Lesson Plan

Topic Area:
Website Design

Grade Range:
Beginning Web Developers - High School and Above

Goals/Outcomes:
Students are required to work on a semester-long project in which they will apply the concepts and tools of web design to create and publish an original website, based on an instructor-approved topic of their choice. Once completed, students will be able to demonstrate mastery of website construction techniques by following the full planning, design and development process from beginning to end

Objectives:
- Complete the website project topic approval form
- Complete the website project planning analysis sheet
- Create a Cacoo account *(advanced online diagraming tool used for creating sitemaps and wireframes used to express a solution)*
- Create a sitemap to get a sense of the framework of your site and the relative importance of the various elements of your site by:
  - ✓ Identifying the major areas of your site (sitemap)
  - ✓ Identifying the areas subordinate to each main area (sitemap)
- Identify what a web page wireframe is.
- Describe how to use the wireframe as a tool in the web development process.
- Create a wireframe for the homepage of the semester website project, that includes all of the following:
  - ✓ labeled boxes representing areas or regions
  - ✓ text representing content
  - ✓ crossed out boxes representing images
  - ✓ navigational features (tabs, navigation bars, links)
  - ✓ annotations explaining any dynamic functionality
- Create an original website consisting of at least ten web pages based on your approved topic
- Create a Free Hosting Cloud account
- Download and install FileZilla
- Use FileZilla FTP to upload your completed website to your Free Hosting Cloud Account
- Complete three sitemap peer reviews
- Complete three wireframe peer reviews
- Complete one peer review on final website project

Student Projects:
Over the course of this project, students produce the following pieces that will make up their complete product:
- Topic Approval Form
- Planning Analysis Sheet - Website Project (Checkpoint #1)
- Sitemap – Website Project (Checkpoint #2)
- Homepage Wireframe - Website Project (Checkpoint #3)
- Completed 10-page or more Website (two more progress checkpoints will be scheduled after wireframes, but before the final project due date.)

Assessments:
Collect students' Planning Analysis worksheets to see that they have thoughtfully planned the project. Check to see if they have a clear understanding of their website's purpose. The sitemaps should represent clear organization of the webpages to be included. The wireframe of the home page should appear to be a layout that is reasonable for a first year student to accomplish.

✓ **Sitemap Rubric** *(see below)* ✓ **Wireframe Rubric** *(see below)* ✓ **Final Website Project Rubric** *(see below)*	

Standards. Themes, or Skills

Technology Standards:	How Met:
1. Creativity and Innovation **a.** Apply existing knowledge to generate new ideas, products, or processes **b.** Create original works as a means of personal or group expression **2. Communication and Collaboration** **b.** Communicate information and ideas effectively to multiple audiences using a variety of media and formats **4. Critical Thinking, Problem Solving, and Decision Making** **b.** Plan and manage activities to develop a solution or complete a project **5. Digital Citizenship** **b.** Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity **6. Technology Operations and Concepts** **a.** Understand and use technology systems **d.** Transfer current knowledge to learning of new technologies	Students will apply what they have learned throughout the course to create an original website. There are several steps one must take in planning and designing a website which involve critical thinking, problem-solving, and decision making techniques. First and foremost, the project must be defined; the site's purpose, the target audience, and so on. After choosing a topic, student will research the content and gather information about the subject of the site. This creative process involves analyzing; taking things apart, and synthesizing; putting things together. After all the information has been gathered, the next step is to lay out the content in a sitemap. This will present the content of the page in a visual way, making the navigation design much easier and efficient. This stage of the planning process involves deciding on what pages the site will include, naming them, and then grouping them according to their content; sort of like creating a concept map. After creating their sitemaps, students will then move on to creating wireframes for their homepage, which to illustrates the features, content and links that need to appear on the page. By using Cacoo to construct and share their sitemaps and wireframes, student will be demonstrating digital citizenship. Before applications like Cacoo came into play, website designers would use the traditional pen and paper method to create sitemaps and wireframes to use as deliverables for clients. Cacoo features sharing and collaboration capabilities that traditional methods lack. These diagramming techniques will promote visual learning in ways that help students demonstrate critical thinking by brainstorming and idea generation, identifying connections, understanding relationships, evaluating events and information, as well as problem-solving by "looking at the situation or issues from a systemic perspective". They also promote visual communication which "is an effective way to communicate and assess understanding and knowledge. Collaborating using visual diagrams can engage students, support participation and lead to greater understanding, knowledge and co-learning."

