Lesson Plan: Coding - HTML Basics

Class Description

Learn how to build websites from scratch or control the appearance of an existing website. This class will cover basic page structure of an HTML document introduce CSS.

**Prerequisites:** Capable of using a web browser (i.e. Google Chrome, Internet Explorer, Safari or Firefox).

**Curriculum Track**

Software & Apps

**Audience**

Adults

**Course Length**

90 minutes

**Training Method**

Instructor-led hands-on

**Purpose**

This program will introduce the elements that make up a web page beginning with the structure of an HTML document. Along the way we’ll learn the difference between HTML and CSS and how they work together to form the layout of a web page.

Equipment Requirements

Projector and projection screen; computers with internet access for the instructor and each participant; laser pointer (recommended)

Software Requirements

One of the following. Windows 7, Linux, OS X, a text editor or an in-browser code editor like Codepen.io

Material Requirements

Pens or pencils, activity sheets, handouts, participant surveys

**Learning Objectives**

At the end of the session, learners will:

* Setup an in-browser code editor
* Learn what an HTML document is
* Learn what elements, tags and attributes are
* Understand the difference between block elements and inline elements

**Assessment Technique(s)**

Successful completion of class activities

Content Outline

**Agenda (3 mins)**

* Outline the following topics that will be covered in class:
  + Terminology & Descriptions
  + Set up an in-browser code editor
  + What is an HTML document
  + What are elements, tags and attributes
  + Block vs. Inline Elements

**Topics, Talking Points, and Activities (85 mins.)**

* Terminology & Descriptions
  + Define the following terms for participants:
    - **HTML**: (HyperText Markup Language) gives content structure and meaning
    - **Text Editor:** a type of program used for editing plain text files
    - **Web Browser:** an application for locating, retrieving and displaying content
    - **Codepen:** is an in-browser code editor for writing HTML and CSS with a real-time preview
    - **Elements:** are designators that define the structure and content within a page
    - **Tags:** a set of less-than and greater-than symbols that surround an element
    - **Attributes**: provide additional information about an element which include a name and a value
    - **Block-level Element:** an element that begins a new line, stacking one on top of the other
    - **Inline Element:** an element that falls within the normal flow of a document

**ACTIVITY**: Have participants complete **Activity #1** on the *Activity Sheet*

* How to set up the in-browser code editor – **Codepen**
  + Reiterate how Codepen is an in-browser code editor for writing HTML and CSS and includes a preview panel for viewing the development of content
  + Note how CodePen is free and set up of an account requires an email address
  + Be sure to emphasize the importance of confirming a new account by responding to the automated verification email
  + Live demo how to set up an account on Codepen
  1. Enter **Codepen.io** into the address bar of the browser
  2. Click on the green **Sign me up** button
  3. Scroll down to the *Free Plan* option and click on the **Sign Up** button
  4. Fill out the form and click on the box next to “I’m not a robot”
     + Remind attendees to check their email inboxes for a verification message from Codepen and to complete the verification process within the next 24 hours

**ACTIVITY**: Have participants complete **Activity #2** on the *Activity Sheet*

* What is HTML?
  + HTML is an acronym which stands for HyperText Markup Language
  + HTML documents are plain text documents saved with an .html file extension
  + HTML code is made up of characters that exist inside angled brackets (less-than and greater-than symbols) – these are called HTML elements
  + Each HTML element tells the browser something about the document being served
  + Every HTML document begins with a declaration followed by several basic elements
  + Live demo how to add elements in Codepen:

*(Inform students Codepen handles the declaration and tags for the head and body of the document.)*

1. Confirm the students have their Codepen account open
2. Provide a quick tour of the Codepen window
3. Instruct everyone to click on the **pencil** icon near the upper left corner
4. Have everyone enter the title *Project\_dotCSS*
5. Open <http://codepen.io/Meggen/pen/MJqYWx> and inform the students they will be coping the text from the HTML box. (The text is also listed on the activity sheet.)
6. Click onthe **Save** button at the top

**ACTIVITY**: Have participants complete **Activity #3** on the *Activity Sheet*

* What is an element, tag and attribute?
* Explain the 3 most common HTML terms.
  1. Element
     + Define the structure of content of objects within a page
     + Elements are identified by the use of less-than and greater-than angle brackets
     + **Example: <a>** *(“a” is a reference for an anchor element.)*
  2. Tag
     + Less-than and greater-than angle brackets surrounding an element creates what is known as a tag
     + Tags most commonly occur in pairs of opening and closing tags
     + An opening tag marks the beginning of an element
     + A closing tag includes a forward slash and marks the end of an element
     + **Example: <a>…</a>** *(This is a set of tags.)*
  3. Attribute
     + Provide additional information about an element
     + Common attributes include **id, class, src** and **href**
     + **Example:** **<a href=”http://meganjohnson.com/”>Megan Johnson</a>**

*(href is a hyperlink attribute for referencing to a resource or file.)*

* Outline the following steps for adding an anchor element

1. Open <http://codepen.io/Meggen/pen/QdZbEe>
2. Point to the anchor element at the top of the HTML box in Codepen
3. <a> refers to an anchor, href refers to a link, img src refers to an image source
4. Inform the students they will be coping the anchor element from the HTML box   
   (The text is also listed on the activity sheet.)
5. Click the **Save** button

**ACTIVITY:** Have participants complete **Activity #4** on the *Activity Sheet*

* Block vs. Inline Elements
* Define what block-level elements are
  1. Block-level Elements
     + Block-level elements begin on new lines, but inline elements can start anywhere in a line
     + Block-level elements may contain inline elements and other block-level elements
     + **Examples:** <header>, <section>, <nav>, <h1> through <h6> and <p>
* Define what inline level element is
  1. Inline Elements
     + Inline elements can start anywhere within a line
     + **Examples: <span>, <strong>, <i>**, <a>, <img> and <button>
* Outline the following steps for adding a navigation element

1. Open <http://codepen.io/Meggen/pen/pRxKyM>
2. Point to the navigation element on line 3 and online it’s elements
3. <nav> refers to navigation, <ul> refers to an unordered list, <li> refers to a list item
4. Inform the students they will be coping the navigation element from the HTML box  
   (The text is also listed on the activity sheet.)
5. Click the **Save** button

**ACTIVITY:** Have participants complete **Activity #5** on the *Activity Sheet*

**Wrap Up/Closing (3 mins.)**

* Highlight the upcoming HTML/CSS class and share the types of topics that will be covered
* Ask if there are questions and answer any that were “parked” during the session
* Thank participants for coming and ask them to complete the class survey before leaving