
  - Linear equations. algebraically
  - Quadratic equations . factoring (when the coefficient of  $x^2$  is 1) and using the quadratic formula

- All types of equations using graphing, computer, and graphing calculator techniques
3. Judge the meaning, utility, and reasonableness of the results of symbol manipulations, including those carried out by technology.

## **STANDARD 4.4 – MATHEMATICS**

Building upon knowledge and skills gained in preceding grades, by the end of Grade 12, students will:

### **A. Data Analysis**

1. Use surveys and sampling techniques to generate data and draw conclusions about large groups.
  - Advantages/disadvantages of sample selection methods (e.g., convenience sampling, responses to survey, random sampling)
2. Evaluate the use of data in real-world contexts.
  - Accuracy and reasonableness of conclusions drawn
  - Bias in conclusions drawn (e.g., influence of how data is displayed)
  - Statistical claims based on sampling
3. Design a statistical experiment, conduct the experiment, and interpret and communicate the outcome.
4. Estimate or determine lines of best fit (or curves of best fit if appropriate) with technology, and use them to interpolate within the range of the data.
5. Analyze data using technology, and use statistical terminology to describe conclusions.
  - Measures of dispersion: variance, standard deviation, outliers
  - Correlation coefficient
  - Normal distribution (e.g., approximately 95% of the sample lies between two standard deviations on either side of the mean)

### **B. Probability**

1. Calculate the expected value of a probability-based game, given the probabilities and payoffs of the various outcomes, and determine whether the game is fair.
2. Use concepts and formulas of area to calculate geometric probabilities.
3. Model situations involving probability with simulations (using spinners, dice, calculators and computers) and theoretical models, and solve problems using these models.
4. Determine probabilities in complex situations.
  - Conditional events
  - Complementary events
  - Dependent and independent events
5. Estimate probabilities and make predictions based on experimental and theoretical probabilities.
6. Understand and use the law of large numbers. (that experimental results tend to approach theoretical probabilities after a large number of trials).

### **C. Discrete Mathematics. Systematic Listing and Counting**

1. Calculate combinations with replacement (e.g., the number of possible ways of tossing a coin 5 times and getting 3 heads) and without replacement (e.g., number of possible delegations of 3 out of 23 students).
2. Apply the multiplication rule of counting in complex situations, recognize the difference between situations with replacement and without replacement, and recognize the difference between ordered and unordered counting situations.
3. Justify solutions to counting problems.
4. Recognize and explain relationships involving combinations and Pascal's Triangle, and apply those methods to situations involving probability.

#### **D. Discrete Mathematics. Vertex-Edge Graphs and Algorithms**

1. Use vertex-edge graphs and algorithmic thinking to represent and solve practical problems.
  - Circuits that include every edge in a graph
  - Circuits that include every vertex in a graph
  - Scheduling problems (e.g., when project meetings should be scheduled to avoid conflicts) using graph coloring
  - Applications to science (e.g., who-eats-whom graphs, genetic trees, molecular structures)
2. Explore strategies for making fair decisions.
  - Combining individual preferences into a group decision (e.g., determining winner of an election or selection process)
  - Determining how many Student Council representatives each class (9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> grade) gets when the classes have unequal sizes (apportionment)

#### **STANDARD 4.5 – MATHEMATICS**

At each grade level, with respect to content appropriate for that grade level, students will:

##### **A. Problem Solving**

1. Learn mathematics through problem solving, inquiry, and discovery.
2. Solve problems that arise in mathematics and in other contexts (cf. workplace readiness standard 8.3).
  - Open-ended problems
  - Non-routine problems
  - Problems with multiple solutions
  - Problems that can be solved in several ways
3. Select and apply a variety of appropriate problem-solving strategies (e.g., .try a simpler problem. or .make a diagram.) to solve problems.
4. Pose problems of various types and levels of difficulty.
5. Monitor their progress and reflect on the process of their problem solving activity.

##### **B. Communication**

1. Use communication to organize and clarify their mathematical thinking.
  - Reading and writing
  - Discussion, listening, and questioning
2. Communicate their mathematical thinking coherently and clearly to peers, teachers, and others, both orally and in writing.
3. Analyze and evaluate the mathematical thinking and strategies of others.
4. Use the language of mathematics to express mathematical ideas precisely.