Strategies, Resources, and Tools

Proposed or Recommended Instructional Strategies:	Rationale:
During the semester of a basic web design course, students will apply what they have learned throughout the chapters of the required textbook to create a final website project. Each stage of the website project, from planning to completion, will have a due date checkpoint. Sitemap and wireframe examples are provided, as well as tutorials,	Checkpoints throughout the various stages of the project will allow for just-in-time tutorials and lessons. They not only enable the instructor to evaluate the student's work to see where they may need help, but also to ensure that students are progressing in a timely manner. Examples, tutorials, instructional videos, and additional IA resources

instructional videos, and additional resources for information architecture.	are provided to cover understanding of technology tools used (Cacoo), as well as a more in-depth understanding of IA that the required textbook does not provide.
Related Resources: • Textbook, Basics of Web Design: HTML5 & CSS3 Chapter 4: Web Design Basics: http://www.coursesmart.com/basics-of-web-design-html5-and-css3/terry-ann-felke-morris/dp/9780132176613 • Internet Resource - Information Architecture: Creating a Sitemap: http://usability.gov/methods/design_site/define.html#CreatingaSitemap • Internet Resource - Information Architecture: Creating a Wireframe: http://usability.gov/methods/design_site/define.html#CreatingaWireFrame • Internet Resource - Cacoo Wireframe Tutorial: http://issuu.com/annamiars/docs/wireframe_tutorial • Cacoo Overview Video: http://www.amyhissom.com/ITEC57430/Cacoo/Cacoo.html • Sitemap Example: http://www.slickplan.com/project/41703 • Wireframe Example: https://cacoo.com/diagrams/3smXHdGLzOp1UMox • Internet Resource: FileZilla How To's - http://wiki.filezilla-project.org/Documentation	**Rationale:** The required textbook will be used to learn the basics of HTML5 and CSS3, as well as website planning. This book explains sitemaps and wireframes, however, it does not incorporate the use of online diagramming tools that can be used to create them. Therefore, the inclusion of additional resources pertaining to Cacoo will give the student a better understanding of how it is used. The Usability.gov website covers a lot of information pertaining to Information Architecture; therefore, direct links are provided for sections of this site pertaining to sitemaps and wireframes. The example sitemap and wireframe are included to give the student an idea of how each would look when finished. The FileZilla documentation direct link is provided, which lists many instructions in terms of installing and using the application.
Recommended Technology Tools: • Notepad • Computer • Internet Access • Internet Browser such as Internet Explorer, Firefox, Google Chrome, etc. • Cacoo - http://www.cacoo.com • Free Hosting Cloud - http://www.freehostingcloud.com • Free FileZilla Software - http://filezilla-project.org	**Rationale:** A computer is needed to complete all stages of this project. Because this is a basic website design class in which students will learn the code behind webpages, Notepad or and equivalent text editor will be used to hand code webpages. Internet Access and a browser are needed in order to create accounts for Cacoo and Free Hosting Cloud, and to download FileZilla. It is also needed to upload files using FileZilla and to access the Cacoo application. "Cacoo is a user friendly online drawing tool that allows you to create a variety of diagrams such as sitemaps, wire frames, UML and network charts. Cacoo can be used free of charge. Cacoo is a diagram creation tool that runs in your web browser. Multiple people can work together on the same diagram in real time. Diagrams can be published directly to websites, wikis, and blogs." (Cacoo) Free Hosting Cloud is a free website hosting service that will allow you to upload your pages to the internet for viewing purposes. FileZilla is a free downloadable "FTP" (File Transfer Protocol) application which is used to upload website files to the Internet. FileZilla can be used by both Windows and Mac users.
Additional Comments	
The assessment rubrics are shown below.	

