

HTML5 — The New Semantic Tags

What is a Semantic Tag?

Semantic

[si-man-tik]

adjective

of, pertaining to, or arising from the different **meanings** of words or other symbols.

HTML5 added several semantic tags — or tags that have *meaning*.

Tags Without Meaning

Some tags have no meaning. Can you tell me what is in the following element?

```
<div> ... </div>
```

No, you can't, because the `<div>` tag has no meaning.

Tags With Meaning

Can you guess what is in the following semantic element?

```
<header> ... </header>
```

You don't know what color it is, but you can guess several things about the header.

- 1.
- 2.
- 3.

Can you guess what is in the following element? Can you guess where it is?

```
<footer> ... </footer>
```

- 1.
- 2.
- 3.

In the same way you were able to make some assumptions about the `<header>` and `<footer>` tags, browsers and search engines like to know what an element's meaning is.

The new tags:

Here is a list of some of the HTML5 semantic tags used for structure (Look in the insert panel for these).

<header>

Contains banner elements for a page or a section of a page. There may be more than one on a page.

<nav>

Contains blocks of navigation links. There may be more than one on a page.

<main>

Should surround the main content of your site. It cannot be nested inside of “an <article>, <aside>, <footer>, <header>, or <nav> element. (W3schools.com)” Tagging your main content allows screen readers and other assistive technologies to understand where the main content begins. Use it to wrap the main content of you site; the juicy stuff people are coming for. There can only by one <main> element per page.

<aside>

Content related to an article — like a sidebar in a textbook. Recently, the HTML5 gods have determined that the <aside> tag can be used for a page’s sidebar, even though a sidebar is often not related to a single article. There may be more than one on a page.

<article>

Contains content that can stand on its own. If you lifted it out of the web site, it should make sense alone. Newspaper articles and a blog posts are examples. There may be more than one on a page.

<section>

Defines a section of a page. Often starts with a heading (H1 — H6). There is a lot of discussion about when to use the section tag. The <section> is a little like the semi-colon is to grammar. Only two people in the English speaking world really know how to use a semi-colon. The rest of us just guess. So, use a <section> tag if you really have sections on your page. Otherwise, use a <div> or <article>.

<footer>

Contains footer elements for a page or a section of a page. There may be more than one on a page.

<figure>

Contains an image or images and related content, such as a caption. There may be more than one on a page.

<figcaption>

Defines the caption for a figure element.

<time>

Defines time and allows some browsers to plug an event into a calendar. Can also define a publication date.

Also for your consideration:

The <video> and <audio> tags are two HTML5 tags that give us more power (and complexity) in how we can deliver rich media to all browsers and operating systems. We won't be working with them today, but we want you be aware of them.

Activity 1: HTML5 Structure

Let's draw some HTML5 tags on this very simple website to make it more structurally semantic.

- <header>
- <main>
- <article>
- _____

HTML5 and the Box Model

Terminology Refresh

Let's sound smart at work and speak the language of web development.

Element — A pair of html tags and the content between them.

Examples include `<p> ...</p>`, `<h1> ...</h1>` and `<div> ... </div>` elements.

Block elements — elements that have a line break before and after. They occupy the whole horizontal space of their container. Examples include `<p>` paragraphs, `<h1>` headings, `` lists and `<table>` tables.

In-line elements — elements that float in the flow of text, or in the flow of other elements.

Examples include `<a>` links and `` images.

Box Model — everything is in a box, even if you cannot see the box. Every paragraph, list, table, link, photo and div is in a box. Everything. In-line and block elements are in boxes.

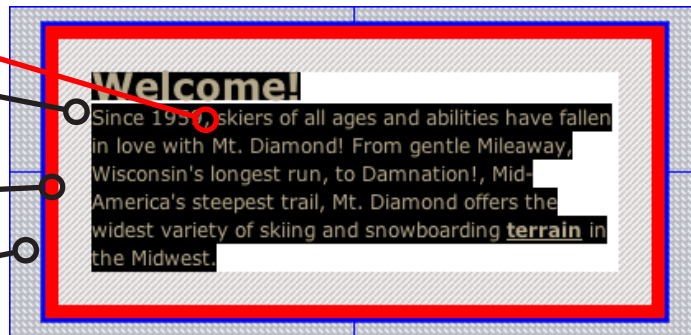
Attributes of a box include:

Content — The stuff inside the box.

Padding — space between the content and the edge of the box (like text inset in InDesign).

Border — a stroke on one or more sides of the box

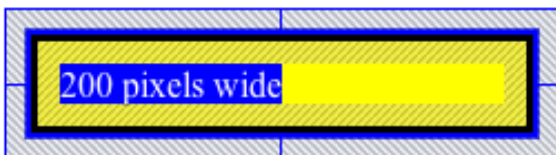
Margin — space around the box that pushes other elements away (like offset used in text wrap in InDesign).