##### **C. Connections**

1. Recognize recurring themes across mathematical domains (e.g., patterns in number, algebra, and geometry).
2. Use connections among mathematical ideas to explain concepts (e.g., two linear equations have a unique solution because the lines they represent intersect at a single point).
3. Recognize that mathematics is used in a variety of contexts outside of mathematics.
4. Apply mathematics in practical situations and in other disciplines.
5. Trace the development of mathematical concepts over time and across cultures (cf. world languages and social studies standards).
6. Understand how mathematical ideas interconnect and build on one another to produce a coherent whole.

## **D. Reasoning**

1. Recognize that mathematical facts, procedures, and claims must be justified.
2. Use reasoning to support their mathematical conclusions and problem solutions.
3. Select and use various types of reasoning and methods of proof.
4. Rely on reasoning, rather than answer keys, teachers, or peers, to check the correctness of their problem solutions.
5. Make and investigate mathematical conjectures.
  - Counterexamples as a means of disproving conjectures
  - Verifying conjectures using informal reasoning or proofs.
6. Evaluate examples of mathematical reasoning and determine whether they are valid.

## **E. Representations**

1. Create and use representations to organize, record, and communicate mathematical ideas.
  - Concrete representations (e.g., base-ten blocks or algebra tiles)
  - Pictorial representations (e.g., diagrams, charts, or tables)
  - Symbolic representations (e.g., a formula)
  - Graphical representations (e.g., a line graph)
2. Select, apply, and translate among mathematical representations to solve problems.
3. Use representations to model and interpret physical, social, and mathematical phenomena.

## **F. Technology**

1. Use technology to gather, analyze, and communicate mathematical information.
2. Use computer spreadsheets, software, and graphing utilities to organize and display quantitative information.
3. Use graphing calculators and computer software to investigate properties of functions and their graphs.
4. Use calculators as problem-solving tools (e.g., to explore patterns, to validate solutions).
5. Use computer software to make and verify conjectures about geometric objects.
6. Use computer-based laboratory technology for mathematical applications in the sciences.

## **SUGGESTED ACTIVITIES THAT ADDRESS THESE STANDARDS MAY INCLUDE BUT ARE NOT LIMITED TO:**

### **4.1**

Extending understanding of real number system to include rational and irrational numbers.

Evaluating expressions containing powers, roots, and factorials.

Applying absolute values, exponents, and approximations in real-life situations.

Translating numbers between standard notation and scientific notation.

Applying reflexive, transitive, and symmetric properties.

Simplifying expressions using the associative and commutative properties of arithmetic operations.

Applying primes, factors, and multiples in real-life situations.

Identifying equivalent and nonequivalent forms of fractions, decimals, and percents.

Demonstrating an understanding of the relationships between ratios, proportions, and percents.

### **4.2**

Describing and giving examples of geometric and algebraic terms.

Applying properties, definitions, and relationships to identify and classify two-dimensional shapes.

Applying properties, definitions, and relationships to identify and classify three-dimensional shapes.

Identifying the relationships between geometric figures and relate them to algebraic concepts.

Using the rectangular coordinate system to determine the effects on figures of transformations.  
Developing and applying strategies for determining area and surface area.  
Using vectors to show the position of an object.  
Developing and applying strategies for determining volume.  
Solving problems by applying the Pythagorean Theorem.

#### 4.3

Constructing, recognizing and extending patterns.  
Evaluating algebraic expressions using independent and dependent variables.  
Applying algebraic operations to solve inequalities that reflect real- life situations.  
Applying algebraic operations to solve linear equations that reflect real- life situations.  
Using domain and range of relations and functions to solve problems.  
Finding and graphing the slope of a line.  
Applying basic transformations to graphs of function.

#### 4.4

Determining the probability of a simple and compound event.  
Determining measures of central tendencies, range, rank, and frequency.  
Selecting appropriate graphical representations of statistical measure.  
Determine the number of possible combinations and outcomes by using tree diagrams.  
Representing information using networks.  
Analyzing and applying iterative processes to solve problems. (Fractals)  
Analyzing and applying recursive processes to solve problems. (Compound interest)

#### 4.5

Organizing information using illustrations, charts, or graphs, discovering patterns and arranging data.  
Calculating with and using manipulative.  
Estimating values.  
Substituting simpler numbers.  
Translating sentences into equations.  
Applying formulas, definitions, and rules.  
Working in reverse.  
Constructing proportions or ratios.

