## >>Responsive Web Design Principles: Create a Media Query

Media Queries are a new technique introduced in CSS3 that change the presentation of content based on different viewport sizes. The viewport is a user's visible area of a web page, and is different depending on the device used to access the site.

Media Queries consist of a media type, and if that media type matches the type of device the document is displayed on, the styles are applied. You can have as many selectors and styles inside your media query as you want.

Here's an example of a media query that returns the content when the device's width is less than or equal to 100px:

@media (max-width: 100px) { /\* CSS Rules \*/ }

and the following media query returns the content when the device's height is more than or equal to 350px:

@media (min-height: 350px) { /\* CSS Rules \*/ }

Remember, the CSS inside the media query is applied only if the media type matches that of the device being used.

## >>Make an Image Responsive

Making images responsive with CSS is actually very simple. Instead of applying an absolute width to an element:

img { width: 720px; }

You can use:

img {  
  max-width: 100%;  
  display: block;  
  height: auto;  
}

The max-width property of 100% scales the image to fit the width of its container, but the image won't stretch wider than its original width. Setting the display property to block changes the image from an inline element (its default), to a block element on its own line. The height property of auto keeps the original aspect ratio of the image.

## >>Use a Retina Image for Higher Resolution Displays

The simplest way to make your images appear "retina" (and optimize them for retina displays) is to define their width and height values as only half of what the original file is.

Here is an example of an image that is only using half of the original height and width:

<style>  
  img { height: 250px; width: 250px; }  
</style>  
<img src="coolPic500x500" alt="A most excellent picture">

## >>Make Typography Responsive

Instead of using em or px to size text, you can use viewport units for responsive typography. Viewport units, like percentages, are relative units, but they are based off different items. Viewport units are relative to the viewport dimensions (width or height) of a device, and percentages are relative to the size of the parent container element.

The four different viewport units are:

* vw: 10vw would be 10% of the viewport's width.
* vh: 3vh would be 3% of the viewport's height.
* vmin: 70vmin would be 70% of the viewport's smaller dimension (height vs. width).
* vmax: 100vmax would be 100% of the viewport's bigger dimension (height vs. width).

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