

Unit 2

Web portfolios using Adobe Dreamweaver CS4

Timing: 12–18 hours

Unit overview

Portfolios communicate accomplishments, works in progress, or personal history. Designers use a portfolio to showcase their previous work when applying for a job. Traditionally a portfolio is a large book or leather case containing design samples. With the Internet, portfolios can be electronic, easily and quickly sharing a designer's work with anyone in the world.

In this unit, students create the elements of a web portfolio with Adobe Dreamweaver CS4 and Adobe Fireworks CS4. They build a website that features work they have completed and work to be completed. As students create their portfolios, they plan, implement, and test their website designs; students then reflect on and evaluate their work. Incorporating graphic design techniques is essential in this unit. The presentation of a web portfolio can be just as important as its content.

Unit objectives

At the completion of the unit, students will have developed the following skills:

Project management skills

- Managing files and using file-naming conventions
- Designing for usability and accessibility
- Managing a quality assurance test
- Factoring visitor response into redesign
- Synthesizing content based on reflection

Design skills

- Investigating and incorporating color and layout consistently
- Applying principles of user interface design
- Considering screen size
- Designing consistent website pages
- Rebuilding web pages based on visitor feedback

Research and communication skills

- Evaluating and analyzing content validity
 - Evaluating and analyzing website navigation
 - Designing a quality assurance test
 - Advocating and practicing legal use of images
- Technical skills

Dreamweaver

- Using options on panels
- Creating a root folder and site
- Creating pages
- Using tables to organize data
- Using Design view and Live Mode
- Inserting images and text
- Understanding and using Cascading Style Sheets (CSS)
- Using relative and absolute links
- Using alternative text (Alt text)
- Importing interactive images from Fireworks
- Publishing a website

Fireworks

- Building buttons
- Exporting buttons as HTML

Activity summary

The unit contains the following activities, with handouts and other materials.

Activity

Activity 2.1: Introduction to Dreamweaver

Activity materials

Guide: How to set up a local root folder and site structure
Worksheet: The Dreamweaver interface
Guide: The Dreamweaver interface
Guide: Working with text and images
Worksheet: The Dreamweaver Insert bar
Guide: The Dreamweaver Insert bar

| Activity | Activity materials |
|--|---|
| Activity 2.2: Analyzing websites | Worksheet: Analyzing websites Guide: Understanding Cascading Style Sheets (CSS) Guide: CSS styles panel in Dreamweaver Worksheet: CSS styles panel in Dreamweaver Sample assets (electronic file) |
| Activity 2.3: Planning a portfolio | Guide: Digital Design file list Guide: Student portfolios Guide: How to plan a portfolio |
| Activity 2.4: Managing files | Guide: Naming conventions Worksheet: File management folders Worksheet: File management |
| Activity 2.5: Planning a home page | Guide: Planning a home page |
| Activity 2.6: Creating a home page | Guide: How to lay out a web page with CSS |
| Activity 2.7: Creating content pages | Guide: Creating consistent content pages Guide: How to set document properties Guide: How to create lists Guide: How to add text from another document Guide: How to create data tables |
| Activity 2.8: Linking pages | Guide: How to create links |
| Activity 2.9: Ensuring usability and accessibility | Worksheet: Usability Worksheet: Accessibility Newspapers |
| Activity 2.10: Making a graphical navigation bar | Guide: How to create buttons and navigation bars |
| Activity 2.11: Quality assurance I: Technical testing | Guide: How to check links |
| Activity 2.12: Quality assurance II: Usability testing | None |
| Activity 2.13: Publishing a website | Guide: How to publish web files Guide: Managing files and links by using the Files panel |
| Activity 2.14: HTML basics | Guide: HTML tags |

Activity 2.1

Introduction to Dreamweaver

Objectives

- Identify the panels and work area used in Dreamweaver.
- Set up a local site and root folder.
- Create a simple web page with text, an image, alternative text, and an e-mail link.

Materials

- Adobe Dreamweaver CS4 installed on instructor and student workstations
- Projection system for instructor workstation or overhead slides with screenshots of the Dreamweaver interface
- Guide: How to set up a local root folder and site structure
- Worksheet: The Dreamweaver interface
- Guide: The Dreamweaver interface
- Guide: Working with text and images
- Worksheet: The Dreamweaver Insert bar
- Guide: The Dreamweaver Insert bar

Time

30–50 minutes

Overview

The instructor introduces the basic Dreamweaver interface. Students then set up their local sites and root folders and create a basic web page.

Student product: Root folder setup, simple web page, and Dreamweaver interface reference document

Activity steps

1. Using a projector, briefly introduce students to the workspace and panels in Dreamweaver.

The Document window is the primary workspace. The main panels are the Insert bar (above the Document window) and the Property inspector (below the Document window). Explain to students that they can customize the Dreamweaver workspace, save customized workspace layouts, and use the Workspace Switcher to toggle between preset workspace layouts that are ideal for different users. Explain that they will be using the components of each of these panels and the Document window later in the activity.

2. Ask students to create a folder that will serve as the main folder for their portfolios—either locally on their workstations or on a server where they can save all their work.

If students set up the folder on their workstation hard disks, this folder is the local root folder for the websites they will create in Dreamweaver.

3. Have students start Dreamweaver and open a new document.
4. Demonstrate how to set up a local site in Dreamweaver.

Guide: How to set up a local root folder and site structure

Note: The guide illustrates how to use the Basic tab (also known as the Site Wizard) to define a local site. Once students are familiar with the concept of defining a site, they might find it more efficient to use the Advanced tab.

5. After you demonstrate the task, ask students to do each step to define a local site.
6. Explain that students will learn the basic techniques to create a web page.

Note: You might choose to have all students create this page about the same topic so you can decide the content while they focus on learning the technical skills.

7. Demonstrate how to use the Insert bar and the Property inspector in Dreamweaver to create a basic web page that contains the following items:

- Text (paragraphs and bullet lists)
- An image with alternative text (Alt text)
- An e-mail link

Note: Students create a simple page to get used to using a WYSIWYG editor and will learn to use Cascading Style Sheets to style text and layout a web page in the next few activities.

8. Ask students to create a basic web page with text, an image with alternative text, and an e-mail link.

Worksheet: The Dreamweaver interface

Guide: The Dreamweaver interface

Guide: Working with text and images

9. Have students save this document in their local root folders as sample.htm. Mention that they can use .html as an alternative to .htm on either Windows or Macintosh workstations, but it's best to be consistent.

10. Ask students to add a title for their pages. Discuss the difference between a page title and a filename. Have students preview their pages in a browser to see where the page title appears.

11. Discuss the types of content that can be created or inserted by using the Insert bar. Demonstrate how to view the eight categories of the Insert bar and how to change between showing the Insert bar as tabs and as a menu.

Worksheet: The Dreamweaver Insert bar

Guide: The Dreamweaver Insert bar

12. Call on students to describe to the class how to set up a local root folder and local site, insert an image, create an e-mail link, and add text.
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Preparation

- Review The Dreamweaver interface guide.
- If you plan to use the guides and worksheets, make photocopies.
- Gather content such as text and images for students to use when creating their first web page.

Extension

Student Seminar Introduction: You might ask a small student group to review *Using Dreamweaver* or the online Dreamweaver Support Center (in the Dreamweaver Help menu) to research how to set up the local site and root folder. This group can then report to the class the reasoning for setting up the site and why it is important.

Rationale

Many professional web developers use visual editors such as Dreamweaver to help them quickly and efficiently create web pages from their paper storyboards.

Background resources

- Review the tutorial materials available within Dreamweaver by choosing Getting Started and Tutorials from the Help menu.
- Look at the online material available for Dreamweaver at www.adobe.com/support/dreamweaver/
- For Adobe Software Support Tech Notes, go to www.adobe.com/support/dreamweaver/

Assessment

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|----------|----------------------------|--|--|
| Web page | Absent or incomplete. | Students can set up a local root folder and local site. Web pages include text, image and email link. Students can identify components of the Dreamweaver interface. | Students can set up a local root folder and local site as well as clearly articulate the difference between these objects. Web pages include text, image and email link. Students can identify components of the Dreamweaver interface and explain when to use each component. |

ISTE NETS*S Standards for Students

This activity is aligned to the ISTE NETS*S Technology Standards. Depending on the subject and content area the student selects you may research your own state content standards to see how this activity aligns to your state requirements.

ISTE NETS*S: Curriculum and Content Area Standards – NETS for Students

II. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- B. communicate information and ideas effectively to multiple audiences using a variety of media and formats.

VI. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems and operations. Students:

- A. understand and use technology systems.
- B. select and use applications effectively and productively.
- C. troubleshoot systems and applications.
- D. transfer current knowledge to learning of new technologies.

Adobe Certified Associate, Web Communication objectives

- 3.1 Identify elements of the Dreamweaver interface.
- 3.2 Use the Insert bar.
- 3.3 Use the Property inspector.
- 4.1 Define a Dreamweaver site.
- 4.2 Create, title, name, and save a web page.
- 4.3 Add text to a web page.
- 4.4 Insert images and apply alternative text on a web page.
- 4.5 Link web content, using hyperlinks, e-mail links, and named anchors.

Key terms

- root folder
- cache
- local site
- flowchart
- alternative text

Activity 2.2

Analyzing websites

Objectives

- Evaluate consistency, visual layout, and use of color in website designs.
- Gain a basic understanding of Cascading Style Sheets (CSS)
- Investigate content validity of websites.