Sitemap Rubric

Criteria	Outstanding (15 points.)	Average (10 points.)	Needs Improvement (5 points.)	Score
Site Organization	The site is organized in an appropriate and usable manner.	Only one area of the site organization needs to be modified to result in a usable product.	Two or more areas of the site organization need to be modified.	
Web Pages	Lists each web page (at least 10).	Lists more than five but less than ten pages.	Lists less than five pages.	
Mechanics	Clearly labeled (including web page file name), readable,	Clearly labeled, readable.	Unclear or not readable.	
Peer Review	Completed three peer reviews.	Completed two peer reviews.	Completed one peer reviews.	
Late Penalty	5 points deducted for each day late.			
			Total Score	

Wireframe Rubric

Criteria	Outstanding (15 points.)	Average (10 points.)	Needs Improvement (5 points.)	Score
Wireframe	Wireframe includes all required components, and includes relevant details. There are no grammatical errors.	Wireframe includes all required components but is lacking in details. There are three or fewer grammatical errors.	Wireframe is incomplete. There are three or more grammatical errors.	
Critical Thinking	Wireframe shows clear evidence of critical thinking (application, analysis, synthesis, and evaluation).	Wireframe shows some critical thinking (application, analysis, synthesis, and evaluation).	Wireframe is lacking critical thinking. The wireframe tends to be inaccurate or unclear.	
Peer Review	Completed three peer reviews.	Completed two peer reviews.	Completed one peer reviews.	
Late Penalty	5 points deducted for each day late.			
			Total Score	

Final Website Project Rubric

Criteria	Exemplary (15 points)	Proficient (10 points)	Partially Proficient (7 points)	Not Yet Proficient (5 points)	Incomplete (3 points)	Score
Content	The theme or main idea of the Web page is clear, and pages link to related information. The content has accurate and very useful information. The theme or main idea is very clear. The Web pages link to quality information.	The content has accurate and useful information. The theme or main idea of the Web page is clear and related to the purpose or theme of the project.	Information is clear and correct. The theme or main idea of the Web page is more or less clear and related to the purpose or theme of the project	Information is not always clear or correct. The theme or main idea of the Web page is more or less clear but does not relate to the purpose or theme of the project	Information is incomplete or not correct. The Web page does not have a clear purpose or central theme.	
Writing Process	Clear, concise, and well written and edited with no serious errors.	Clear, concise, and basically well written; still has a few errors.	Easy to understand, with some errors.	Many errors but a reader can understand the main idea.	Difficult to understand the main idea, many errors in spelling, grammar.	
Development Process	A reflection of development process is given to the teacher.	Evidence of revision of page; text relates very closely to original plan.	Draft page is printed from within browser; text on page relates to original plan.	Text for page entered into simple text editor.	Written sheet submitted to teacher.	
Web Skill	3–5 pages with clear order; labeling and navigation are clear; links work. Used storyboarding.	3 pages with clear order, labeling and navigation is clear; links work	2 pages (or 1 page with links to other resources).	1 page with TITLE, heading.	1 page.	
Layout	Appearance of the page looks professional.	Organized and consistent; good formatting.	Uses headings; sections labeled; some formatting.	Text broken into paragraphs and/or sections.	Layout has no structure or organization.	
Images	Images have strong relation to page/text; some images are produced by student; images have proper size, resolution, colors, and cropping.	Images are related to page/text; some images are produced by student. Most images are correct size or resolution.	Images related to page/text; images were recycled from other pages on the Internet. Images too big/small or poorly cropped or have color problems.	Images unrelated to page; images recycled from other pages on the Internet; images too big/small or poorly cropped or have color problems.	No images or images that are the wrong type.	
Peer Review						
Late Penalty	5 points deducted for each day late.					
					Total Score	