

Graphics and Images

Two Main Tags for Images

- `img`
- `background-image`
- There are no specific `` properties, but you may typically use:
 - `border`
 - `border-radius`
 - `float`
 - `padding`
 - `margin`
- Typically you'll use a class or descendant selector to get at images.

Background Images

- background-image adds an image to the background of an element
- Takes url as a value:
- background-image: url('myImage.png')
- Important!!! – The url or location of the image is in relation to the stylesheet location.
- Background images don't print by default. If it's important to see in the printed version, use .

Image Formats

- Three primary image formats to work with.
- Graphics Interchange Format (GIF)
 - 256 shades
 - Single color transparency (allows background to show through)
- Joint Photographic Experts Group (JPEG)
 - Millions of colors – great for photographs
 - Not the best for text and large areas of solid colors.

Image Formats (Continued)

- Portable Network Graphics (PNG)
 - PNG8 – 256 colors, 1 color transparency
 - PNG24/PNG32 – Millions of colors
 - PNG32 has 256 levels of alpha (transparency)
- A fourth type (SVG) is used to draw graphics.

Image Licensing

- The person who owns the image typically controls its use.
- Using images from anywhere on the Internet without properly licensing the image is stealing.
- There are some sites that have imagery available under an Attribution License.
- Use of improperly licensed and/or credited images may be considered plagiarism in the educational context.
- If you're not sure whether it's ok to use it: Don't use it!

Background Images Practice 1

- Create a new HTML5 document.
- Add a background image to the body.
 - `background-image: url('<your URL here>');`
- Add a comment with the source of the image:
 - `http://www.starrenvironmental.com/`

Controlling Background Images

- Background images always tile.
- Use the background-repeat property to control the tiling. Four essential values to know:
 - repeat (default)
 - no-repeat
 - repeat-x (horizontally)
 - repeat-y (vertically)
- Example (add this to your CSS):
 - background-repeat: no-repeat;

Background Image Position

- The background-position property controls the position of the background image.
- Three ways to enter the value:
 - Keywords
 - Exact Values
 - Percentages
- Keywords for horizontal and vertical:
 - left, right, center
 - top, bottom, center

Position Height

- If your image is taller than the page content, the positioning will (may) not work correctly.
- The top may be cutoff or other artifacts.
- Fix this by adding a height or min-height on the html element:
 - `html { min-height: 100%; }`

Background Image Practice 2

- Add a background-position declaration to your CSS.
- Use Firebug to change the values interactively.
- Note the "Layout" tab in Firebug to help with Box Model interpretation.
 - Remember that other browsers may not interpret the box model exactly the same.
- Work with your image until it is in the middle of the page both horizontally and vertically.

Background Sizing

- You can control the size of the background with the background-size property.
 - Use values, auto, or other keywords
 - background-size: 100%;
 - background-size: 250px 100px;
 - background-size: 250px auto;
 - Also 'contain' and 'cover' keywords.
- Be careful with this property – it can ruin the look and feel of your images when viewport size changes.

Locking an Image in Place

- The background-attachment property fixes an image in place so it doesn't scroll.
- Two values:
 - scroll
 - fixed

The Basics So Far

- `` tag and `background-image` CSS property.
- No specific CSS properties for `` but many to control `background-image`.
- Background images typically don't print to anything other than screen.
- On to new material...

Gradient Backgrounds

- The following several slides discuss background gradients which are not supported by IE9 and older.
- If you need to support IE9 and older, you should use an image with a gradient or use a background-color (no gradient).
- The information on gradients themselves is relevant regardless!

Linear Gradients

- A linear gradient describes a straight line that transforms or transitions the image between multiple colors.
- In CSS, this relates to the background-image property as a different value.
- background-image: linear-gradient(degrees, color, color, ...);

Gradient Practice

- Create a new HTML5 page.
- Add to the page a header and an h1 within the header. The h1 should contain some relevant content.
- Add CSS to make the header be a gradient.
 - `background-image: linear-gradient(90deg, black, blue);`
- Use Firebug to add a third color.

Linear Gradient Values

- The "degrees" value describes the angle of a line going through the element being styled.
- Degrees are clockwise:
 - 90deg is to the right
 - 180deg is straight down
 - 270deg is to the left
- You can also specify without degrees with the keyword:
 - top
 - bottom
 - right
 - left

Color Stops

- You can specify more than two colors and you can specify where to stop with a linear-gradient.
- The word "transparent" can also be used.

Cross-Browser Gradients

- One way to provide for older browsers is to either use a background-image with a gradient or use a background color the same as the gradient.
- If you place the background color first, older browsers will (should) ignore the linear-gradient and just apply the background color.
- Note that rgba may also not work in older browsers, so be prepared to make changes to how you specify colors too!

Cross-Browser Testing

- Recall we discussed cross-browser testing for IE:
 - Use F12 developer tools and choose the mode/version.
- Testing older versions of other browsers is more difficult; Typically requires a virtual machine with an older operating system installed and auto-updates turned off.
- Testing on phones and tablets can require external hosting or VPN connection
- Remember the HTML5 Shiv!

Summary

- `` and `background-image`
- Use `background-repeat`, `background-position`, and others to control the background-image
- Several image formats were discussed
- The use of gradient backgrounds was introduced.

Further Reading

- Additional CSS topics and properties not covered here due to lack of great support (yet)...
 - Radial Gradients
 - background-origin
 - background-clip