Materials

- Worksheet: Analyzing websites
- Guide: Understanding Cascading Style Sheets (CSS)
- Guide: CSS styles panel
- Worksheet: CSS styles panel
- Electronic assets: example_dw_page.htm

Time

100-120 minutes

Overview

The instructor demonstrates website evaluation, showing examples of sites that are well designed and those that are not. Students evaluate a website and learn to utilize Cascading Style Sheets to create a web page on which they report their findings.

Student product: One-page website with analysis of another site

Activity steps

1. Show students at least two websites, one that is well designed and one that is not.
2. Discuss the notion of consistency and visual hierarchy. Discuss features of a website that can be designed to promote consistency and hierarchy, such as placement of the navigation scheme, the use of color, and the use of fonts.
3. Identify visual elements of a web page that can be used to support content hierarchy, such as text headings, fonts (colors, emphasis, and size), and indentation of paragraphs.

4. Demonstrate website analysis techniques. Criteria for evaluating sites might include the following:

- Design
- Visual layout
- Consistency structures
- Color scheme
- Visual hierarchy elements
- Content
- Bias
- Currency
- Source
- Ability to corroborate information

Worksheet: Analyzing websites

5. Group students into pairs.

6. Provide each pair with a website to evaluate, or allow them time to search for a website to evaluate.

7. Ask students to evaluate the website for design and content. Inform students that they will create a web report of their evaluation, after learning some new techniques in Dreamweaver.

8. As students have just finished evaluating a website for consistency elements, introduce the concept of Cascading Styles Sheets (CSS). You might explain the importance of CSS as follows:

- Simplify text formatting.
- Enable design of consistent-looking pages.
- Enable site-wide changes.

9. Briefly, discuss best practices for using CSS and introduce the three main types of CSS styles – Class, Tag, and ID.

Guide: Understanding Cascading Style Sheets (CSS)

10. Ask students to open the sample Dreamweaver page.

Electronic assets: example_dw_page.htm

11. Using the styles in the sample Dreamweaver page, go through the style features on the CSS Styles panel to show students the types of styles they can create.

Guide: CSS styles panel in Dreamweaver

Worksheet: CSS styles panel in Dreamweaver

12. Have students select a style in the CSS Styles panel and either make changes to an existing property in the Properties pane or click Add Property and select a property to add and manipulate. Students can also complete this same action by clicking the Edit Style button at the bottom of the panel. Ask them to make a change to the features of the style to see how the change is implemented on the page. (They can click Apply to see changes without closing the dialog box if they use the Edit Style button.)

13. After manipulating styles, students should create a new style and add it to the sample CSS. You might have them create the following:

- A title text style (for example, a Class style that is bold and green, with a 25-point Arial font)
- A copyright text style (for example, a Class style that is italic and black, with a 10 point Arial font)

14. Ask students to revise the example Dreamweaver page to create a simple web-page report that includes the following elements:
 - A title, such as “Website Evaluation” or other descriptor
 - A link to the website they evaluated
 - A logo or an image from the site, with copyright information
 - A short paragraph evaluating the design features
 - A short paragraph evaluating the validity of the content
13. Ask students to apply the CSS styles in the sample Dreamweaver page to the web page title, link, copyright information, body paragraphs and paragraph headings. Emphasize using appropriate styles to create visual structure and hierarchy in the information they are presenting.
14. Ask pairs to present their reports to the class.

Preparation

- Identify at least two websites (one that is well designed and one that is not) to use for your classroom demonstration.
- You might want to prepare a list of websites for students to evaluate. Consider using a combination of .edu, .com, .org, .net, and .gov sites.
- Copy the sample Dreamweaver page on student workstations.
- Try creating CSS styles so you understand how they work.

Extension

Research: To provide students with more of a foundation in Cascading Style Sheets, you might have teams of students spend some time researching topics and then present their findings to the class. Topics could include the following:

- The emergence of CSS
- The current standards around CSS from the W3C
- The benefits of using CSS

Rationale

Part of the work done by web designers is to evaluate existing websites. Website analysis and evaluation provides a basis for good web development and design practices and informs future designs.

Background resources

- Great Plains Alliance for Computers and Writing. Three papers on web validity
<http://web.stcloudstate.edu/jmkilborn//gpacw.html>
- Apponequet Regional High School Library website on testing for validity
<http://jimgrasela.tripod.com/WebSiteCritique/>

- Why Use CSS?
www.adobe.com/devnet/dreamweaver/articles/why_css.html
- CSS Zen Garden. A demonstration of what can be accomplished through CSS-based design.
www.csszengarden.com/
- Best practices of CSS
www.adobe.com/products/dreamweaver/bestpractices/css/
- Building your first CSS site
www.adobe.com/devnet/dreamweaver/articles/first_css.html

Assessment

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|---------------------------|----------------------------|---|---|
| Website evaluation | Absent or incomplete. | Website evaluation includes visual representation, with copyright documentation, analysis of design features, and content validity. The evaluation is built as a web page that applies the skills learned in the previous activity. Students understand CSS styles and their uses in implementing page design. Students create CSS styles using a combination of redefined styles and new styles. | Website evaluation includes visual representation, with copyright documentation. Evaluations include a complete analysis of design features, and content validity as they relate to effectiveness of site as it relates to its audience and purpose. The evaluation is built as a web page that applies the skills learned in the previous activity. Students understand and clearly articulate CSS styles and their uses in implementing page design. Students create CSS styles using a combination of redefined styles and new styles. |

ISTE NETS*S Standards for Students

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ISTE NETS*S: Curriculum and Content Area Standards – NETS for Students

II. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- A. interact, collaborate, and publish with peers, experts or others employing a variety of digital environments and media.
- B. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
- D. contribute to project teams to produce original works and solve problems.

III. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information. Students:

- B. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
- C. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
- D. process data and report results.

IV. Critical Thinking, Problem-Solving & Decision-Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. Students:

- A. identify and define authentic problems and significant questions for investigation.

V. Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

- A. advocate and practice safe, legal, and responsible use of information and technology.

VI. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems and operations. Students:

- A. understand and use technology systems.
- B. select and use applications effectively and productively.
- C. troubleshoot systems and applications.
- D. transfer current knowledge to learning of new technologies.

Adobe Certified Associate, Web Communication objectives

- 2.1 Demonstrate general and Dreamweaver-specific knowledge of best practices for designing a website, such as maintaining consistency, separating content from design, using standard fonts, web-safe colors, and utilizing visual hierarchy.
- 2.3 Demonstrate knowledge of page layout design concepts and principles.
- 2.6 Communicate with others (such as peers and clients) about design and content plans.
- 5.1 Set and modify document properties.
- 5.2 Organize web page layout with absolutely-positioned div tags and CSS styles.

5.3 Modify text and text properties.

Key terms

- currency
- corroboration
- source
- Cascading Style Sheets (CSS)
- Class style
- Tag style
- ID style
- bias
- consistency
- visual hierarchy
- color scheme

Activity 2.3

Planning a portfolio

Objectives

- Describe the goals and uses of a portfolio.
- Identify the purpose and audience for a web portfolio.
- Select and organize content for a web portfolio.
- Plan and create a flowchart for a portfolio.

Materials

- Guide: Digital Design file list
- Guide: Student portfolios
- Guide: How to plan a portfolio

Time

45–90 minutes

Overview

The class examines the purpose and audience of websites and then discusses the uses of a portfolio. Students consider the content, audience, objectives, and organization of their own web portfolios and then create flowcharts for their portfolios.

Student product: Flowchart for web portfolio

Activity steps

1. Begin with a general class discussion about the purpose and audience of a website. Identify the kind of information that determines purpose, audience, and audience needs.

Focus the discussion on websites that have sections targeted to different audiences. For example, you might contrast the PBS site for adults, www.pbs.org, with their site for kids, kids.pbs.org, discussing the following:

- Purpose of the site
 - Audience for the site
 - How the site uses graphics, color, and text to emphasize purpose and audience
2. Discuss the concept of a portfolio, its purpose and its audience.
 - What is a portfolio?
 - What are the goals of a particular portfolio?

- What does a portfolio contain?
 - Would it contain professional experiences? Coursework?
 - How do you use a portfolio to communicate ideas?
 - What could you use to communicate these ideas (for example: images, text, design of homepage, organization of the portfolio)?
 - What are the long-term and short-term goals of a portfolio?
 - Who is the audience for the portfolio?
3. Divide students into small groups to look at a variety of web portfolios and analyze their purpose and audience.
 4. Ask some of the groups to share their analysis with the class.
 5. Describe the type of portfolio you want students to create. Discuss its purpose and audience.
 6. Pair students and ask them to consider the work they've done in this course and to identify which files they could include in their portfolios.
Guide: Digital Design file list
 7. In a class discussion, decide on the specific list of files to be included in the web portfolios for this course.
 8. Discuss how to organize the contents of the portfolio. Demonstrate how to create category outlines and corresponding flowcharts for the type of portfolio chosen.
Guide: Student portfolios
 9. Explain the structure of a flowchart. Mention that the home page is sometimes called a menu page because it usually contains the main menu links to the first set of content pages. Some of these first content pages might contain submenus to other content pages.
 10. Ask students to create a flowchart for their portfolios, including background information as follows:
 - Describe the purpose of the portfolio.
 - Create a list of assets in the portfolio and organize files and projects into categories.
 - Using the category outline as a guide, draw a flowchart for the web portfolio.*Guide:* How to plan a portfolio
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Preparation

- Find two or three examples of web portfolios for students to analyze.
- Determine the type of portfolio you would like students to create for this course, such as showcase, skill growth, or progress. Review the Student portfolios guide if you need help making this decision.
- If you plan to use any of the guides, make photocopies.
- Search the Internet for sample professional and coursework portfolios to show students. Possible keywords: professional portfolio, design portfolio, web portfolio.