## **UNIT OBJECTIVES**

### **UNIT –WEB BASICS–**

#### **Classifying Web Sites, Identifying Hyperlinks, Identifying Necessary Career Skills, Viewing Web Pages.**

#### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to Web basics.
  - Internet, World Wide Web, file, web browser, web page, home page, text, graphics, multimedia, audio, animation, video, hyperlink, interaction design, information design, presentation design, Web author, Web designer, Web developer, Webmaster, interface, task pane, folder list and navigation pane.
- Compare the Internet and the Web.
- Identify Web browser components.
- Compare Web sites and Web pages.
- Describe types of Web sites.
- Identify parts of a Web page.
- Summarize the importance of hyperlinks.
- Use a Web browser.
- Describe Web site development steps.
- Identify the three categories of Web site design.
- Discuss Web design careers.
- Identify parts of the FrontPage interface.
- Use FrontPage to view Web Pages.

## **INSTRUCTIONAL STRATEGIES:**

### **WEB BASICS**

#### **Traditional Strategies:**

- Lecture
- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

#### **Alternative Assessment:**

- Cooperative Learning
- Students select a Web development career and research as to what educational background is needed.
- Students evaluate several Web sites and make a comparison table that identifies each site's category, purpose, audience and key elements.

## **EVALUATION/ASSESSMENT OF STUDENTS:**

### **WEB BASICS**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above

- Web Assignment:
  - Example:
    - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 1**
    - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 1**

## **UNIT OBJECTIVES**

### **UNIT –COMPUTER BASICS–**

#### **Classifying Computer Hardware, Identifying Computer Software, Understanding Computer Networks, Creating a One-Page Web Site.**

#### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to computer basics.
  - Hardware, software, central processing unit (CPU), random-access memory, keyboard, mouse, monitor, printer, basic input/output system (BIOS), operating system (OS), graphical user interface (GUI), application software, multitasking, folder, subfolder, template, placeholder text, theme, and font.
- Identify computer hardware.
- Describe processing components.
- Compare and contrast computer input and output devices.
- Compare and contrast computer storage devices.
- Identify and describe operating system software.
- Identify and describe application software.
- Summarize cross-platform issues.
- Identify types of networks.
- Examine types of network connections.
- Identify network hardware and software.
- Use a web site template.
- Save a Web site.
- Apply a theme.
- Format text.
- Insert a graphic.

## **INSTRUCTIONAL STRATEGIES:**

### **COMPUTER BASICS**

#### **Traditional Strategies:**

- Lecture
- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

#### **Alternative Assessment:**

- Cooperative Learning
- Students create a list of input, output and storage devices they would include in a computer system for Web designers giving reasons for each selection.
- Students make a chart showing how computers affect the environment discussing each example's importance, its environmental impact, and possible solutions.

- Students research the World Wide Web Consortium (W3C) to learn how to become a member and what membership in the W3C requires.
- Students use database or spreadsheet software to create two separate inventory sheets containing information on computer hardware and computer software.

## **EVALUATION/ASSESSMENT OF STUDENTS: COMPUTER BASICS**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:
      - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 2**
      - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 2**

## **UNIT OBJECTIVES**

### **UNIT –ONLINE BASICS–**

#### **The Internet, The Web, Web Site Development Tools, Social, Ethical and Legal Issues.**

#### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to Online basics.
  - Internet service provider (ISP), Transmission Control Protocol/Internet Protocol (TCP/IP), Hypertext Transfer Protocol (HTTP), File Transfer Protocol (FTP), intranet, extranet, uniform resource locator (URL), domain name, domain name extension, accessibility option, search engine, Web directory, keyword, Boolean search, key editor, Web site development application, WYSIWYG, Web hosting service, external hyperlink, Internet Use Agreement, Netiquette, commercial software, shareware, freeware and copyright.
- Describe Internet hardware and software.
- Explain Internet protocols.
- Compare intranets, extranets and the Internet.
- Identify URL components.
- Compare Web browsers.
- Use search engines.
- Describe Web development applications and hardware.
- Describe connectivity components.
- Insert external hyperlinks.
- Explain how to download files responsibly.
- Summarize copyright and fair use laws.

- Cite digital sources.
- Evaluate Web site contents.

