

# Photographing Your Artwork – Resizing

## I. UNDERSTANDING SIZING

Every digital image is made of a grid of pixels, each displaying a predefined colour, to make up the entire image. Depending on how tightly packed together these pixels are, you can change the physical size and resolution of an image. It is the balance between size and resolution that will determine the file size (megabytes) of your images. More pixels = more information = larger file size.

### Physical Size

All digital images will have a physical size (e.g. 4x6"). Most photo editing software will offer a variety of units (inches, cm, mm) in which to measure your image. Units can often be changed in Settings.

### PPI or DPI (pixel/dots per inch) / Resolution

This explains the resolution of the image, or number of pixels per inch. A higher number = a sharper, crisper image.

## II. FILE SIZE

File size is determined by both the physical size and resolution of your image. Sometimes you will want to increase the resolution, without reducing the file size. Other times you may need to reduce both size and resolution to achieve a small enough file size for submissions or online viewing.

### Change physical size/resolution without losing information

Each pixel of an image contains colour information. By squeezing these pixels together, we increase the resolution (sharpness), but reduce the physical size of the image.

### ORIGINAL INFORMATION

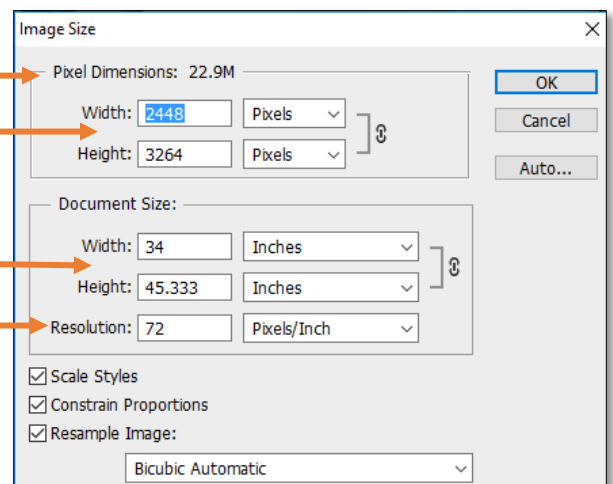
In this screen shot (from Photoshop) you can see:

The **FILE SIZE** (22.9 MB)

The number of **PIXELS** of information in this image (2448 x 3264)

The **PHYSICAL SIZE** of the image (34 x 45.3 inches)

The **RESOLUTION** of the image (72 ppi)



### INCREASE RESOLUTION (without losing any information)

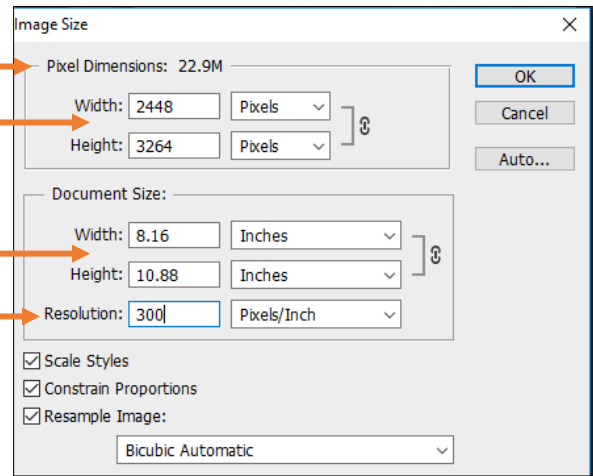
You can change the physical size and resolution, without changing the total number of pixels. Here we have increased the resolution and decreased the size (better for professional printing).

**FILE SIZE** is unchanged

The number of **PIXELS** of information is unchanged

The **PHYSICAL SIZE** has been reduced

The **RESOLUTION** of the image has been increased (pixels are squished together)



### **Change file size by changing resolution and/or physical size**

To decrease the file size of an image, you will need to change the physical size and/or resolution of your image. Be sure to always save this reduced image as a new file, so you don't lose any information from your master image.

### DECREASE FILE SIZE

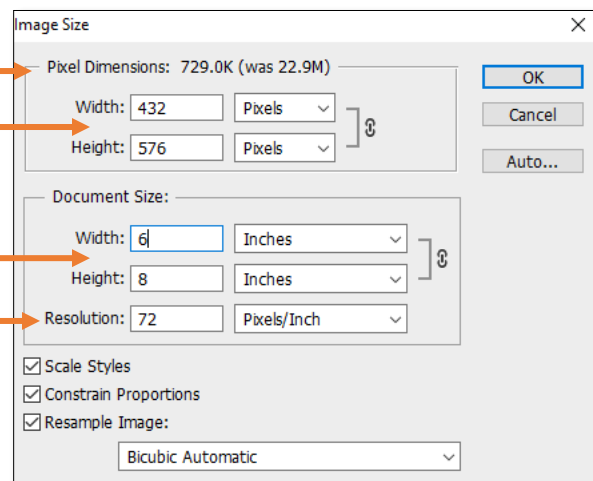
By changing the image to 72 ppi and 6 x 8 inches, we have reduced the file size to under 1 MB.

**FILE SIZE** is reduced

The number of **PIXELS** of information is reduced

The **PHYSICAL SIZE** has been reduced

The **RESOLUTION** remains low (72 ppi)



### Tips about file size:

- You should always keep a master copy of your final images (largest size and PPI your camera offers), and save copies of the master file when making any changes or resizing images. If you resize an image without saving your master image, you have lost valuable data, which cannot be recovered.
- On your website, you will want to decrease the size of your image as much as possible, without losing quality. A standard resolution of 72 ppi is sufficient and the physical size should be limited, so there is less chance of someone “stealing” your image.
- File size is also affected by the type of file you use, as they store and compress the information in different ways.

**GIF** Good for graphics and images with a very limited number of colours. For web use.

**PNG** Good for graphics and photographs, especially graphics with a transparent background. For web use and printing.

**JPEG\*** Good for photographs and images with many colours. For web use and printing.  
*\*Most devices save in this format and this is the most accepted format for submissions.*

**TIFF** Good for photographs and images with many colours. Maintains all information gathered by the camera; large file sizes. For master files and printing.

### III. RESOLUTION REQUIREMENTS

**300 ppi** The standard maximum resolution required for professional printing.

**150-200 ppi** A good standard resolution for printing on a home printer.

**72 ppi** The standard resolution for images being displayed on a screen (websites, social media, phones, etc.) Most devices save images at this resolution.