Extensions

Map an existing site: To help students understand flowcharts, have them create a flowchart for a simple site on the Internet. You might find a small site for students to map. For example, students would draw the pages linked to the home page of this site and then the pages linked to those pages. Students, by clicking through the links, will begin to understand how a flowchart relates to a constructed site and will be able to create their own flowcharts more easily.

Portfolios: Have students plan a portfolio that showcases their best work from all their courses.

Reflection supplement: Ask students to write up the decisions they made in the planning process for their portfolios. This document will help students reflect on their process and provide a framework for the next time they plan a website.

Rationale

Professional designers keep portfolios to highlight exceptional work, show a progression of expertise, or document a particular project. Keeping an updated portfolio is an ongoing process for many web professionals. Because their portfolios constantly evolve, designers often plan the portfolio structure to allow for easy changes and additions. To begin the process of building a web portfolio—or any website—designers organize site content information by using a flowchart.

Background resources

- Examples and instructions for visualizing information and using flowcharts
www.jjg.net/ia/visvocab/ - page
- U.S. Department of Education, Office of Research and Improvement, Classroom Uses of Student Portfolios
www.ed.gov/pubs/OR/ConsumerGuides/classuse.html
- Website Production Management Techniques (select Content and Site View from the Structure menu on the right side of the screen)
www.adobe.com/resources/techniques/structure/

Assessment

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|--------------------|----------------------------|--|---|
| Portfolio analysis | Absent or incomplete. | Portfolio analysis includes articulation for ways design elements are used to meet goals and address the audience. | Portfolio analysis includes articulation for ways design elements are used to meet goals and address the audience. Analysis includes applying knowledge of design principles from the graphic design unit to page design. |

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|----------------------------|-----------------------------------|---|--|
| Portfolio flowchart | Absent or incomplete. | Flowchart shows clear organization of content and appropriate selection of content. | Flowchart shows clear organization of content and appropriate and complete selection of content relevant to goals and purpose. |

ISTE NETS*S Standards for Students

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ISTE NETS*S: Curriculum and Content Area Standards – NETS for Students

II. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- A. interact, collaborate, and publish with peers, experts or others employing a variety of digital environments and media.
- B. communicate information and ideas effectively to multiple audiences using a variety of media and formats.

III. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information. Students:

- A. plan strategies to guide inquiry.
- B. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
- C. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
- D. process data and report results.

IV. Critical Thinking, Problem-Solving & Decision-Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. Students:

- A. identify and define authentic problems and significant questions for investigation.
- B. plan and manage activities to develop a solution or complete a project.
- C. collect and analyze data to identify solutions and/or make informed decisions.
- D. use multiple processes and diverse perspectives to explore alternative solutions.

Adobe Certified Associate, Web Communication objectives

- 1.1 Identify the purpose, audience, and audience needs for a website.

1.2 Identify web page content that is relevant to the website purpose and appropriate for the target audience.

Key terms

- purpose
- audience
- portfolio
- information architecture
- flowchart
- visualization

Activity 2.4

Managing files

Objectives

- Identify a rationale for good file organization.
- Understand the concepts of file organization and structure.
- Create an organizational structure for files and folders.
- Provide feedback to peers on their file structure.

Materials

- Guide: Naming conventions
- Worksheet: File management folders
- Worksheet: File management

Time

30–40 minutes

Overview

Students brainstorm reasons for file management and propose methods of file management. They learn best practices for naming web files. They learn to organize files by content, file type, or a combination of the two. They modify a file structure and test it with each other.

Student product: Write-up on file management

Activity steps

1. Use a class brainstorm to introduce file management, generating reasons for file organization. Questions to ask the class include:
 - What is file management?
 - Why is it important?
 - How might you organize a set of files?
2. Have students propose ways they might organize their files from this course within the local root folders they created in Activity 2.1 for their portfolio websites.
3. Discuss best practices for naming web files, including identification of forbidden characters. Ask students to propose additional conventions that might help manage their files and folders, such as using names that help others recognize the contents of a folder or file. Decide as a class what conventions you will use.

Guide: Naming conventions

4. Have students create a file organization scheme for the files from their work in this course, naming the folders and organizing files in the folders. Questions to guide the organization include the following:
 - How are you categorizing the files?
 - How easily would you be able to find the files if you looked for them a long time from now?
 - How easily would someone else be able to find a file by using your system?
 - How does this categorization system help you keep your electronic portfolio files in order?
 - How easy to understand are your filenames and folder names?
 - How well do your filenames and folder names follow naming conventions?

Worksheet: File management folders

Worksheet: File management, Part I

5. Ask students to rename their existing files as necessary to follow the class naming conventions.
6. If you are using the File Management Folders worksheet, have students name the folders and list the files that would be in each folder. For example, students might name a folder “images” and then write the names of all image files in that folder. Or they might create a folder called “design-skills,” inside which they draw another folder called “images” to contain their design image files, such as the logo. The local root folder should hold all folders, subfolders, and files, depending on the various student strategies.
7. After students have organized their folders, pair students so they can exchange local root folders.
8. Identify two files students must find in their partner’s local root folder.
9. Ask students to discuss how they found each file.

Worksheet: File management, Part II

10. After locating the files, ask partners to share the challenges they had in locating files or in understanding the file structure.
11. Ask students to reassess their own file organization and reorganize as necessary to reflect their new file management strategy.
12. Ask students to implement their file management strategy in their local root folders by creating subfolders and moving their files into the subfolders.

Preparation

- If you plan to use the guide or worksheets, make photocopies.

Extension

Visualizing file management: Start creating a pictorial file management map in front of the class (similar to a concept map), showing different file management strategies introduced by the students. Ask students to add to the class map the successful file management strategies they encountered. For example, draw the folder structure and names used for some of the strategies suggested.

Rationale

Professional web developers typically have hundreds or even thousands of files to manage on a website. They need to deal with a wide variety of file types, such as images, HTML documents, Adobe Flash CS4 movies, and video files that reflect a broad array of content topics. Clear organization and understandable file naming enable developers and their teams to find documents.

Background resources

- Adobe Software Support Tech Notes.
www.adobe.com/support/dreamweaver/

Assessment

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|-------------------------------|-----------------------------------|---|--|
| File management scheme | Absent or incomplete. | Files are organized in a clear manner such that other students can quickly and effectively find necessary files. File names reflect class conventions and observe proper conventions. | Files are organized in a clear manner such that other students can quickly and effectively find necessary files. File names reflect class conventions, are consistent, and observe proper conventions. |

ISTE NETS*S Standards for Students

This activity is aligned to the ISTE NETS*S Technology Standards. Depending on the subject and content area the student selects you may research your own state content standards to see how this activity aligns to your state requirements.

ISTE NETS*S: Curriculum and Content Area Standards – NETS for Students

I. Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

- C. use models and simulations to explore complex systems and issues.
- D. identify trends and forecast possibilities.

II. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- A. interact, collaborate, and publish with peers, experts or others employing a variety of digital environments and media.
- B. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
- C. develop cultural understanding and global awareness by engaging with learners of other cultures.
- D. contribute to project teams to produce original works and solve problems.

IV. Critical Thinking, Problem-Solving & Decision-Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. Students:

- A. identify and define authentic problems and significant questions for investigation.
- D. use multiple processes and diverse perspectives to explore alternative solutions.

Adobe Certified Associate, Web Communication objectives

4.2 Create, title, name, and save a web page.

Key terms

- file formats
- naming conventions

Activity 2.5

Planning a home page

Objectives

- Plan and create a detailed wireframe for the home page of a portfolio.
- Incorporate principles of good user interface design on a home page.

Materials

- Adobe Fireworks CS4 installed on instructor and student workstations
- Guide: Planning a home page

Time

60 minutes

Overview

Students look at sample portfolios, plan and outline a navigation system and general layout, and then create wireframes for their own portfolios. Students make design decisions such as colors, layout, and structuring navigation through their sites.

Student product: Home page wireframe

Activity steps

1. Show some sample portfolios and discuss the design decisions the creators have made. Discussion questions might include the following:
 - What design choices have they made?
 - What elements do they have on their home page?
2. Discuss the notion of the home page of a website. Point out that the home page is the default page that opens in a browser if the visitor does not specify another page.
3. Briefly review design principles and what's involved in creating a wireframe, including why wireframes are an important part of the website design process.

Note: Explain to students that they will not create a formal production storyboard in this activity, even though this document is generally part of the website design process. Students will create production storyboards for their client sites in Activity 3.5, when they will be involved in a formal client review process.