## **INSTRUCTIONAL STRATEGIES:**

### **ONLINE BASICS**

#### **Traditional Strategies:**

- Lecture
- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

#### **Alternative Assessment:**

- Cooperative Learning
- Students list six types of Internet communications identifying which of these methods are available inside their classroom; students use one or more of these methods to communicate with one another.
- Students use three search engines to conduct a keyword search for the population of Hopatcong and then evaluate which of the three helped them locate the information the quickest by writing a summary of their findings.
- Students write a brief essay that compares and contrasts the content requirements of different types of Web sites using examples from at least four different sites.
- Students pretend they are doing a research paper on Antarctica. They are to locate three Web sites they would use as resources and write the citations for each site using established methods.

## **EVALUATION/ASSESSMENT OF STUDENTS:**

### **ONLINE BASICS**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:
      - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 3**
      - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 3**

## **UNIT OBJECTIVES**

### **UNIT – HTML BASICS –**

**Creating Folders to Organize a Site, Creating and Saving an HTML Document, Adding color and Formatting Text using HTML, Creating an Unordered List using HTML,**

**Viewing HTML in a Browser, Inserting an Image using HTML, Inserting Absolute Links using HTML, Testing an HTML Document, Creating and Formatting a Page in FrontPage, Adding Headings and Unordered Lists in FrontPage, Inserting a Graphic and Links using FrontPage, Testing a Web Page in FrontPage.**

**The students will be able to:**

- Understand basic terminology of Web Programming and Design related to HTML basics.
  - Hypertext Markup Language (HTML), HTML tag, starting tag, ending tag, nested tag, empty tag, source code, file name extension, attribute, ordered list, unordered list, text link, graphic link, anchor, absolute link, relative link, debugging, testing, border, and embedded file.
- Format HTML tags.
- Identify HTML guidelines.
- Organize Web site files and folders.
- Use a text editor.
- Use HTML tags and attributes.
- Create lists using HTML.
- View an HTML document.
- Insert images using HTML.
- Insert links using HTML.
- Debug and test a Web page.
- Re-create an existing HTML document in FrontPage.
- Test a Web page in FrontPage.

**INSTRUCTIONAL STRATEGIES:**

**HTML BASICS**

**Traditional Strategies:**

- Lecture
- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

**Alternative Assessment:**

- Cooperative Learning
- Students research an emerging Web language, compare and contrast it with HTML, and state why new markup languages are constantly being developed.
- Students use Notepad to create an ordered list of HTML attributes that can be displayed in a Web browser, print the Notepad document, and then print the page from a browser, comparing and contrasting the two results.
- Students write the HTML code to insert an image named frame.gif into a Web page, store the image in the site's images folder, and center and include an alternate text message to display.

**EVALUATION/ASSESSMENT OF STUDENTS:**

**HTML BASICS**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework

- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:
      - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 4**
      - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 4**

## UNIT OBJECTIVES

### UNIT – PLANNING A WEB SITE –

#### **Creating a Mission Statement, Navigation Schemes, Storyboarding Your Site**

#### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to planning a Web site.
  - Mission statement, target audience, navigation scheme, hierarchal navigation scheme, top-level page, parent-child relationship, peer-to-peer relationship, linear navigation scheme, random-access navigation scheme, storyboard, page name, file name.
- Determine the purpose of their Web sites.
- Determine the target audience for their Web sites.
- Write a mission statement.
- Describe types of navigation schemes.
- State the advantages and disadvantages of each scheme.
- Choose the appropriate navigation scheme for a particular site.
- Discuss the advantages of storyboarding a site.
- Draw the navigation structure of a site.
- Create sketches of a site's pages.

## INSTRUCTIONAL STRATEGIES:

### PLANNING A WEB SITE

#### **Traditional Strategies:**

- Lecture
- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

#### **Alternative Assessment:**

- Cooperative Learning
- Students write a mission statement for a Web site they would like to develop for a favorite hobby. A description of the purpose and target audience of the Web site must be included.
- Students create a hierarchal chart that places the titles of seven books they have read into a hierarchal structure.

## EVALUATION/ASSESSMENT OF STUDENTS:

## PLANNING A WEB SITE

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:
      - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 5**
      - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 5**

## UNIT OBJECTIVES

### UNIT – DEVELOPING CONTENT AND LAYOUT –

#### **Creating Web Site Content, Placing Items on a Page, Creating a Page Template, Enhancing the Template.**

#### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to developing content and layout.
  - Content, inverted pyramid, pixel, screen resolution, safe area, white space, proximity, logo, title graphic, table, column, row, cell, navigation link, hover button, active button, interactive button, link bar, footer.
- Write Web text.
- Use a mission statement.
- Generate and organize content ideas.
- Use page dimension guidelines.
- Determine content placement.
- Evaluate page layouts.
- Create a custom page template.
- Insert a logo.
- Insert a title graphic.
- Create a table.
- Create navigation buttons.
- Add footer information.
- Add text links.
- Create an e-mail window.