The most unusual aspect of the box model is sizing an element. If you define an element's width, you are defining only the size of the content. The true width of the element is made up of

content+padding+border+margin

200 pixels wide



This image shows two divs that are 200 pixels wide. The bottom div takes up more space because its padding, border and margin are added to the width of the div. If you really wanted the bottom div to occupy only 200 pixels, you would have to subtract the width of the padding, border and margin from the width of the content.

Divs

- divisions of page content. May or may not have borders or background colors. Where we have traditionally used divs, we can now use html5 elements instead (<aside> for #sidebar, <header> for #header).
- Most modern web pages are made of a combination of HTML5 elements and divs.
- You can name divs anything you like.
- **Divs are block elements**
They occupy the entire width of whatever contains them (the browser window or another div) unless you specify a specific size. They grow until they can't grow any longer.
- **Divs can act like in-line elements.**
If you give a div a float of left or right and a width value, other content will flow around it (like text wrap in InDesign).

This div has no defined width. It expands to occupy the entire width of its container because it is a block element.

This div has a width set at 300px. It is floating to the left, therefore other elements will flow around it. It acts a little like an in-line element, but it really is not.

Welcome!

Since 1959, skiers of all ages and abilities have fallen in love with Mt. Diamond! From gentle Mileaway, Wisconsin's longest run, to Damnation!, Mid-America's steepest trail, Mt. Diamond offers the widest variety of skiing and snowboarding terrain in the Midwest. The unique chalet offers food service, a complete ski shop, rental and repair shop, and an award-winning bar, all close to the slopes and handy to parking.

Float — allows content to flow around a block element

Clear — stops content from flowing around an element

Creating CSS layouts with the use of HTML5 elements, Divs, and the box model

Putting a div on a page is a two-step process:

1. First Describe the div's size, color, and float in a new CSS rule.
2. insert the div code in the HTML where the box/div should appear.

Page layout is probably the trickiest part of Dreamweaver and Web design. The good news is that once you create and refine your initial index page layout, you will use it over and over again and just make minor changes based on the content of the page.

Selector Type Review

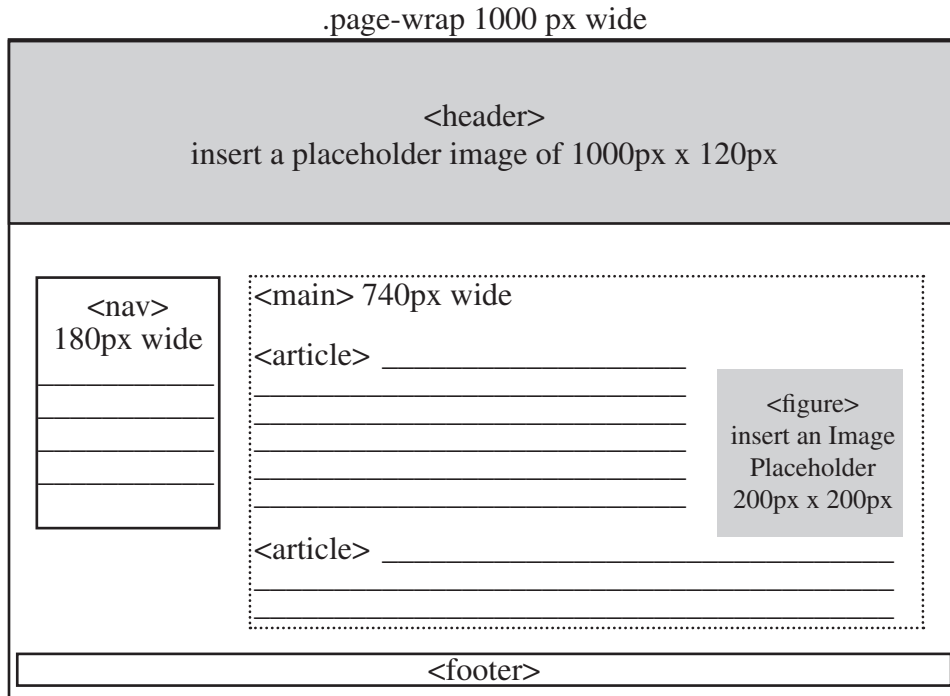
class (.) —

ID (#) —

Tag —

compound (ex: header img) —

Activity 2: Box-model Layout with Dreamweaver



HTML

CSS

Create the layout with the two pieces of a website puzzle: Structure (HTML) and Presentation (CSS).

Hey Look!

We primarily use classes to style html5 elements since many html5 elements can be reused.