4. Have students complete the wireframes for their home pages using Adobe Fireworks. Ask them to consider the following:
 - Graphic choice and placement
 - Text choice and placement
 - Navigation choice and placement (for both graphical and text navigation bars)
 - Color choices

Guide: Planning a home page
 5. Pair students to discuss their home page wireframes and design decisions. Ask students to explain their home pages and why they made their decisions about color and layout.
-

Preparation

- Review online professional and coursework portfolios to show students. Sample search keywords you could use: professional portfolio, design portfolio, web portfolio
- If you plan to use the guide, make photocopies.

Extensions

Reviewing audience and purpose: Constructing a wireframe for a website is difficult the first time. Looking at examples of portfolios can help students better understand the possibilities for their own designs. Have a student seminar group find examples and report to the class about the audience and purpose of each portfolio. This presentation can serve as a good introduction to the activity.

Create a wireframe for an existing page: If students have trouble starting their wireframes, consider having the class create a wireframe for an existing portfolio home page to learn all the parts they need to document.

Interview: To help students better understand the importance of creating a wireframe for a website, find a web designer students can interview about the planning process.

Rationale

Just as laying out flowcharts enables designers to think through the flow of their sites, creating wireframes enables them to think through the layout and details of each page. Wireframes help designers create a layout, define the links and buttons on the page, and implement their layout more efficiently. Wireframes also document the design so other people can produce it.

Background resources

- Examples and instructions for visualizing information and using flowcharts
www.jjg.net/ia/visvocab/ - page
- Review the guides for using Fireworks to create web graphics from Unit 1: Graphic design using Adobe Fireworks
- Review the *Principles of graphic design* presentation in Unit 1, Activity 1.6: Planning a logo.

- Resources about information architecture (click the topic Screen View for specific information about creating a storyboard or schematic and determining navigation)
www.adobe.com/resources/techniques/structure/

Assessment

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|--------------------------------------|----------------------------|---|---|
| Portfolio home page wireframe | Absent or incomplete. | Wireframes are consistent with portfolio flowchart and include information on color, placement, and navigation choices. Students clearly explain design decisions for home page plan. | Wireframes are consistent with portfolio flowchart and include information on color, placement, and navigation choices. Students clearly explain design decisions for home page plan. Explanations also include synthesis of information from website analysis. |

ISTE NETS*S Standards for Students

This activity is aligned to the ISTE NETS*S Technology Standards. Depending on the subject and content area the student selects you may research your own state content standards to see how this activity aligns to your state requirements.

ISTE NETS*S: Curriculum and Content Area Standards – NETS for Students

I. Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

- A. apply existing knowledge to generate new ideas and products and processes.

II. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- A. interact, collaborate, and publish with peers, experts or others employing a variety of digital environments and media.
- C. develop cultural understanding and global awareness by engaging with learners of other cultures.

III. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information. Students:

- B. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
- C. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
- D. process data and report results.

IV. Critical Thinking, Problem-Solving & Decision-Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. Students:

- B. plan and manage activities to develop a solution or complete a project.
- C. collect and analyze data to identify solutions and/or make informed decisions.
- D. use multiple processes and diverse perspectives to explore alternative solutions.

Adobe Certified Associate, Web Communication objectives

- 2.5 Demonstrate knowledge of flowcharts, storyboards, and wireframes to create web pages and a site map (site index) that maintain the planned website hierarchy.
- 2.6 Communicate with others (such as peers and clients) about design and content plans.

Key terms

- home page
- navigation
- wireframe
- layout

Activity 2.6

Creating a home page

Objectives

- Build a web page based on a wireframe design.
- Apply user interface design principles and concepts.

Materials

- Adobe Dreamweaver CS4 installed on instructor and student workstations
- Guide: How to lay out a web page with CSS
- Students' home page wireframes from Activity 2.5: Planning a home page

Time

45–90 minutes

Overview

The instructor demonstrates how to use CSS to lay out content on a web page by using Dreamweaver. Then students build their home pages.

Student product: Home page for a web portfolio

Activity steps

1. Make sure students have their home page wireframes.
2. Ask students to start Dreamweaver. Review the Dreamweaver interface.
3. Have students open a new document, save it, and name the file index.htm. Point out that index.htm and default.htm are both default filenames for a home page.
4. Explain how to control the design and layout of a page by placing div tags, then adding content to them. The rectangles students drew for images, text blocks, and navigation on their wireframes represent div tags in their Dreamweaver documents.

Note: You might discuss the historical methods for web page layout, namely the use of tables. Explain to students that div tags are a cleaner implementation of design than using tables and that CSS based layouts are now the standard layout method in professional web design.

5. Demonstrate how to place div tags corresponding to the blocks of information students sketched in their wireframes.

Guide: How to lay out a web page with CSS

6. Review how to add text, graphics, and links to a page.
 7. Ask students to create their home pages from the wireframes. Remind students to create an appropriate title for the page.
 8. Explain to students that although they have designated a space for their navigation, they will build a graphical navigation bar in a later activity to put in this location.
 9. After students have built their home page elements, be sure to have them utilize div tags at the bottom of their page for their text navigation. Have students utilize these div tags to create a text title for each page of their site.
 10. If time permits, ask for volunteers to show their home pages to the class.
-

Preparation

- Review the How to lay out a web page with CSS guide and make photocopies if you plan to give it to students.
- Plan a demonstration for creating a home page. Consider building a home page with CSS to see how it works before showing it to the class.

Extension

Using Local Experts: Assign students as resource specialists. For example, have four students act as local experts to help others use a software product. Extra hands and heads will enable you to manage the classroom without needing to be the sole software expert. As students become more familiar with the software, more students will be able to share the responsibility of being the local experts.

Rationale

Web developers and designers begin producing their web content after they have completed their planning and wireframes. To quickly and efficiently build web pages, many designers use a visual editor, such as Dreamweaver.

Background resources

- How to lay out a web page with CSS guide
- Review the tutorial materials available within Dreamweaver by starting Dreamweaver and choosing Tutorials in the Help menu.
- Look at the online material available for Dreamweaver at www.adobe.com/support/dreamweaver/

Assessment

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|---------------------|----------------------------|--|--|
| Portfolio home page | Absent or incomplete. | Portfolio home page reflects wireframe design and text navigation reflects flowchart elements. | Portfolio home page reflects wireframe design and text navigation reflects flowchart elements. Design and layout of the home page reflect good application of design principles. |

ISTE NETS*S Standards for Students

This activity is aligned to the ISTE NETS*S Technology Standards. Depending on the subject and content area the student selects you may research your own state content standards to see how this activity aligns to your state requirements.

ISTE NETS*S: Curriculum and Content Area Standards – NETS for Students

I. Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

- A. apply existing knowledge to generate new ideas and products and processes.
- B. create original works as a means of personal and group expression

II. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- A. interact, collaborate, and publish with peers, experts or others employing a variety of digital environments and media.

VI. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems and operations. Students:

- A. understand and use technology systems.
- B. select and use applications effectively and productively.
- C. troubleshoot systems and applications.
- D. transfer current knowledge to learning of new technologies.

Adobe Certified Associate, Web Communication objectives

- 2.5 Demonstrate knowledge of flowcharts, storyboards, and wireframes to create web pages and a site map (site index) that maintain the planned website hierarchy.
- 4.2 Create, title, name, and save a web page.

5.2 Organize web page layout with absolutely-positioned div tags and CSS styles.

Key terms

- layers
- absolute positioning
- margin
- fixed width
- fixed height
- padding

Activity 2.7

Creating content pages

Objectives

- Identify consistent elements in web page design.
- Create a consistent layout for pages.
- Insert previously created text onto a web page.

Materials

- Adobe Dreamweaver CS4 installed on instructor and student workstations
- Projection system for instructor workstation or overhead slides with Dreamweaver screenshots
- Guide: Creating consistent content pages
- Guide: How to set document properties
- Guide: How to create lists
- Guide: How to add text from another document
- Guide: How to create data tables

Time

60–105 minutes

Overview

Students design and build the other pages in their portfolios. Students incorporate previously written and formatted documents.

Student product: Content pages for a web portfolio

Activity steps

1. Show the class sample web portfolios and discuss consistency and navigation. Discussion topics include the following:
 - Consistency of navigation
 - Type of navigation on pages
 - Navigation choices
 - How the design creates consistency
 - Consistency of appearance
 - Common design elements between pages

- Page elements that identify the site
 - Benefits of consistency, such as improved usability
2. Ask students to think about their portfolios and what design elements would make their sites consistent. Some guiding questions include the following:
 - Will your page banner be on each page? If yes, is it in the same place? Is it the same size?
 - How will your page banner change to be consistent with other design decisions you make about the site?
 - What font will you use for titles or headings in your content pages?
 - What color will you use for titles or headings in your content pages?
 - What font will you use for descriptions in your content pages?
 - What color will you use for the description font?
 - Where will you place your navigation bar on the page?
 - What content will be on the navigation bar?
 - Will the navigation bar be on every page?
 - Will there be text navigation on every page?
 - How will your navigation bar and text navigation help visitors know which page they are on?

Note: You might give students an opportunity to update their page banners from the previous unit to better match their goals, audience, and design for the portfolio.

Guide: Creating consistent content pages

3. Show students how to set document properties by using the Document properties dialog box.

Guide: How to set document properties
4. Demonstrate how to use the Property inspector to apply a style to a paragraph. Demonstrate how to use the Property inspector to set off a block quotation by indenting it.
5. Have students complete a general content page layout.
6. Pair students and ask them to share their general-content page layouts and describe their consistent elements.
7. For the first content page in their flowchart, have students open a new Dreamweaver document, save it, and name it. (This document should be one of the links on the home page.)
8. If necessary, review adding and modifying div tags, tables, text, and images.
9. Demonstrate how to create lists.