## INSTRUCTIONAL STRATEGIES:

### DEVELOPING CONTENT AND LAYOUT

#### **Traditional Strategies:**

- Lecture

- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

#### **Alternative Assessment:**

- Cooperative Learning
- Students compare layout designs of two sample Web pages found in the textbook to determine which is more effective.
- Students add a footer containing an email contact and copyright notice to an example Web page.

### **EVALUATION/ASSESSMENT OF STUDENTS:**

#### **DEVELOPING CONTENT AND LAYOUT**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:
      - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 6**
      - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 6**

### **UNIT OBJECTIVES**

#### **UNIT – SELECTING COLOR AND DESIGN –**

#### **Principles of Presentation Design, Choosing Web-safe Colors, Fonts and Typography, Image Maps and Checklists.**

#### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to selecting color and design.
  - Consistency, repetition, page banner, color scheme, Web-safe color, typography, font, point, alignment, serif, sans serif, subpage, image map, hotspot.
- Identify presentation design principles.
- Use a custom template.
- Add pages to a navigation structure.
- Identify color scheme guidelines.
- Use Web-safe colors.
- Identify text properties.
- Summarize formatting guidelines.
- Format text.
- Insert a text document.

- Create an image map.
- Define a hotspot.
- Use a checklist.

## **INSTRUCTIONAL STRATEGIES: SELECTING COLOR AND DESIGN**

### **Traditional Strategies:**

- Lecture
- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

### **Alternative Assessment:**

- Cooperative Learning
- Students find a Website that contains a graphic identifying the entire site and graphics identifying individual pages on the same site comparing and contrasting the two graphics styles.
- Students experiment with various background colors on a given Web page to determine which has the best effect on the look of the page.

## **EVALUATION/ASSESSMENT OF STUDENTS: SELECTING COLOR AND DESIGN**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:
      - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 7**
      - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 7**

## **UNIT OBJECTIVES**

### **UNIT – USING WEB GRAPHICS –**

**Using Custom Themes and Shared Borders, Web Graphic Types and File Formats, Obtaining and Creating Graphics, Editing and Formatting Graphics.**

#### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to using Web graphics.
  - External style sheet, embedded style sheet, cascading style sheet, shared border, raster graphic, paint program, vector graphic, draw program, GIF (Graphic

Interchange Format), JPEG (Joint Photographic Experts Group), lossless compression, lossy compression, scanner, dots per inch (dpi), digital camera, inline graphic, WordArt, resizing, aspect ratio, resampling, cropping, photo gallery, thumbnail.

- Create a custom scheme.
- Design a color scheme.
- Use shared borders.
- Identify types of graphics.
- Identify and compare graphic formats.
- Describe compression schemes.
- Identify image sources.
- Use graphics ethically.
- Use clip art.
- Describe graphic input tools.
- Create WordArt.
- Crop, resize and resample a graphic.
- Create a photo gallery.
- Create a thumbnail.

## **INSTRUCTIONAL STRATEGIES: USING WEB GRAPHICS**

### **Traditional Strategies:**

- Lecture
- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

### **Alternative Assessment:**

- Cooperative Learning
- Students create a multiple-page Web site adding a top shared border that includes a page banner and a link bar.
- Students experiment with a JPEG image by saving it as a GIF file and comparing the file size and image quality.

## **EVALUATION/ASSESSMENT OF STUDENTS: USING WEB GRAPHICS**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:

- Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 8**
- Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 8**

## **UNIT OBJECTIVES**

### **UNIT – ADDING MULTIMEDIA TO A WEBSITE –**

#### **Multimedia and Web Design, Adding Audio and Video to a Site, Adding Animation to a Site.**

#### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to adding multimedia to a Web site.
  - Multimedia, audio, video, animation, codec, multimedia authoring tool, plug-in, digital video recorder, analog video recorder, video capture card, Macromedia Flash, Dynamic HTML (DHTML).
- Identify multimedia design guidelines.
- Identify sources of multimedia files.
- Explain the ethical use of multimedia files.
- Describe multimedia authoring tools.
- Evaluate multimedia Web sites.
- Identify audio file formats.
- Identify video file formats.
- Insert audio files into a Web page.
- Insert video files into a Web page.
- Describe the equipment needed to create audio and video.
- Identify animation file formats.
- Insert animation into a Web page.

