WHAT IS A MEDIA QUERY?

A Media Query (Boolean code) written in CSS3 determines the screen display size that needs to be used and adjusts the HTML pages to display correctly to fit on the device.

The code written needs to address these characteristics:
1. Height and width of the device
2. Height and width of the browser
3. Screen resolution of the device
4. Orientation of the device (for mobile phones and tablets - portrait or landscape)
CSS style sheets can have media statements such as screen, print or media query statements. To make web pages responsive to smaller devices, media queries allow different style rules for different types of media in the same style sheet. Example of what media query can do: When a user resizes the browser window up or down to a certain width or height, different layouts can be used by the browser from the media query. -or- A small tablet can view a web page because a media query has been written to allow for the small display to view the page correctly.

@media (...) {
/*CSS rules go here*/
}

```css
/*CSS rules go here*/
```
A webmaster can code media queries on CSS style sheets for specific devices and link the style sheets to the HTML web sheets or other CSS style sheets.

A CSS media query within a style sheet can look like this:
```
@media only screen and (max-device-width: 600px) and (orientation: Landscape or Portrait){
    /*CSS rules on how to display with this resolution on this device*/
}
```

The preceding example tells the computer that if the current display has a width of 600 pixels then run the code for that screen display.
Notice how there are commas separating the different screen max device widths and orientation, this is called a comma-separated list. Comma-separated lists can behave like a Boolean and logical operators, 'and' or 'or' are used to separate the individual queries. If one is true it can use the CSS rules or if it is false then the CSS rule will not be used.
There are different ways that media queries can be written.

- Write a CSS style sheet that lists all of the different types of device styles and what styling code to run for each device. Then insert a link on each HTML page referencing the media queries to be used if the default style is ‘false’.
- Write in each HTML page a statement testing for the size of the browser, and then reference the size to the media queries on a CSS style sheet for that particular size.

Here is an example of a code to write in a CSS style sheet for a small device:

```css
@media screen and (max-device-width: 320px) and (orientation: portrait), screen and (max-device-width: 480px) and (orientation: landscape) {
  body {
    background-color: yellow;
    color: #f00;
  }
  h1 {
    font-size: 200%
  }
}
```
<table>
<thead>
<tr>
<th>Size</th>
<th>Description/ Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>320 pixels</td>
<td>Smart phone, iTouch - portrait</td>
</tr>
<tr>
<td>480 pixels</td>
<td>Smart phone, iTouch - landscape</td>
</tr>
<tr>
<td>768 pixels</td>
<td>Tablets, Kindle or Nook sizes - portrait</td>
</tr>
<tr>
<td>1024 pixels</td>
<td>iPad or Tablets - portrait</td>
</tr>
<tr>
<td>1024 pixels</td>
<td>Large iPad, Large Tablets, Laptops, Netbooks Resolution</td>
</tr>
<tr>
<td>1300 pixels</td>
<td>Widescreen displays, desktop computers, and laptops</td>
</tr>
</tbody>
</table>

**Device Sizes**

CHECK THE CURRENT DEVICE PIXEL SIZES, THESE CHANGE AS TECHNOLOGY IS PROGRESSING!
Once your CSS Media Query is written you must link your HTML web pages to that query. Here is an example of a CSS Media Query link to put in the <head> of an HTML document:

```html
<link rel="stylesheet" type="text/css" media="only screen and (max-device-width: 480px)" href="mobile-device.css" />
```

This link checks the device size and then sends the size to the referencing file (mobile-device.css file) where all the specific media queries are coded for the type of device being used; this will style the web page correctly for the current device.
GREAT PLACE TO LEARN WHAT MEDIA QUERY IS:
HTTP://WWW.HTMLGOODIES.COM/BEYOND/CSS/INTRODUCTION-TO-CSS-MEDIA-QUERIES.HTML

GREAT PLACES TO LEARN HOW TO DO DIFFERENT ASPECTS OF A MEDIA QUERY:
HTTPS://DEVELOPER.MOZILLA.ORG/EN-US/DOCS/WEB/GUIDE/CSS/MEDIA_QUESTIONS
&
HTTP://WWW.W3SCHOOLS.COM/CSSREF/CSS3_PR_MEDIAQUERY.ASP