Guide: How to create lists
10. Have students create their general-content page layouts in Dreamweaver.
11. After they complete this general layout, ask students to use Save As on the File menu to save a separate copy of their content pages with a name such as shell.htm to use as a “shell” for other content pages.

12. Have students make a copy of the shell page for each content page in their flowcharts. Remind students to name each page appropriately and to put it in the appropriate subfolder in their local root folders.
13. Have students insert images, text, and other materials onto each content page, to complete all their content pages. If necessary, show students how to copy and paste text from a word-processing document, how to import text from a word-processing document, and how to import tabular data from a spreadsheet.

Guide: How to add text from another document

Guide: How to create data tables

Note: Creating data tables in Dreamweaver is one of the objectives for the Adobe Web Communication certification exam. If students are preparing for this examination, make sure they include data tables, as well as learn to adjust and modify them in their content pages.

Preparation

- Review the guides.
- If you plan to use the guides, make photocopies.

Extension

Distributed skill-building: Another way to teach Dreamweaver skills is to distribute skill expertise among the students. Demonstrate and briefly introduce skills such as creating data tables, inserting images, using text and text properties, and inserting outside content by using copy-and-paste or file import. Following this brief introduction, divide the students into small groups and ask each group to become experts for one of the skills, applying it to a content page they create. After they have mastered their specific skill, ask each group to present their application of the skill to the class and explain their methodology. This explanation and presentation will help others understand how to use the technique while they continue to work on their content pages.

Rationale

Consistent, intuitive page design on a website helps ensure effective visitor experiences. Professional designers look across all site content to determine a page structure that suits all the content and supports effective navigation.

Background resources

- Resources about information architecture (click Screen View from the right column under the word “Structure” for specific information about creating a storyboard to show layout and navigation)
www.adobe.com/resources/techniques/structure/

Assessment

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|--------------------------------|----------------------------|--|---|
| Portfolio content pages | Absent or incomplete. | Portfolio content pages reflect flowchart elements, have a common structure, and include consistent design elements that improve usability for visitors. | Portfolio content pages reflect flowchart elements, have a common structure, and include consistent design elements that improve usability for visitors. Content pages apply principles learned through website analysis. |

ISTE NETS*S Standards for Students

This activity is aligned to the ISTE NETS*S Technology Standards. Depending on the subject and content area the student selects you may research your own state content standards to see how this activity aligns to your state requirements.

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Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- A. interact, collaborate, and publish with peers, experts or others employing a variety of digital environments and media.
- B. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
- D. contribute to project teams to produce original works and solve problems.

VI. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems and operations. Students:

- A. understand and use technology systems.
- B. select and use applications effectively and productively.
- C. troubleshoot systems and applications.
- D. transfer current knowledge to learning of new technologies.

Adobe Certified Associate, Web Communication objectives

- 2.1 Demonstrate general and Dreamweaver-specific knowledge of best practices for designing a website, such as maintaining consistency, separating content from design, using standard fonts, web-safe colors, and utilizing visual hierarchy.
- 4.3 Add text to a web page.
- 4.9 Import tabular data to a web page.
- 4.10 Import and display a Microsoft Word or Microsoft Excel document to a web page.
- 5.1 Set and modify document properties.
- 5.3 Modify text and text properties.

Key terms

- import
- copy
- paste
- consistency
- paragraph style
- usability

Activity 2.8

Linking pages

Objectives

- Construct a text-based navigation bar for a website.
- Link all content pages to the home page in a website.

Materials

- Adobe Dreamweaver CS4 installed on instructor and student workstations
- Projection system for instructor workstation or overhead slides with Dreamweaver screenshots
- Guide: How to create links

Time

45–90 minutes

Overview

The instructor introduces the various types of links and methods for creating links. Students link the pages of their portfolios.

Student product: Text-based navigation bar on the pages of a web portfolio

Activity steps

1. Begin a class discussion to find out what students already know about linking.
 - What are web links?
 - What kinds of things can links connect?
2. After students have had a chance to discuss their perception of links, you might want to elaborate on their comments.
3. Ask students to open their home pages in Dreamweaver.
4. Demonstrate three methods for using the Property inspector to create links from text or an image to another document or file:
 - *Link text box:* Type the pathname for the document or file to link.
 - *Folder icon:* Click the file folder icon next to the Link text box and browse for the document or file to link.
 - *Point to file icon:* If you have the Files panel open, you can click and drag the Point To File icon to draw a link line to the target file in the Files panel. The name of the file you point to will be added to the Link text box automatically.

Point out that the second and third methods are less prone to error because there is no typing.

5. Discuss the differences among the types of links: absolute, site-root-relative, and document-relative.
6. Discuss link targets: `_blank`, `_self`, `_parent`, and `_top`.
7. Ask students to link the text on their home-page text navigation bars to their content pages, as prescribed by their flowcharts.

Guide: How to create links

8. Pair students and ask them to test each other's links against their flowcharts.
 9. If students made the decision to place a text navigation bar on each page of their content pages, have them copy and paste this navigation table onto each of the content pages in the spaces designated for the navigation.
-

Preparation

- Review the How to create links guide.
- If you plan to use this guide, make photocopies.

Extension

Pathname seminar group: Introduce the topic of linking by having a small group of students research pathnames and links and explain to the class what a link is and how it works. The group can also give examples of where they have seen pathnames (other than links).

Rationale

Much of the interactivity on the web comes from links. Links provide connections between pages and within pages. Links are fundamental navigation structures for site visitors.

Background resources

- How to create links guide

Assessment

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|----------------------------------|----------------------------|--|---|
| Text-based navigation bar | Absent or incomplete. | Text-based navigation bar is included on the home page and all content pages of the portfolio. Text navigation accurately reflects flowchart for portfolio. Students understand the differences between different types of links and link targets. | Text-based navigation bar is included on the home page and all content pages of the portfolio. Text navigation accurately reflects flowchart for portfolio. Students understand and can clearly articulate the differences between different types of links and link targets. |

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A. apply existing knowledge to generate new ideas and products and processes.

II. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

A. interact, collaborate, and publish with peers, experts or others employing a variety of digital environments and media.

VI. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems and operations. Students:

A. understand and use technology systems.

B. select and use applications effectively and productively.

C. troubleshoot systems and applications.

D. transfer current knowledge to learning of new technologies.

Adobe Certified Associate, Web Communication objectives

4.5 Link web content, using hyperlinks, e-mail links, and named anchors.

6.5 Manage assets, links, and files for a site.

Key terms

- hyperlink
- link
- absolute link
- site-root-relative link
- document-relative link
- link target
- named anchor
- pathname

Activity 2.9

Ensuring usability and accessibility

Objectives

- Identify navigation techniques and effectiveness (usability).
- Identify website elements that promote accessibility, such as alternative text tags for images and labeled links.
- Identify features of a website that can increase or decrease usability.

Materials

- Newspapers
- Worksheet: Usability
- Worksheet: Accessibility

Time

90 minutes

Overview

Students analyze and compare navigation methods in print media and on the web. Students examine usability and accessibility in their analyses and report to the class.

Student product: Analysis of website usability and accessibility

Activity steps

1. Organize students into groups of four or less.
2. Distribute complete newspapers to each group.
3. Discuss navigation and usability. Some questions to guide discussion include the following:
 - What devices are used to tell you where you can find certain types of information?
 - What categories of information do you find in newspapers?
 - Where are these categories located?
 - What can you say about the amount of information you can find in any particular area? In the entire paper?
4. Proceed in this manner until the class exhausts all visual clues about navigation, structure, and organization.

5. Explain to students that they will do a similar usability analysis on websites, but their analysis will also include accessibility.
6. Discuss text-formatting guidelines that improve website readability, such as minimum font sizes; the use of serif and sans serif fonts; the use of color, alignment and indentation; paragraph headings; and lists. Show students a site that illustrates good text formatting and one that doesn't.
7. Discuss accessibility and why it matters to website visitors as well as website sponsors. Describe the W3C Priority 1 Checkpoints. Show students a site that illustrates adherence to the checkpoints and one that doesn't.
8. Discuss screen readers, including what parts of a web page they can read and what parts they cannot read.

Note: You can use the information from the Adobe Accessibility Resource Center to guide your discussion: www.adobe.com/accessibility/

9. Reorganize students into pairs. Assign each pair two websites that address the same topic and have the same purpose so students can compare ease of use and accessibility. Choose topics of interest to your students or use the following examples:
 - Sports:
www.fifa.com and www.ussoccer.com and www.wnba.com
 - Safe driving:
www.cyberdriveillinois.com/publications/rules_of_the_road/rr_chap10.html and www.crashprevention.org
 - Skin cancer:
www.melanoma.com and www.maui.net/~southsky/introto.html
10. Ask students first to compare their two sites for usability. Have them rank the sites for usability, ranging from easy to difficult. Questions for guiding student inquiry might include the following:
 - What types of navigation elements are used: Buttons, hyperlinks, images, something else?
 - As you navigate, how many clicks does it generally take to get to information you are seeking?
 - As you navigate, do you get to the information you are expecting?
 - Is the site structure apparent?
 - How long does it take for pages to load? (Typical visitors will wait seven seconds for a page to load before moving on.)
 - Is the text readable? Is the text uniquely styled? If so, does the styling add value to the purpose?
 - Is the site structure apparent?
 - How does the use of text, navigation, and site structure make the site easier or more difficult for visitors?
 - Do the images have alternative text (Alt text) so descriptive text appears when you roll the pointer over the image?
 - Are there clear titles, headings, or other visual elements that specifically help organize the information?

