**HTML/CSS for Baldwinsville Webmasters**

**Mike Foster 4/7/2014**

**Goal:** Most web page management for the Baldwinsville CSD website is done by an on-line program (tempEDIT) which allows the user to enter information and formatting directly into an editor. The program then generates the required HTML source code to display the information as it was formatted by the user. However, in some cases, limitations in tempEDIT make it difficult to achieve the desired formatting using the editor. In those cases, the desired formatting can often be achieved by directly editing the source code. The purpose of this workshop is to provide users with information on how the source code can be interpreted and edited to produce the desired effects.

**Definitions:**

* **HTML ( HyperText Markup Language) –** a set of formatting instructions that are interpreted by the computer but not shown on the web page. Examples of these tags would be:
	+ <br/> (line break) – generates a new line
	+ <font> - determines font type, size, weight
	+ <table> <tr><th> <td> - identifies a table, table header, table row, table data cell
	+ <a href=”……….”> - identifies a link to another web page

Note: most tags must be followed by a closing tag which terminates the instruction: </font> </table> </tr> </td> </a>

* **CSS (Cascading Style Sheets) –** styles determine how to display an HTML element. They were developed to increase the formatting options in HTML.
* **CSS Methods**
	+ **Linked –** Styles can be identified for multiple web pages with a single set of instructions. In the case of the Baldwinsville website, this web page can be found at <http://www.bville.org/main2.css>. **This page can NOT be edited by webmasters.**
	+ **Embedded –** Styles that are used multiple times in the same web page can be embedded in the head section of a web page. This eliminates the need to redefine the style of an element each time it is used. **Webmasters do NOT have the ability to edit the embedded styles in Baldwinsville web pages**.
	+ **In-line –** It is possible to change the style of a particular element in a web page by editing its HTML tag. These in-line styles CAN be modified by webmasters and increases the formatting options available to them on a web page.
	+ **Cascading** refers to the fact that the different methods are activated in a particular order. **Link styles can be overridden by embedded styles, which can be overridden by in-line styles. Thus, changing in-line styles by using an in-line style gives a lot of flexibility in formatting a page.**

**Modifying Source Code in tempEDIT**

* Sign in to tempEDIT (Website Login)
* Click on Source button (top left)
* You may modify the source code to achieve the format that you desire. Click on the preview button in order to view the code changes. After viewing a preview screen, make sure to close it to avoid displaying a large number of different previews. This makes it difficult to determine which page is the most current preview.
* Make sure to save your page.

**Using CSS to Modify Web Page Formatting**

* Formatting in-line styles – in order to utilize CSS you need to recognize the different parts of a rule:
	+ Selector (ex. <p> <h1> <div>
	+ Property (ex. Color, width, font-family)
	+ Value (ex. Blue, 16px, Ariel)
	+ The following would be an example of how an in-line rule for a paragraph might look:

**<p style=” color:red;background:yellow; font-size:16px;text-decoration:underline;”>**

**Every good boy does fine.**

**</p>**

**Every good boy does fine. (Example 1)**

Guided practice:

1. Try changing the background to red, the font-size to 11 and the decoration to italic.
2. How would you change the text color to yellow?
* You also need to Recognize the difference between **Inline** and **block** selectors:
	+ Block selectors start a new line when displayed in a browser (ex. <h> <div> <p> <table> <ul> <li>
	+ Inline selectors do not cause a new line to be displayed. (ex: <span> <a> <td> <img> <b>
	+ One of the most useful source code tags for a web master is the line break selector (**<br/>**) . This selector generates a new line when it is encountered. Most selectors require an end tag at the conclusion of a rule (examples: </p> </div>,</table>. The line break selector requires no closing tag.
	+ The **<span>** selector is a very useful in emphasizing text. For instance, if we take the source code above and wish to emphasize the word good, we could use the following:

**<p style=”background:yellow;color:red;font-size:16px;text-decoration:underline;”>**

**Every**

 **<span style=”color:yellow;background-color:red;”>**

**good boy**

**</span>**

**does fine.**

**</p>**

**Every good boy does fine. (Example 2)**

 Guided practice:

1. What is the difference between an in-line and a block element?
2. Use the span selector to change the background color of fine to green and the font color to black.
3. How would you get a display where every word is on a separate line? (Two ways!)
* **Controlling line spacing** – one of the difficulties often encountered in web page design is that HTML typically only recognizes one space between two words. This can often be overcome by the use of the ASCI code for a non-breaking space **(&nbsp;).** In the next section of the web page I have taken the original statement and increased the spacing in the HTML:

**<p style=” color:red;background:yellow; font-size:16px;text-decoration:underline;”>**

**Every good boy does fine.**

**</p>**

However, when this is displayed, the extra spaces are ignored by the computer and the display is exactly the same as it was without the additional spacing:

**Every good boy does fine.**

The wider spacing can be achieved by placing the code for the non-breaking spaces in the source code:

**p style=” color:red;background:yellow; font-size:16px;text-decoration:underline;”>**

**Every &nbsp;&nbsp; good &nbsp;&nbsp; boy &nbsp;&nbsp; does &nbsp;&nbsp; fine.**

**</p>**

**Every good boy does fine. (Example 3)**

The non-breaking space code can also be used in conjunction with paragraph tags to add additional blank lines to a web page. In the CSS tutorial page I have prepared, this can be seen in the code for the second paragraph and fourth paragraphs:

 **<p style="font-size:40px;"> &nbsp; </p>**

By coupling the non-breaking space with the paragraph tag, I was able to generate a blank line. The height of the blank line can then be controlled by changing the font-size value for the paragraph.

Guided practice:

1. In the source code, try changing the value of the text-size attribute in the paragraph selector from 40px to 20px. Then to 80px.
* **Using Comment tags –** HTML uses comment tags to allow users to place labels and instructions in a web page that are useful to the web page author, but are not displayed.

**<!--- Any text that is included between these two tags will not be displayed. -->**

**Comment tags can be very useful in hiding chunks of code that are used repeatedly, but are not appropriate at all times.** For instance, suppose a school has a yearly Christmas concert. The information for the concert might be entered in a web site for display. After the event has occurred, rather than deleting the information, one might wish to enclose the entire section with comment tags. The information is still present in the source code and can be displayed, with any necessary edits, the next year by just removing the comment tags.

 Guided practice:

1. Use the comment tags to hide example 2 in the sample page.

* **Images** (Example 4)  **–** displaying images requires the use of the <img> selector. One of the major difficulties in web page design is getting the images to appear where you want them. At times it may be easier to use CSS to align a graphic appropriately. The float property can be used with the <img> selector to help accomplish this. In the sample web page I have placed a graphic on either side of some text using float:right and float:left. The text has been centered horizontally by adding the text-align property to the <div> tag with a value of center (text-align:center). In addition, I have utilized the border property in the image selector for the picture on the right. To center the text vertically between the two images, I created a paragraph with a large text-size and then placed the actual text inside a span selector with a vertical-align value of middle.

 Guided practice:

 1. Set both images to the same float value.

 2. Change the border property of the images so that both have a inset border with a width of 15px.

 3. Change the paragraph text-size value from 60px to 20px for the paragraph containing “BALDWINSVILLE CENTRAL SCHOOL DISTRICT”. Then to 80px.

 4. Change the text color to red and add a text-decoration attribute of underline for “BALDWINSVILLE CENTRAL SCHOOL DISTRICT”.

## The CSS Box Model (http://www.w3schools.com/css/css\_boxmodel.asp)

* All HTML elements can be considered as boxes. In CSS, the term "box model" is used when talking about design and layout.
* The CSS box model is essentially a box that wraps around HTML elements, and it consists of: margins, borders, padding, and the actual content.
* The box model allows us to place a border around elements and space elements in relation to other elements.
* The image below illustrates the box model:
* 

|  |  |
| --- | --- |
| * Note
 | **Important:** When you set the width and height properties of an element with CSS, you just set the width and height of the **content area**. To calculate the full size of an element, you must also add the padding, borders and margins. |

The total width of the element in the example below is 300px:

width:250px;
padding:10px;
border:5px solid gray;
margin:10px;

Let's do the math:
250px (width)
+ 20px (left + right padding)
+ 10px (left + right border)
+ 20px (left + right margin)
= 300px

Guided practice:

 1. Change the background color property of the table to blue.

 2. Change the border-style property of the table to double.

 3. Double the number of x’s in the first cell of the table. What happens to the width of the first column?

 4. Add padding of 20px to the cell containing yyyy.

 5. Add “border-collapse:collapse;” to the the style section of the table selector.

6. Try to place the table to the right of a string of text: “Are we having fun yet?”. To the left of the text.

**Why CSS? –** The real value of CSS to a web designer is in its ability to create classes of various selectors either in the heading of the web page or in an external stylesheet. This allows the designer to define a certain style for a selector. For example, the designer might wish to use a certain style for a paragraph (say color:red; font-size:14px;text-decoration:underline;) that will be used many times in his website. By defining this paragraph class (class=sample) in the heading or in an external stylesheet, he can then apply that style to a particular paragraph by specifying its class (ex. <p class=”sample”>) rather than having to insert all of the attributes and values every time he wishes to use them.

