

Images for the Web

Image File Formats

- Web Browser Friendly

- JPG
- GIF
- PNG
- BMP
- ICO
- ...a few more

- Some Support

- PDF
- SVG

- Other Formats (not web friendly)

- TIFF
- CGM
- VML
- HEIF
- BAT

...hundreds more

Rules for Media on the Web...

For any media: images; sound files; video; et cetera

- The Internet is slow(ish)
- Computers are slow(ish)
- File size is important
 - Small file sizes are fast
 - Large file sizes look better
- Trade off:
 - Speed, versus...
 - High resolution

Digital Graphics Family Types

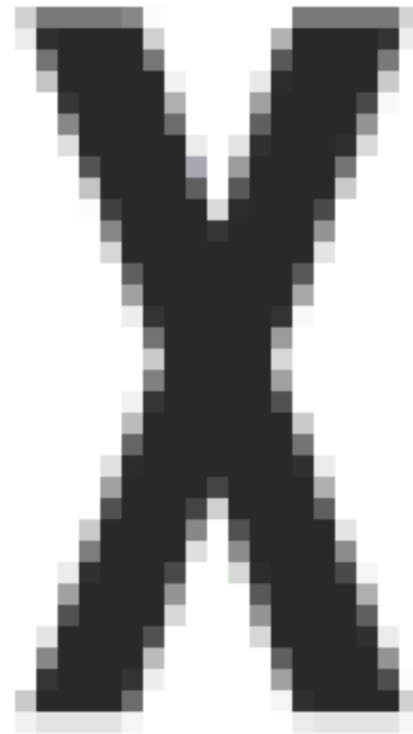
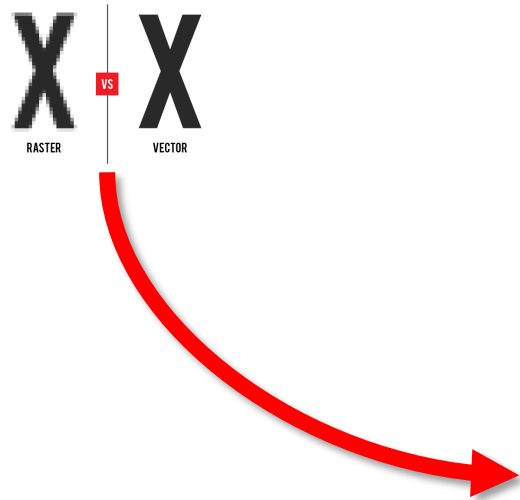
Raster (bitmaps)

- JPGs, GIFs, PNGs
- Pixels
- Detailed images
- Photographs
- Realistic
- Can be large file sizes
- Limited scalability
- Not inherently mobile-friendly

Vector (line drawings)

- SVGs
- Lines, curves, fills
- Line art
- Logos, drawings
- Simplistic
- Small file sizes
- Scalable
- Mobile-friendly