Worksheet: Usability

11. Ask students to return to their two sites and compare them for accessibility. Have them rank the sites for accessibility, just as they did for usability, ranging from easy to difficult. Questions for guiding student inquiry might include the following:

- Do the images have alternative text (Alt text) so descriptive text can be read by screen readers?
- Are all the links, including embedded links, labeled so they can stand alone?
- Do tables have header rows?
- Are there clear titles and headings that help organize the information for someone using a screen reader?
- Is the navigation scheme positioned conveniently for someone using a screen reader?
- Can a site visitor use the tab button to access all elements on the page/site?
- Is color the only element used to convey emphasis?

Worksheet: Accessibility

12. In a class discussion, ask students to report their rankings and findings on both usability and accessibility to the class.

13. Ask for evidence for their conclusions.

14. As a wrap-up activity, ask students to write a self-reflection on what they have learned about the principles of good usability and accessibility and how navigation compares between print vs. web media.

Preparation

- Gather enough newspapers so each group will have one complete edition. These do not need to be current.
- Identify sample websites for demonstration. Select one website that has poor usability and one that has good usability. Select one website that has poor accessibility and one that has good accessibility.
- Review the reference to the W3C Priority 1 Checkpoints in Background resources.
- If you plan to use the worksheet, make photocopies.

Extensions

Alternative to newspapers: For the newspaper portion of the demonstration, you could substitute a magazine or dictionary. The navigation devices are similar. Some key points for comparison follow:

- Printed matter is relatively permanent compared to the somewhat transitory nature of the web.
- Physical size limitations of print media restrict the sheer volume of information that can be conveyed, in contrast to the practically unlimited capacity of the Internet.
- Position of navigation elements is consistent across much print media, in contrast to frequently inconsistent positioning of navigation devices on the web, sometimes even within a website.

Sample usability guideline: Setting visitor performance and preference goals helps developers build better websites. It can also help make usability testing more effective. For example, some Internet sites have set a goal that information will be found 80% of the time and in less than one minute.

Rationale

The visitor's ability to locate information quickly and easily on a website is a reflection of the site design.

Some design accommodations are physical devices such as specialized keyboards and readers that voice the text on the screen and the alternative text (Alt text) for images. Others are additions to the visual layout of the website that make it more accessible to all visitors. Ease of use, navigation, site structure, text readability, visual layout, and accessibility are all major considerations in the design of websites and are part of the larger topic of effective communication.

Background resources

Quick tips for making accessible websites

For full details, check www.w3.org/WAI/ or www.adobe.com/accessibility/

- *Images and animations:* Use alternative text descriptions (Alt text) to describe the function of each visual element.
- *Multimedia:* Provide captioning and transcripts of audio and descriptions of video.
- *Links:* Use text that makes sense when read out of context. For example, avoid “click here.”
- *Page organization:* Use headings, lists, and consistent structure.
- *Graphs and charts:* Summarize or use the long description attribute.
- *Data Tables:* Make line-by-line reading sensible. Summarize.

Accessibility resources

- W3C Priority 1 Checkpoints
www.w3.org/TR/WCAG20/
- Dreamweaver has a built-in check for accessibility:
Select File > Check Page > Accessibility
- A list of accessibility resources:
www.crittur.com/access

Usability resources

- An excellent site that contains various usability topics:
<http://usability.gov/guidelines>
- A site that has lists of sites about usability:
www.usableweb.com/

Assessment

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|-------------------------------|-----------------------------------|---|---|
| Navigation analysis | Absent or incomplete. | Students can identify elements used to aid navigation in print and web media. Students can evaluate how well navigation elements work to help users find information quickly and efficiently. | Students can identify elements used to aid navigation in print and web media. Students can evaluate how well navigation elements work to help users find information quickly and efficiently. Students analysis clearly distinguish successful mechanisms used across different mediums to reach audiences. |
| Usability analysis | Absent or incomplete. | Students can define usability and explain its impact on web page elements. Usability evaluations include supporting information for ranking decisions. | Students can define usability and explain its impact on web page elements. Usability evaluations include supporting information for ranking decisions. Students can offer alternatives to improve usability. |
| Accessibility analysis | Absent or incomplete. | Students can define accessibility and explain its impact on web page elements. Students understand the role of WC3 for setting accessibility guidelines globally. Accessibility evaluations include supporting information for ranking decisions. | Students can define accessibility and explain its impact on web page elements. Students understand the role of WC3 for setting accessibility guidelines globally. Accessibility evaluations include supporting information for ranking decisions. Students can offer alternatives to improve accessibility. |

ISTE NETS*S Standards for Students

This activity is aligned to the ISTE NETS*S Technology Standards. Depending on the subject and content area the student selects you may research your own state content standards to see how this activity aligns to your state requirements.

ISTE NETS*S: Curriculum and Content Area Standards – NETS for Students

I. Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

- C. use models and simulations to explore complex systems and issues.
- D. identify trends and forecast possibilities.

II. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- A. interact, collaborate, and publish with peers, experts or others employing a variety of digital environments and media.
- C. develop cultural understanding and global awareness by engaging with learners of other cultures.

III. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information. Students:

- A. plan strategies to guide inquiry.
- B. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
- C. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
- D. process data and report results.

IV. Critical Thinking, Problem-Solving & Decision-Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. Students:

- A. identify and define authentic problems and significant questions for investigation.
- C. collect and analyze data to identify solutions and/or make informed decisions.
- D. use multiple processes and diverse perspectives to explore alternative solutions.

V. Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

- A. advocate and practice safe, legal, and responsible use of information and technology.
- B. exhibit positive attitudes toward technology uses that support collaboration, learning, and productivity.
- C. demonstrate personal responsibility for lifelong learning.

Adobe Certified Associate, Web Communication objectives

- 1.4 Demonstrate knowledge of website accessibility standards that address the needs of people with visual and motor impairments.
- 2.4 Identify basic principles of website usability, readability, and accessibility.

Key terms

- multimedia
- alternative text (Alt text)
- accessibility
- usability
- embedded link
- navigation elements
- readability
- site structure

Activity 2.10

Making a graphical navigation bar

Objectives

- Create a simple three-state button.
- Create a navigation bar with multiple buttons.
- Export a navigation bar as an HTML page with a folder of supporting images.

Materials

- Adobe Fireworks CS4 and Adobe Dreamweaver CS4 installed on instructor and student workstations
- Projection system for instructor workstation or overhead slides
- Guide: How to create buttons and navigation bars

Time

90–135 minutes

Overview

The class discusses the criteria for a button to make the usability connection between a physical button and a virtual button. The instructor demonstrates how to make a button. Students then build their own buttons to include as graphical navigation elements in their portfolios.

Student product: Navigation bar

Activity steps

1. Introduce the concept of buttons with a class brainstorm about the action of physical buttons. Possible questions to ask include the following:
 - What is a button?
 - What are the features of a button that tell you it is a button?
 - What can a button look like?
 - How do you know whether you can push or turn a button?
 - How do you know if you've effectively pressed a button?
 - How do you know the button did something when you pressed it?
2. As students define physical buttons, begin to categorize their responses into the Up, Over, and Down states (as these terms are used in the Fireworks Button Editor). For example, a button has a different feel because you can push or move it to cause something to happen. To replicate this feeling on the web, a button can appear initially as raised or three-dimensional, indicating that it can be clicked.

3. Explain that virtual buttons can have four states: Up, Over, Down, and Over While Down. The first three states are the most commonly used.
 4. Demonstrate how to create a three-state button in Fireworks and how to set the active area for a button.
Guide: How to create buttons and navigation bars
 5. Ask students to use Fireworks to create a button with a label that corresponds to an element in their navigation bars. Remind them that the look of their buttons should coordinate with their site designs.
 6. Have students continue by making a button for each element of their navigation bars.
 7. Demonstrate how to export a navigation bar from Fireworks.
Guide: How to create buttons and navigation bars
 8. Ask students to export their navigation bars from Fireworks and then insert the navigation bars into their portfolio pages by using Dreamweaver.
 9. Demonstrate how to use roundtrip editing to edit images with Fireworks from inside Dreamweaver.
-

Preparation

- You might want to try building buttons before doing it in class. Then you will have an example to show students.
- If you plan to use the guide, make photocopies.

Rationale

Buttons are important components of web pages. Buttons are used in navigation and linking between pages and sites. Creating a button requires a careful design of physical appearance and perceived action.

Background resources

- Criteria for optimal web design (designing for usability) by Michael Bernard:
www.rocketface.com/archive/Criteria%20for%20optimal%20web%20design.html

Assessment

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|-------------------|----------------------------|--|---|
| Button navigation | Absent or incomplete. | Buttons have clear up, over, and down states. Button design coordinates with overall site design. | Buttons have clear up, over, and down states. Button design coordinates with overall site design. Students articulate design principles used when designing their button navigations. |

ISTE NETS*S Standards for Students

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ISTE NETS*S: Curriculum and Content Area Standards – NETS for Students

VI. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems and operations.