## **INSTRUCTIONAL STRATEGIES:**

### **ADDING MULTIMEDIA TO A WEBSITE**

#### **Traditional Strategies:**

- Lecture
- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

#### **Alternative Assessment:**

- Cooperative Learning
- Students explore the Web to find sites that have clip art, sound and/or video clips printing their license and usage pages and summarizing how files from these sites may legally be used on Web sites.
- Students evaluate a site advertising a contemporary movie using the criteria learned in the class on multimedia components.

## **EVALUATION/ASSESSMENT OF STUDENTS:**

### **ADDING MULTIMEDIA TO A WEBSITE**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions

- Open-ended Questions
- Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:
      - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 9**
      - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 9**

## UNIT OBJECTIVES

### UNIT – ADDING INTERACTIVITY TO A WEB SITE –

#### Scripting and markup Languages, Adding Dynamic Effects, Adding Form to a Web Site.

#### The students will be able to:

- Understand basic terminology of Web Programming and Design related to adding interactivity to a Web site.
  - Script, interactivity, JavaScript, Java applet, Common Gateway Interface (CGI), markup language, extensible Markup Language (XML), marquee, banner ad, rollover button, page transition, form, field, label
- Define scripting.
- Summarize interactivity design guidelines.
- Identify scripting languages.
- Compare common scripting languages.
- Identify markup languages.
- Apply DHTML effects.
- Create a marquee.
- Create a banner ad.
- Create custom rollover buttons.
- Add update information.
- Create page transitions.
- Create a form.
- Identify different field types.
- Place fields and labels into forms.

## INSTRUCTIONAL STRATEGIES:

### ADDING INTERACTIVITY TO A WEB SITE

#### Traditional Strategies:

- Lecture
- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

### **Alternative Assessment:**

- Cooperative Learning
- Students view the source code of a favorite entertainment Web site identifying and explaining the function of two examples of scripting used in the Web site.
- Students apply dynamic effects to text on a Web page using the DHTML toolbar and evaluate why they would or would not include this effect in their Web site.

### **EVALUATION/ASSESSMENT OF STUDENTS:**

#### **ADDING INTERACTIVITY TO A WEB SITE**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:
      - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 10**
      - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 10**

### **UNIT OBJECTIVES**

#### **UNIT – PROJECT PLANNING –**

##### **The Project life Cycle, Determining Project Scope.**

##### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to project planning.
  - Client, client liaison representative, milestone, project manager, source control, scope, e-commerce, business-to-business (B2B) e-commerce, business-to-consumer (B2C) e-commerce, target market, budget, instant storefront.
- Identify the stages of the Web site development life cycle.
- Identify the responsibilities of project team members.
- Use a checklist to evaluate progress.
- Explain the use of source control.
- Explain project scope.
- Define e-commerce.
- Identify types of e-commerce.
- Summarize guidelines for developing e-commerce Web sites.

### **INSTRUCTIONAL STRATEGIES:**

#### **PROJECT PLANNING**

##### **Traditional Strategies:**

- Lecture

- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

#### **Alternative Assessment:**

- Cooperative Learning
- Students write a short essay describing the educational requirements and experience needed in order to be a project manager, Web author, Web designer or Web developer.
- Students compare and contrast two e-commerce Web sites that sell similar products.

### **EVALUATION/ASSESSMENT OF STUDENTS:**

#### **PROJECT PLANNING**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:
      - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 11**
      - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 11**

### **UNIT OBJECTIVES**

#### **UNIT – DEVELOPING A WEB SITE –**

##### **Examining an E-commerce Web Site, Web Site Privacy and Security.**

#### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to developing a Web site.
  - Feedback form, scroll box, option button, check box, privacy, cookie, privacy policy, security, data encryption, SSL (Secure Socket Layer), digital certificate.
- Discuss the functions of a Web site.
- Create a feedback form.
- Compare and contrast option buttons and check boxes.
- Explain the use of privacy policies.
- Compare and contrast Web site privacy and security.
- Discuss security measures used by e-commerce sites.