1. `<div class="page-wrap">`

2. `<header>`

3. `<nav>`

4. `<main>`

5. `<footer>`

6. `<figure>`

1. `.page-wrap`
`max-width= 1000px`
`margin: right & left auto`

2. `.page-header`
`bottom margin= 10px`

3. `.page-nav`
`width=180px`
`Float: left`
`padding: 10px`

4. `.content`
`Margin: left 230px`
`Width: 740px`

5. `.page-footer`
`Clear: both`
`top margin=10px`

6. `.figure-float`
`Float: right`
`top and right margins= 0px`

7. `body`
`margin-top: 0px;`

Explanation of Insert Commands:

“At Insertion Point” = wherever cursor happens to be in the code. e.g. *inside* `<body> </body>`

“After Start of Tag” = Div nested inside another div. e.g. *header gets inserted inside page-wrap.*

“After Tag” = Div is inserted after a previous div. e.g. *the nav gets inserted after the header.*

Editing Divs and HTML5 elements

- edit rules through the CSS Designer panel by selecting it's name and changing properties.
- After inserting the `<div>`s on the page, add space between them by adjusting margins.
- Add padding, if needed to move the content in a `<div>` away from its edge or border.
- we use primarily use classes to style html5 elements since many can be reused.
- work top to bottom, left to right to help build within the flow of the document.
- the entire width of all elements combined (width + border + padding + margin) cannot exceed the max-width total. If it does your layout will break.

CSS Fine Tuning Review

Why do we almost never add a height to our DIVs?

How do we get rid of the space on top of the h1 head?

How do we get rid of the space between the H1 and the subsequent `<p>` tag?"

How do we close the gap between the h2 and h3 heads?

Ok, then, how do we close the gap between the `<H3>` and the `<p>` ?

How can we get the main text closer to the figure image?

How do we add more space between the lines of paragraph text?

How can we change the color of some special areas of paragraph text, but not all?

We want the `<p>` text in the `<footer>` a different color than the text in the `<main>` area. How can we change the properties of identical tags, but in different locations?

Group Activity 3: Fix Me!

navigation

Hello World

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footer

Dreamweaver Design View

In the browser

Untitled Document

navigation

Hello World

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footer


Assignment 2-A: Practice DIVs

Create Practice DIV layouts 1, 2 and 3 using all of the specifications shown on the following pages. Each Div layout should have its **own root folder and external stylesheet**. When you are finished put all three root folders into a folder titled "LastNameFirstInitial-02" and copy it to your instructors drop box.

Use Dreamweaver to create the following three div layouts. Strive for amazing accuracy.

Practice DIV layout #1

header image
 900px x 90px



navigation. padding 10px

Heading 1

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Heading 2


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sidebar images

250px x 150px



Heading 3

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footer. padding: 10px

Practice DIV layout #2

header image
900px x 120px

[Link 1](#) | [Link 2](#) | [Link 3](#) | [Link 4](#) | width 680px, padding 10px

Heading 1

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link
link
link
link
width 180px.
padding 10px

sidebar image
200px x 400px.

footer. padding: 10px

Practice DIV layout #3

[Link 1](#) | [Link 2](#) | [Link 3](#) | [Link 4](#) (padding 20px)

hero image
600px x 300px.

sidebar image
280px x 200px.

Heading 1

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Headline 4

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Headline 4

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small images
190px x 75px.

footer (padding 10px)