Students:

- A. understand and use technology systems.
- B. select and use applications effectively and productively.
- C. troubleshoot systems and applications.
- D. transfer current knowledge to learning of new technologies.

Adobe Certified Associate, Web Communication objectives

4.7 Insert navigation bars, rollover images, and buttons created in Fireworks on a web page.

5.4 Modify images and image properties.

Key terms

- button
- navigation bar
- Up state
- Over state
- Down state
- Over While Down state
- active area
- roundtrip editing

Activity 2.11

Quality assurance I: Technical testing

Objectives

- Create a detailed checklist for technical testing of a website.
- Test the technical operation of a website by checking links, consistency of layout structures, spelling, and compatibility with different browsers.

Materials

- Adobe Dreamweaver CS4 installed on instructor and student workstations
- Projection system for instructor workstation or overhead slides with Dreamweaver screenshots
- Guide: How to check links

Time

45 minutes

Overview

Students learn technical and functional testing as part of the quality assurance process. Students define quality criteria and then create detailed checklists for technically testing their own sites. Students test their sites and implement any required fixes.

Student product: Technical test documentation and updated portfolios

Activity steps

1. Introduce the topic of quality assurance by asking students about their perception of quality assurance.
 - What is quality assurance?
 - What steps would you take to guarantee quality?
2. Present an overview of this activity and the next, in which students will conduct a quality assurance test on their electronic portfolios, doing technical and functional testing as well as usability testing.
3. For technical testing, ask students to make a checklist—also called a test plan—of the technical features they need to test. Their checklists might include the following:
 - Test links and buttons on every page. (List each page.)
 - Confirm that standard layout structure and elements appear on every page (for example, banners across the top, navigation bars).
 - Check spelling on every page.
 - Check that all images have alternative text.

- Check that the site is compatible with popular browsers, such as Internet Explorer and Mozilla Firefox.
 - *Optional:* Check that the site works on multiple operating systems, including elements that appear differently on the platforms.
4. In a brief demonstration, show students the Link Checker feature of Dreamweaver.
Guide: How to check links
 5. Have students perform technical testing of their sites and document any problems they find.
 6. Ask students to fix problems found in testing and then test the site again, specifically looking at each problem to make sure it has been fixed.

Preparation

- Consider drafting a technical testing checklist to help students come up with ideas on what to test.
- If you plan to use the guide, make photocopies.

Rationale

After completing website production, a web team begins the process of quality assurance. The quality assurance phase tests a site from various perspectives, including technical and functional implementation, content accuracy, and visitor experience. The first stage of this process is to solve any technical and functional problems such as broken links, spelling errors, standard format, and browser rendering. Critical to technical testing is re-testing after problems have been fixed.

Background resources

- Resources about testing (click the words Build and Test from the right column and then click Testing) www.adobe.com/resources/techniques
- *All Things Web:* Testing and Quality Assurance www.pantos.org/atw/testing.html

Assessment

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|------------------|----------------------------|---|---|
| Test plan | Absent or incomplete. | Test plans have clear goals and checklist of items to test for site. Students document test and report results. | Test plans have clear goals and checklist of items to test for site. Students document test and report results. Plans are carried out effectively, offering alternatives and solutions for improvement. |

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|--------------------------|-----------------------------------|--|--|
| Portfolio website | Absent or incomplete. | Students identify and implement solutions to technical problems. | Students identify and implement solutions to technical problems. |

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ISTE NETS*S: Curriculum and Content Area Standards – NETS for Students

IV. Critical Thinking, Problem-Solving & Decision-Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. Students:

- A. identify and define authentic problems and significant questions for investigation.
- B. plan and manage activities to develop a solution or complete a project.
- C. collect and analyze data to identify solutions and/or make informed decisions.
- D. use multiple processes and diverse perspectives to explore alternative solutions.

V. Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

- A. advocate and practice safe, legal, and responsible use of information and technology.
- B. exhibit positive attitudes toward technology uses that support collaboration, learning, and productivity.
- C. demonstrate personal responsibility for lifelong learning.

VI. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems and operations. Students:

- A. understand and use technology systems.
- B. select and use applications effectively and productively.
- C. troubleshoot systems and applications.
- D. transfer current knowledge to learning of new technologies.

Adobe Certified Associate, Web Communication objectives

2.2 Produce website designs that work equally well on various operating systems and browser versions/configurations.

6.1 Conduct basic technical tests.

Key terms

- quality assurance
- criteria
- compatibility
- testing
- broken links

Activity 2.12

Quality assurance II: Usability testing

Objectives

- Plan a usability test.
- Conduct a usability test through observations and questioning.
- Evaluate a home page by applying a usability test.
- Implement a home page redesign based on the usability test.

Materials

None

Time

45–90 minutes

Overview

Students plan and conduct a usability study of their web portfolios. Students include two types of tests in their usability studies: a paper interview and an observation.

Student product: Usability-test documentation and redesign of web portfolio

Activity steps

1. Introduce the topic of usability testing by asking students about their perception of usability testing.
 - What is usability testing?
 - How would you conduct a usability test?
 - Why is it important to ask site visitors questions?
 - Why is it important to watch visitors as they go through your site?
 - What types of things should you look for when you watch site visitors?
 - How will you know that site visitors are having trouble when you are watching them?
 - When watching site visitors, how will you know when they like what they see on your site?
2. Usability observation looks for latent behavior, behavior of which the site visitor is unaware. Latent behavior is found in body language or facial expressions that visitors are unable to verbalize. Some examples follow:
 - Site visitors might wave the pointer around the screen for a short while, looking for something, but might not document that the item was difficult to find.

- Site visitors might sigh or frown after clicking a link because they are tired of waiting for an image to load. This behavior indicates that an image file is too large, but the visitor might not document this occurrence.
3. Have students make a usability-test interview form for visitors to fill out as they go through a site. You might want to provide your students with some ideas for interview forms from the checklists provided on the *All Things Web* site (see Background resources).
 4. Pair students so each can act as a site tester for the other.
 5. Have one partner go through the other's site as a tester, completing the sections of the usability-test interview form. The other student should observe the tester and document actions, watching for latent behavior.
 6. After the first test is finished, have partners switch roles and perform the usability test for the other student's site.
 7. From the usability-test interview form and observation notes, have students propose written solutions and implement them on their sites. If they do not plan to implement a proposed solution, have them document why they made this decision.
 8. Discuss methods for collecting site visitor feedback and site evaluation information after a site has been published to the web, to determine how well the site meets its intended goals and visitor needs. Such methods might include an e-mail link or a feedback form.
-

Preparation

- You might want to create your own usability-testing checklist to help students gain more ideas on what to test. Check *All Things Web* in Background Resources for suggestions on usability-test interview questions.
- Students complete the web portfolio project in this activity. If you want to do a full project assessment, use the sample project rubric in the Course Overview and Setup.

Extensions

Using constructive comments: Working in teams requires students to become better communicators. Many times during the web development process, students will need to critique each other's work. Giving feedback requires students to be sensitive to the feelings of others. To help students become better communicators, you might spend some time brainstorming with the class to identify constructive comments and words. This class-generated list can be posted as a reminder for everyone when giving a critique of a fellow student's work.

Student seminar topic: Usability testing

Rationale

Web development teams perform two types of tests with site visitors. After visitors have navigated around a site, teams interview visitors to learn where they experienced problems. Web teams also observe visitors

to witness problems they have. Both methods are necessary because visitors do not always realize they are having trouble or might have difficulty explaining their problem, discomfort, or confusion.

Background resources

- Resources about testing (click the words Build and Test from the right column and then click Testing)
www.adobe.com/resources/techniques/structure/
- All Things Web: User Testing Techniques*
www.pantos.org/atw/35317.html

Assessment

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|--------------------------|----------------------------|--|--|
| User test plan | Absent or incomplete. | User test plans have clear goals and comprehensive set of elements to investigate for the site. Students clearly and completely document test and report results that include suggestions and alternatives for solving user problems related to items identified on the user test form and problems found through observation. | User test plans have clear goals and comprehensive set of elements to investigate for the site. Students clearly and completely document test and report results that include suggestions and alternatives for solving user problems related to items identified on the user test form and problems found through observation. Students retest revised sites to make sure user problems are truly minimized. |
| Portfolio website | Absent or incomplete. | Students identify and implement solutions to user problems. Students provide explanations and substantiation for implemented changes. | Students identify and implement solutions to user problems. Students provide explanations and substantiation for implemented changes. |

ISTE NETS*S Standards for Students

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ISTE NETS*S: Curriculum and Content Area Standards – NETS for Students

IV. Critical Thinking, Problem-Solving & Decision-Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. Students:

- A. identify and define authentic problems and significant questions for investigation.
- B. plan and manage activities to develop a solution or complete a project.
- C. collect and analyze data to identify solutions and/or make informed decisions.
- D. use multiple processes and diverse perspectives to explore alternative solutions.

V. Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

- A. advocate and practice safe, legal, and responsible use of information and technology.
- B. exhibit positive attitudes toward technology uses that support collaboration, learning, and productivity.
- C. demonstrate personal responsibility for lifelong learning.
- D. exhibit leadership for digital citizenship.

Adobe Certified Associate, Web Communication objectives

- 6.2 Identify techniques for basic usability tests.
- 6.3 Identify methods for collecting site feedback.
- 6.4 Present web pages to others (such as team members and clients) for feedback and evaluation.

