

Images for the Web and PowerPoint - some basics

1. Different media:

Photos:

- Continuous tone
- True color

Prints in books, newspapers, magazines:

- Rows of dots at relatively high resolution.
- No true color - but tiny dots in CMY create the illusion of color when perceived by the human eye.

Computer screen:

- Low resolution (generally, 72 pixels per inch)
- True color
- Backlit, not reflective, great color!

2. Resolution and display on the web:

For the web, resolution is irrelevant. What matters is dimension of an image in pixels.

Example:

- A 2 inch-wide image, scanned at 200 dpi. When printed, the image will print 2 inches wide. On a monitor, the image will occupy 2×200 pixels = 400 pixels
- A 4 inch-wide image, scanned at 100 dpi. When printed, the image will print 4 inches wide. On a monitor, the image will occupy 4×100 pixels = 400 pixels
- Bottom line: for web display, count pixels

Tips:

- Keep images small
- Use the lowest feasible compression setting
- Be aware of end users monitor limitations!
- Be aware of download times

3. Resolution and display in PowerPoint:

On the web, an image will always display with the same, fixed pixel size. This is not true for PowerPoint, PowerPoint slides resize depending on the display medium (different size monitors), and it is not possible to "fix" the size of an image in pixels.

Resizing can go either one of two ways:

- PowerPoint makes your image *smaller than* its true size in pixels. Not a problem - some information is discarded to shrink the image.
- PowerPoint makes your image *larger* than its true size in pixels. Very bad - information needs to be added to enlarge the image, but the information is not there. The image will look jagged or pixilated.
- Bottom-line: you always want to be in a situation where PowerPoint downscales rather than upscales your images.
- How do you get there? Make your images larger than they need to be. Recommendation: 150 dpi, or twice as many pixels as you think you'll need.
- Big, bad caveat: Do not make your images MUCH larger than that! If you do, your PowerPoint file size increases dramatically, and evil can ensue; for example, a program crash in the middle of your presentation.

4. File formats and compression:

PSD

- Non-compressed file format (Photoshop)
- Large files
- Good for archiving images
- Cannot be used on the web

TIFF

- Compressed file format, but without loss of information
- Large files
- Good for archiving images
- Cannot be used on the web

JPEG

- Compressed file-format, information is discarded
- Small file size
- Best for photos or images with many subtle color shifts
- Can be used on the web

GIF

- Compressed file-format, information is discarded
- Small file size
- Limited to maximally 256 colors
- Best for line art, diagrams, images with big blocks of solid color
- Can be used on the web