**Conclusion –** The goal of this workshop is to enable webmasters to “tweak” code generated by TempEdit. Hopefully, an understanding of the basic idea and structure of CSS will allow the webmaster to understand the source code of the pages for which they are responsible. Given that understanding, they will then be able to make changes in the properties and values in the selectors already present in the web page in order to expand their formatting options. For those interested in further information about HTML/CSS I would recommend **Web Site Design Made Easy** by Dennis Gaskill. In addition, I would highly recommend **W3Schools.com** as an excellent on-line resource. W3Schools has on-line tutorials that allow viewers to actually modify examples and view the results. I have used both resources extensively both in developing my own skill set, as well as in the development of this workshop.

* [CSS Lists](http://www.w3schools.com/css/css_list.asp) [CSS Tables](http://www.w3schools.com/css/css_table.asp) [CSS Box Model](http://www.w3schools.com/css/css_boxmodel.asp) [CSS Border](http://www.w3schools.com/css/css_border.asp) [CSS Outline](http://www.w3schools.com/css/css_outline.asp) [CSS Margin](http://www.w3schools.com/css/css_margin.asp) [CSS Padding](http://www.w3schools.com/css/css_padding.asp) [CSS Dimension](http://www.w3schools.com/css/css_dimension.asp) [CSS Display](http://www.w3schools.com/css/css_display_visibility.asp) [CSS Positioning](http://www.w3schools.com/css/css_positioning.asp) [CSS Floating](http://www.w3schools.com/css/css_float.asp) [CSS Align](http://www.w3schools.com/css/css_align.asp) [CSS Combinators](http://www.w3schools.com/css/css_combinators.asp) [CSS Pseudo-class](http://www.w3schools.com/css/css_pseudo_classes.asp) [CSS Pseudo-element](http://www.w3schools.com/css/css_pseudo_elements.asp) [CSS Navigation Bar](http://www.w3schools.com/css/css_navbar.asp) [CSS Image Gallery](http://www.w3schools.com/css/css_image_gallery.asp) [CSS Image Opacity](http://www.w3schools.com/css/css_image_transparency.asp) [CSS Image Sprites](http://www.w3schools.com/css/css_image_sprites.asp) [CSS Media Types](http://www.w3schools.com/css/css_mediatypes.asp) [CSS Attr Selectors](http://www.w3schools.com/css/css_attribute_selectors.asp)

## CSS3 Tutorial

* [CSS3 Introduction](http://www.w3schools.com/css/css3_intro.asp) [CSS3 Borders](http://www.w3schools.com/css/css3_borders.asp) [CSS3 Backgrounds](http://www.w3schools.com/css/css3_backgrounds.asp) [CSS3 Gradients](http://www.w3schools.com/css/css3_gradients.asp) [CSS3 Text Effects](http://www.w3schools.com/css/css3_text_effects.asp) [CSS3 Fonts](http://www.w3schools.com/css/css3_fonts.asp) [CSS3 2D Transforms](http://www.w3schools.com/css/css3_2dtransforms.asp) [CSS3 3D Transforms](http://www.w3schools.com/css/css3_3dtransforms.asp) [CSS3 Transitions](http://www.w3schools.com/css/css3_transitions.asp) [CSS3 Animations](http://www.w3schools.com/css/css3_animations.asp) [CSS3 Multiple Columns](http://www.w3schools.com/css/css3_multiple_columns.asp) [CSS3 User Interface](http://www.w3schools.com/css/css3_user_interface.asp) [CSS Summary](http://www.w3schools.com/css/css_summary.asp)

## CSS Examples

* [CSS Examples](http://www.w3schools.com/css/css_examples.asp) [CSS Quiz](http://www.w3schools.com/css/css_quiz.asp) [CSS Certificate](http://www.w3schools.com/css/css_exam.asp)

## CSS References

* [CSS Reference](http://www.w3schools.com/cssref/default.asp) [CSS Selectors](http://www.w3schools.com/cssref/css_selectors.asp) [CSS Reference Aural](http://www.w3schools.com/cssref/css_ref_aural.asp) [CSS Web Safe Fonts](http://www.w3schools.com/cssref/css_websafe_fonts.asp) [CSS Units](http://www.w3schools.com/cssref/css_units.asp) [CSS Colors](http://www.w3schools.com/cssref/css_colors.asp) [CSS Color Values](http://www.w3schools.com/cssref/css_colors_legal.asp) [CSS Color Names](http://www.w3schools.com/cssref/css_colornames.asp) [CSS Color HEX](http://www.w3schools.com/cssref/css_colorsfull.asp)