Key terms

- usability test
- latent behavior
- observation
- feedback

Activity 2.13

Publishing a website

Objectives

- Define terms related to publishing a website.
- Identify the steps necessary to publish a website by using Dreamweaver.

Materials

- Adobe Dreamweaver CS4 installed on instructor and student workstations
- Projection system for instructor workstation or overhead slides with screenshots of the Dreamweaver interface
- Guide: How to publish web files
- Guide: Managing files and links by using the Files panel

Time

30–45 minutes

Overview

The instructor introduces the steps for publishing a website. If students have access to a remote server, they publish their web portfolios. The instructor demonstrates use of the Files panel for maintaining site files and links.

Student product: Published portfolio

Activity steps

1. Introduce students to the concept of publishing a website. Explain the general idea of taking files from students' local root folders on their computers and putting them in a location on a remote server.
2. Explain to students that although there are various ways to publish, they will be using Dreamweaver to publish their web files. You might ask students to generate a list of other techniques that can also be used to publish files.
3. Using a projector, briefly introduce students to the Files panel and the publishing process in Dreamweaver. Have students open Dreamweaver and look at the Files panel. Discuss and define the following terms, relating them to interface elements in the Files panel:
 - Dreamweaver site map
 - local host
 - get files
 - remote server
 - put files
 - publish
 - FTP

4. Demonstrate how to set up a remote site.

Guide: How to publish web files

Note: Point out to your students the differences between Web servers and FTP servers as they relate to publishing a Dreamweaver site.

5. Discuss the contents of the dialog boxes you encounter as you demonstrate the steps for setting up a remote site.

Note: Explain check in/check out and subversion integration as file management tools students will use in a later unit when they are working collaboratively to develop websites.

6. If students have access to a remote server, allow time for them to publish their sites.

Note: If you can't allow students to publish their own files, you might spend more time discussing the steps you demonstrate and engaging in extension activities to help students better understand the publishing process.

7. Have students use a web browser to open their newly published sites, navigate to each page, and make sure all files were successfully published and function as they should.

8. To round out students' knowledge of the Files panel, show them how to use the panel to maintain site files and links.

Guide: Managing files and links by using the Files panel

Preparation

- Review the How to publish web files and Managing files and links by using the Files panel guides.
- If you plan to use the guides, make photocopies for students.
- Work with your tech coordinator or system administrator to set up student access so they can publish their files to a remote server.

Extension

Publishing techniques: Form small groups of students to research techniques on publishing websites. Consider techniques students might encounter if they were to publish from a home computer, such as using FTP clients or wizards from site-hosting services such as Yahoo. After each group has learned about its technique, have the group briefly present it to the class. Their presentation might include the positive and negative points of using the technique, a short demonstration or handout explaining how the technique is used, and a description of the technology behind the technique.

Rationale

Since most development occurs on developers' local machines, publishing provides developers the opportunity to take their finished files to the web. Many professional web developers use visual editors such as Dreamweaver to publish files they work on locally.

Background resources

- Review the tutorial materials available within Dreamweaver by choosing Getting Started and Tutorials from the Help menu.
- Look at the online material available for Dreamweaver at www.adobe.com/support/dreamweaver/

Assessment

| | Does not meet expectations | Meets expectations | Exceeds Expectations |
|----------------------------|----------------------------|---|--|
| Published portfolio | Absent or incomplete. | Students can define terms related to website publishing and articulate the differences between local and remote sites. Students understand the main components of the Files panel used in remote site setup. Published portfolios function as they did when testing them locally. | Students can define terms related to website publishing and articulate the differences between local and remote sites. Students understand and explain to others the main components of the Files panel used in remote site setup and how they are used for publishing. Published portfolios function as they did when testing them locally. |

ISTE NETS*S Standards for Students

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ISTE NETS*S: Curriculum and Content Area Standards – NETS for Students

VI. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems and operations.
Students:

- understand and use technology systems.
- select and use applications effectively and productively.
- troubleshoot systems and applications.
- transfer current knowledge to learning of new technologies.

Adobe Certified Associate, Web Communication objectives

- 3.5 Use the Files panel.
- 6.5 Manage assets, links, and files for a site.
- 6.6 Publish and update site files to a remote server.

Key terms

- root folder
- cache
- FTP
- local host
- remote site
- site map
- get files
- put files

Activity 2.14

HTML basics

Objectives

- Write basic HTML tags.
- Create a web page by writing HTML code.
- Identify HTML tags and structures, using the Code view in Dreamweaver.

Materials

- Adobe Dreamweaver CS4 installed on instructor and student workstations
- Projection system for instructor workstation or overhead slides with screenshots
- Guide: HTML tags

Time

45–90 minutes

Overview

Students look at the HTML source on websites. They learn HTML basics and write HTML code to build a basic page.

Student product: Basic HTML document

Activity steps

1. Open a website in a web browser, select Source (or Page Source) from the View menu, and show students the source of a sample site. Briefly explain what HTML is and how it works.
2. Show students how they can use Code view in Dreamweaver to examine and write HTML code. Show them how to use the O'Reilly HTML Reference in the Reference panel for detailed information about any tag in the Code view. (Select the tag and press F1 or select Window > Reference.)
3. Show students the combination Code and Design view and Live View and help them understand the four views of the document window and how each might be useful for different purposes.
4. Explain to students that they will conduct circuit teaching, during which small groups of students teach the rest of the class by demonstrating a type of tag, explaining how it works, and giving an example of it.

Guide: HTML tags

5. Briefly demonstrate the following:
 - What tags to include on every HTML document
 - How to preview a saved document in a browser
 6. Following the demonstration, form student groups consisting of two or three students.
 7. Assign a type of tag to each group. Have each group create a short page that demonstrates that tag. Students should only type HTML tags in Code view, without using any of the usual tools available to create visual elements in Design view. (It might be helpful, however, to use the Code and Design view to observe in the Design view the effect of the code they type in the Code view.) Then, have students assign appropriate CSS styles to the element they created with HTML tags.

You might assign tags for implementing the following tasks:

 - Write text and use heading tags
 - Insert links
 - Place color on the background and change font color
 - Create tables for displaying data
 - Create ordered and unordered lists
 8. Give groups about 15 minutes to complete the assignment.
 9. Have each group present its tag to the class, demonstrating the following:
 - Tag format.
 - A complete page that renders that tag. In addition to the highlighted tag, this page will contain the proper tags necessary for every web page.
 - How the tag works.
 - How assigning the CSS style changed the look of the visual element.
 10. After student teaching sessions, have each group create a complete web page that talks about the group, using all the tags they learned.
 11. If time permits, have student groups present their sites to the class.
-

Preparation

- Review the HTML Tags guide. If you plan to use this guide, make photocopies.
- Review HTML websites from the Resources section, if necessary.
- Find a sample website from which students can view the source, or create a simple “All about me” page about yourself so students can view the source file for your page.

Extension

More Tags: To further challenge students to understand tags, have student groups look up a website and identify the tags and what these tags render on the web page. These pages might contain tags not covered

in this activity, challenging students to make a connection between tags and the visual appearance of the website.

Rationale

Many web designers use visual HTML editors such as Dreamweaver to create their web pages; however, basic knowledge of HTML helps them with troubleshooting. Similarly, students should know the basics of HTML code that underlie the design and content of a web page.

Background resources

- O'Reilly HTML Reference in the Reference panel of Dreamweaver
- HTML Primer
www.htmlprimer.com
- Writing HTML tutorial
www.mcli.dist.maricopa.edu/tut/

Assessment

| | Does not meet expectations | Meets expectations | Exceeds expectations |
|------------------------------|----------------------------|--|---|
| HTML tags | Absent or incomplete. | Students can distinguish between required HTML elements and optional HTML elements needed to structure pages. Students can identify and use tags to set up an HTML document, format text, add links, create tables for displaying data, and build ordered and unordered lists. | Students can identify and clearly articulate the difference between required HTML elements and optional HTML elements needed to structure pages. Students can identify and use tags to set up an HTML document, format text, add links, create tables for displaying data, and build ordered and unordered lists. |
| CSS styles | Absent or incomplete. | Students can assign appropriate CSS styles to HTML tag created elements. | N/A |
| HTML circuit teaching | | Student presentations include tag format, a page that renders that tag, an explanation of how the tag works, and a description of how assigning a CSS style changed the visual element. | Student presentations include tag format, a page that renders that tag, an explanation of how the tag works, and a description of how assigning a CSS style changed the visual element. Student |

| | | | |
|--|--|--|--|
| | | | presentations include clear explanations and original and researched examples. |
|--|--|--|--|

ISTE NETS*S Standards for Students

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ISTE NETS*S: Curriculum and Content Area Standards – NETS for Students

VI. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems and operations.

Students:

- A. understand and use technology systems.
- B. select and use applications effectively and productively.
- C. troubleshoot systems and applications.
- D. transfer current knowledge to learning of new technologies.

Adobe Certified Associate, Web Communication objectives

3.1 Identify elements of the Dreamweaver interface.

5.6 Use basic HTML tags to set up an HTML document, format text, add links, create tables, and build ordered and unordered lists.

Key terms

- tag
- HTML
- source code
- URL
- align
- Design view
- Code view
- Code and Design view
- Live View