### **INSTRUCTIONAL STRATEGIES:**

#### **DEVELOPING A WEB SITE**

##### **Traditional Strategies:**

- Lecture

- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

#### **Alternative Assessment:**

- Cooperative Learning
- Students develop a feedback form containing questions they want answered and add it to a project they are developing.
- Students research digital certificates to determine what a site needs to contain to merit such an award.

### **EVALUATION/ASSESSMENT OF STUDENTS:**

#### **DEVELOPING A WEB SITE**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:
      - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 12**
      - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 12**

### **UNIT OBJECTIVES**

#### **UNIT – ADDING WEB SITE FUNCTIONALITY –**

#### **Tracking Visitors to a Site, Making Information Easy to Find, Collecting and Storing Information from Visitors, Frames.**

#### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to adding Web site functionality.
  - Hit counter, hits, tracking software, guest book, site map, table of contents, frequently asked questions (FAQ), bookmark, search capabilities, database, record, database driven, database interface page, frame, frameset, Set Initial Page button, New Page button, local Web site, remote Web site.
- Add a hit counter to a Web page.
- Identify the limitations of hit counters.
- Describe the information gathered by tracking systems.
- Create a guest book.
- Identify Web site search features.
- Add bookmarks to a Web page.
- Create a Web search form.

- Describe database functions.
- Confirm a database connection.
- Identify database interface pages.
- Explain how frames work.
- Identify guidelines for frames pages.
- Create a frames-based page.
- Use frames on a site.
- Publish a website locally.

## **INSTRUCTIONAL STRATEGIES: ADDING WEB SITE FUNCTIONALITY**

### **Traditional Strategies:**

- Lecture
- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

### **Alternative Assessment:**

- Cooperative Learning
- Students explore tracking software to determine what information the software will gather and how it may help their e-commerce site.
- Students plan a database to store information on clothing orders to be placed on line.

## **EVALUATION/ASSESSMENT OF STUDENTS: ADDING WEB SITE FUNCTIONALITY**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:
      - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 13**
      - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 13**

## **UNIT OBJECTIVES**

### **UNIT – PUBLISHING A WEBSITE –**

#### **Web Servers, The Publishing Process, Promoting a Web Site.**

#### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to publishing a Web site.

- Publish, Web server, Web host, host, Web server clusters, internal Web hosting, external Web hosting, publicize, spam, link trading, meta tag.
- Identify the technical needs of a Web server.
- Evaluate Web hosts.
- Compare and contrast internal and external Web hosting.
- Select a Web site name.
- Register a domain name.
- Maintain a site's page names and directory structure.
- Publish a Web site.
- Test a published Web site.
- Identify techniques for publicizing Web sites.
- Insert meta tags.
- Identify techniques for increasing Web site traffic.
- Evaluate cookies for targeted marketing.

## **INSTRUCTIONAL STRATEGIES:**

### **PUBLISHING A WEBSITE**

#### **Traditional Strategies:**

- Lecture
- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

#### **Alternative Assessment:**

- Cooperative Learning
- Students comparison shop for a Web hosting service for their Web site determining their setup costs, monthly fees and performance/reliability safeguards.
- Students create a directory structure containing a list of their favorite CDs.

## **EVALUATION/ASSESSMENT OF STUDENTS:**

### **PUBLISHING A WEBSITE**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:
      - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 14**
      - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 14**

## **UNIT OBJECTIVES**

### **UNIT – MAINTAINING A WEB SITE –**

#### **Web Server Maintenance, Updating Information, Keeping a Web Site Secure.**

#### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to maintaining a Web site.
  - Hot-swappable hard drives, hard drive mirroring, backup, incremental backup, file management, direct server update, local client update, archiving, access control, password, user authentication, global access control.
- Identify Webmastering tasks.
- Identify Web server maintenance techniques.
- Describe the importance of backups.
- Identify guidelines for updating a site.
- Edit and update a Web page.
- Use FrontPage reports.
- Check for broken hyperlinks.
- Control access to a Web site.
- Create a login screen.
- Monitor Web site traffic using FrontPage Usage reports.

#### **INSTRUCTIONAL STRATEGIES:**

##### **MAINTAINING A WEB SITE**

##### **Traditional Strategies:**

- Lecture
- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

##### **Alternative Assessment:**

- Cooperative Learning
- Students research the Web to find three backup utilities and make a recommendation on one they believe will provide the best overall value.
- Students research the Web to find three online shopping or banking sites and identify the means they employ to keep customer data secure.