Raster vs. Vector



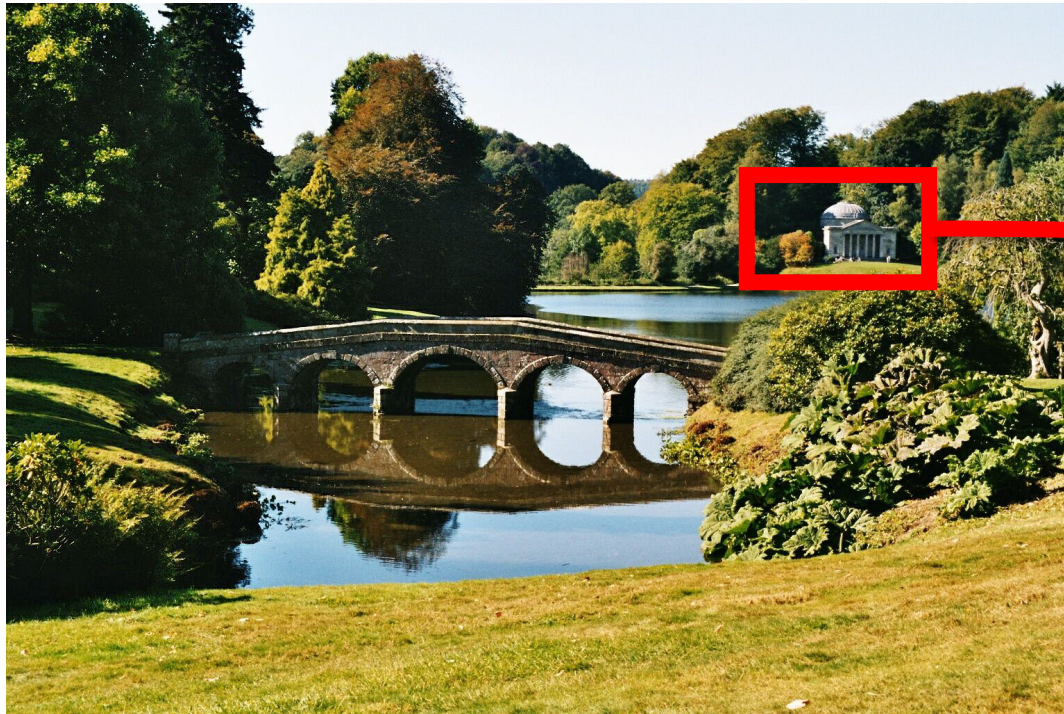
Pixilation

VS



Scalable

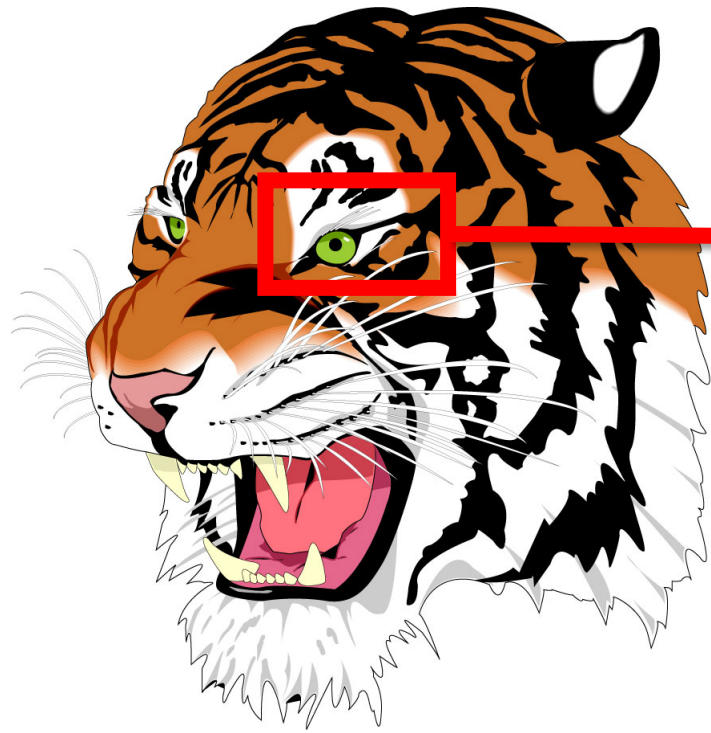
Raster (bitmap)



Pixilation



Vector



File types: the big three

JPG, GIF, PNG

JPEG (.jpg)

- Joint Photographic Experts Group
- Best used for photographs
- Up to 16.7 million colors
- Uses lossy compression
- Cannot be made transparent
- Cannot be animated



GIF (.gif)

- Graphics Interchange Format
- Best used for line art and logos
- Maximum of 256 colors
- Can use a transparent color (layer)
- Uses lossless compression
- Can be animated



Background
color
configured to
be transparent



Background
color – no
transparency



PNG (.png)

- Portable Network Graphic
- Can be used for both photographs or line art and logos
- Up to 16.7 million colors
- Use lossless compression
- Can use a transparent color (layer)
- Can be animated (but not very well)
- Combines the best of GIF & JPEG
 - Doesn't compress as well as JPG (large file sizes!)



Images on Webpages

HTML vs. CSS

HTML vs. CSS

Images in HTML

- Images that are part of the content belong in the HTML
- Use the HTML:
`` element

Images in CSS

- Images used for style, decoration (eye-candy) or otherwise “not content” belong in the CSS as background images
- Use the CSS property:
`background-image: url ("...");`

HTML Image Element

- Configures graphics on a web page

```

```

- `src` Attribute
 - File name of the graphic
- `alt` Attribute
 - Configures alternate text description
- Do *not* use the `height=""` or `width=""` attributes



CSS background-image Property

- Configures a background-image

background-image: url(.. /images/clouds.jpg) ;

- Works with helper properties
 - background-repeat:
 - background-attachment:
 - background-position:
- ...more

Fish

A fish is any member of a paraphyletic group of organisms that consist of all gill-bearing aquatic craniate animals that lack limbs with digits. Included in this definition are the living hagfish, lampreys, and cartilaginous and bony fish, as well as various extinct related groups. Most fish are ectothermic ("cold-blooded"), allowing their body temperatures to vary as ambient temperatures change, though some of the large active swimmers like white shark and tuna can hold a higher core temperature. [1][2] Fish are abundant in most bodies of water. They can be found in nearly all aquatic environments, from high mountain streams (e.g., char and gudgeon) to the abyssal and even hadal depths of the deepest oceans (e.g., gulpers and anglerfish). At 32,000 species, fish exhibit greater species diversity than any other group of vertebrates.



Fish are an important resource for humans worldwide, especially as food. Commercial and subsistence fishers hunt fish in wild fisheries (see fishing) or farm them in ponds or in cages in the ocean (see aquaculture). They are also caught by recreational fishers, kept as pets, raised by fishkeepers, and exhibited in public aquaria. Fish have had a role in culture through the ages, serving as deities, religious symbols, and as the subjects of art, books and movies.