

TERMINOLOGY

PHOTOSHOP CC

Basic Terminology

Pixel - Like tiles of a mosaic, pixels form the basic blocks of an image. Contains millions of colors.

- Pixels are resolution dependent. That means that the larger the picture, the lower the quality of the image.
- Resolution - Refers to the number of pixels per inch in an image.

Vector - An image that uses equations to represent shapes rather than pixels. Adobe Illustrator uses Vector files.

- Vector images are NOT resolution dependent, this means they can be scaled to ANY size with no degradation of quality.

Bitmap - An image having only black and white as its colors, also called a line art, 1 bit or Black & White image.

Grayscale - An image where the pixels are shaded in 256 shades of black. This can also be referred to as an 8-bit or Halftone image.

RGB - Red, Green & Blue, an image comprised of pixels colored red, green and blue. RGB images are used mainly in Video and Web production.

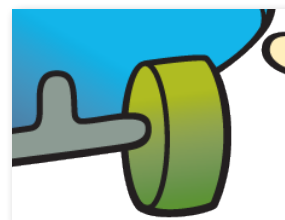
- RGB files cannot be used for printing. All RGB files need to be converted to CMYK in order to print on press.
- Some clients request RGB files to print in house on their color printer, but this is rare.

CMYK - or 4 color process. An image file where the pixels consist of 1-100% each of Cyan, Magenta, Yellow and Black. Used for commercial printing.

Spot Color - A color, usually from the Pantone ink library, that is added to a print job for effect. Also called PMS colors or Spot Plates.

Resolution (Pixels Per Inch or PPI)

Resolution is the term used regarding the number of pixels that make up an image. Pixels are always square, **but they are not a fixed size**.



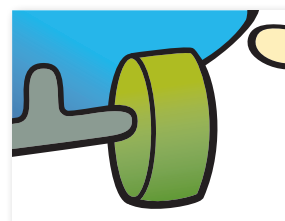
Pixel image at 300 PPI
(Shown at 200%)



Pixel image at 150 PPI
(Shown at 200%)



Pixel image at 72 PPI
(Shown at 200%)



**Vector image
(no resolution)**
(Shown at 200%)



**Vector image
(no resolution)**
(Shown at 1200%)

Images for Print

An image with a resolution of 300 PPI has 300 pixels per square inch of image, meaning smaller squares that are packed into one inch. The more pixels usually means higher resolution. Images that are 300 PPI or greater are considered high resolution.

Print applications use images 300 PPI as a standard rule of thumb

Images for the Web

Any image that is displayed on a monitor, cel phone, TV or any light emitting device is considered to be low resolution. As a general rule, images used in these types of displays are at 72 PPI. Images at 72 PPI have 72 pixels per inch of image and are therefor much larger squares of information and have less detail. Sizes of Web images are referred in pixels, not inches.

Image size in Photoshop

Image size is located in Image>Image Size (**OPTION + COMMAND + I**)

Images cannot be enlarged or reduced in file size without adding or taking pixels away (called Resampling).

Images can be enlarged or reduced without any degradation if the **Resample Images**

is checked off. This allows the image size to be increased and the resolution decreased in inverse proportions and not degrading the file.

There are times when an image **HAS** to be enlarged. This can be done but it will **always degrade the image**, sometimes this degradation is acceptable. To choose the best outcome for the image, choose an option from the drop down list in Image Size.