#### **EVALUATION/ASSESSMENT OF STUDENTS:**

##### **MAINTAINING A WEB SITE**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:

- Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 15**
- Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 15**

## **UNIT OBJECTIVES**

### **UNIT – HTML TABLES AND FRAMES –**

#### **Creating Tables in HTML, Creating Frames in HTML.**

#### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to HTML tabled and frames.
  - Cell spacing, cell padding, header row, header column, frame, container page, left-hand navigation, content page, top navigation.
- Create a basic table using HTML.
- Define borders.
- Merge cells.
- Align content in tables.
- Create a frame-based Web page using HTML.
- Create a link bar page.
- Create a content page.
- Create a container page.
- Control Web page layout with frames.
- Create links between frames.

## **INSTRUCTIONAL STRATEGIES:**

### **HTML TABLES AND FRAMES**

#### **Traditional Strategies:**

- Lecture
- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

#### **Alternative Assessment:**

- Cooperative Learning
- Students revise table structures to force the table heading to move to the left, right or top.

## **EVALUATION/ASSESSMENT OF STUDENTS:**

### **HTML TABLES AND FRAMES**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.
- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above

- Web Assignment:
  - Example:
    - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 16**
    - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 16**

## **UNIT OBJECTIVES**

### **UNIT – HTML, SCRIPTING, AND INTERACTIVITY –**

#### **Adding Interactivity Using HTML, Adding Interactivity Using Scripting.**

##### **The students will be able to:**

- Understand basic terminology of Web Programming and Design related to HTML, scripting and interactivity.
  - Animated GIF, radio button, pull-down menu, text area, client-side script, object, event, event handler, function, variables, conditional statements, server-side script.
- Add an audio file using HTML.
- Create a form using HTML.
- Add text boxes using HTML.
- Add radio buttons and text boxes using HTML.
- Add a pull-down menu using HTML.
- Add a text area using HTML.
- Identify client-side scripting languages.
- Create a rollover button using JavaScript.
- Identify server-side scripting languages.
- Debug code.

## **INSTRUCTIONAL STRATEGIES:**

### **HTML, SCRIPTING, AND INTERACTIVITY**

#### **Traditional Strategies:**

- Lecture
- Black/White Board Work
- Written and oral exercises.
- Vocabulary building activities

#### **Alternative Assessment:**

- Cooperative Learning
- Students locate a Web site containing advanced HTML attributes and experiment with the attributes that affect the appearance of text boxes, pull down menus and text areas.
- Students explore HTML Web sites that contain JavaScript tutorials reviewing the information and summarizing one new technique that they have learned.

## **EVALUATION/ASSESSMENT OF STUDENTS:**

### **HTML, SCRIPTING, AND INTERACTIVITY**

- Teacher generated quizzes and tests.
  - Multiple Choice Questions
  - Open-ended Questions
  - Written Exercises
- Book-generated activities, quizzes, and tests.

- Homework
- Seat Work
- Class Participation
- Alternative Assessment
  - Listed Above
  - Web Assignment:
    - Example:
      - Study using the online PowerPoint presentation available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > PowerPoint Outlines > Chapter 17**
      - Perform the Online Self Check available through the Glencoe Web Site *webdesign.glencoe.com* and then selecting **e-Review > Self Checks > Chapter 17**

### **EVALUATION/ASSESSMENT OF CURRICULUM:**

This course of study will be evaluated/assessed by instructional staff during the first year of implementation for the purpose of necessary revision at the end of the first year. In addition, this course of study will be reviewed according to the Five Year Curriculum Review schedule. (See attached)

### **RESOURCES/BIBLIOGRAPHY:**

“New Jersey Core Curriculum Content Standards for Technological Literacy” New Jersey State Department of Education, 2004

“New Jersey Mathematics Curriculum Framework”, Joseph G. Rosentein, Janet H. Caldwell, Warren D. Crown, 2004

Introduction to Web Design using Microsoft FrontPage, James Renner, McGraw-Hill Glencoe, 2005

Introduction to Web Design using Microsoft FrontPage – Workbook, James Renner, McGraw-Hill Glencoe, 2005

Introduction to Web Design using Microsoft FrontPage – Teacher Edition, James Renner, McGraw-Hill Glencoe, 2005