Activity 4: More HTML 5 Structure

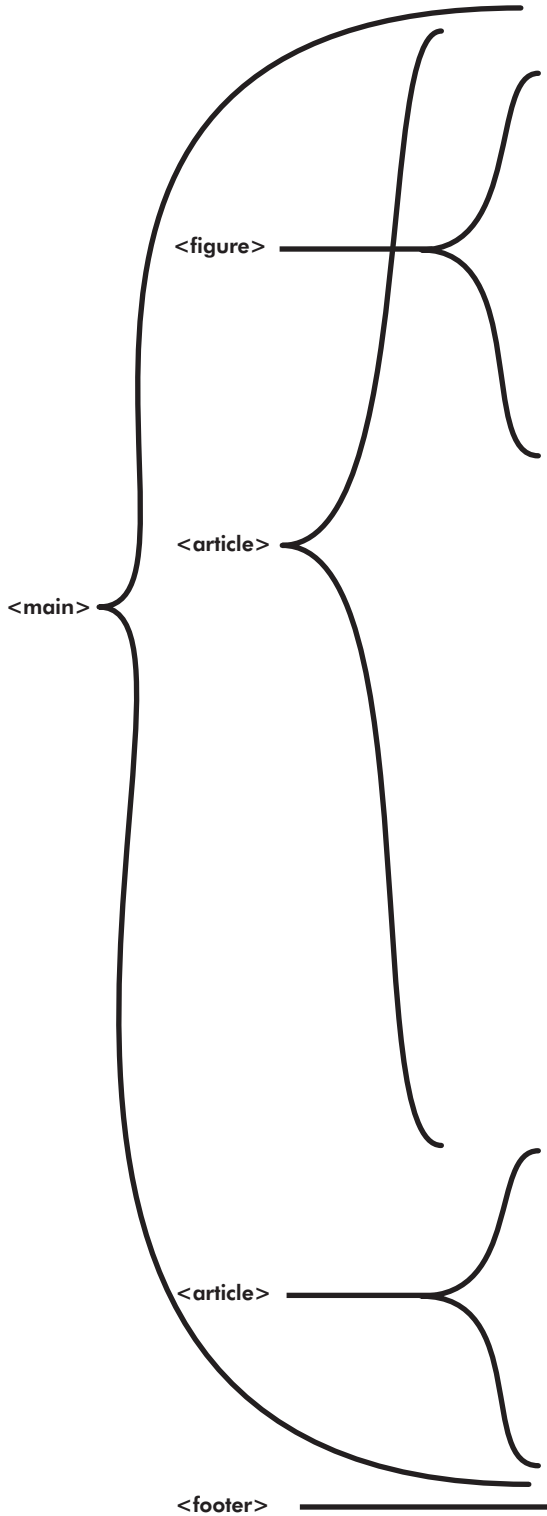
Copy the HTML5 Practice root folder from the Shared Items server. Follow the example on the next page and with your neighbors, structure the index.html page using the new HTML5 semantic tags. When you're done flag me down and I'll check you off. Also, name your root folder after you — your last name — and put it in my drop box.

Please note that the CSS has been provided for you. As you work, pay special attention to the CSS styles:

- you can add multiple classes to elements by adding a space between them in the html like this:

```
<article class="content clearfix"> there is a .content class and a .clearfix class applied to  
this one article
```

- %'s have been used in many of the structural elements. This helps us when we design for responsive sites (coming soon).




Autumn

The Brown Season Everyone Pretends To Love

<header>

What is Autumn?



<figure>

Autumn Trees, by [worldofpictures.com](#)

<figcaption>

Autumn, interchangeably known as fall in North America, is one of the four temperate seasons. Autumn marks the transition from summer into winter, in September (Northern Hemisphere) or March (Southern Hemisphere), when the arrival of night becomes noticeably earlier and the temperature cools considerably. One of its main features is the shedding of leaves from deciduous trees.


When is Autumn?

Some cultures regard the autumnal equinox as "mid-autumn", while others with a longer temperature lag treat it as the start of autumn. Meteorologists (and most of the temperate countries in the southern hemisphere) use a definition based on months, with autumn being September, October and November in the northern hemisphere, and March, April and May in the southern hemisphere.

In North America, autumn is usually defined as beginning on the September equinox and end with the winter solstice (December 21st). In traditional East Asian solar term, autumn starts on or around 8 August and ends on or about 7 November. In Ireland, the autumn months according to the national meteorological service, Met Éireann, are September, October and November. However, according to the Irish Calendar, which is based on ancient Gaelic traditions, autumn lasts throughout the months of August, September and October, or possibly a few days later, depending on tradition. In Australia and New Zealand, autumn officially begins on 1 March and ends on 31 May.

<figure>

True colors come from inside



<figure>

Autumn Leaves, by [Kiel, Deutschland](#)

<figcaption>

Trees actually begin to show their true colors in autumn, and here's why. As days get shorter, the chlorophyll in the leaves breaks down, revealing the yellow and orange pigments that were always there. The fading green allows a leaf's true colors to emerge, producing the orange, yellow, red and purple pigments we refer to as fall foliage.

<aside>

By *Edgar Allen Poe*
Posted: *October 10, 2014*
Category: *Mostly stolen from*

<footer>

What is the Harvest Moon?

Harvest Moon is just a name. It's the name for the full moon nearest the autumnal equinox. On average, the moon rises about 50 minutes later each day. But when a full moon happens close to the autumnal equinox, the moon (at mid-temperate latitudes) rises only about 30 to 35 minutes later daily for several days before and after the full Harvest moon.

These early evening moonrises are what make every Harvest Moon special. Every full moon rises around sunset. After the full Harvest Moon, you'll see the moon ascending in the east relatively soon after sunset for a few days in a row at northerly latitudes. Because of this, it seems as if there are several full moons — for a few nights in a row — around the time of the Harvest Moon.

By *David Thoreau*
Posted: *October 10, 2014*
Category: *Mostly stolen from*

<footer>

©Not copyrighted by us, probably somebody else though