

VISUAL TECHNOLOGY PRODUCTION (MPT1483)

PRINTING

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IMAGE RESOLUTION



INTRODUCTION

- Resolution is the measurement of how many dots/pixels fit into one inch.
- The higher resolution, the sharper the image will be.
- Recommends resolution: 300 dpi (dots per inch) for crisp, clear results.
- Lower resolution images appear fuzzy, jagged and blurry.

INTRODUCTION

Resolution
= 400 dpi

Crisp

Fuzzy

Resolution
= 72 dpi



RULES TO REMEMBER...

- Images should be 300 dpi (dots per inch) at the final size in the layout.
- Images which include text should be 400 dpi at the final size in the layout.

RULES TO REMEMBER...

- Resolution and image size are inversely proportional to each other.
- Enlarge an image, the resolution decreases; reduce an image, the resolution increases.
 - Example: a 2 x 2" image at 300 dpi (acceptable) enlarged to 4 x 4" has a new resolution of 150 dpi (unacceptable).

RULES TO REMEMBER...

- 2 x 2" image @ 300 dpi = GOOD
- ...enlarged to 4 x 4" = 150 dpi = BAD

- 17 x 13" image @ 72 dpi = BAD
- ...reduced to 4 x 3" = 300 dpi = GOOD

- Taking the photo on the highest setting will maximize both the quality of the image, as well as the range of sizes at which you will be able to use it in printing projects.

RULES TO REMEMBER...

- Low resolution images print fuzzy, jagged and blurry.
- The settings used during the original "capture" of an image (ie: scanning, digital camera, etc) determine its base resolution.
- Resolution can only be improved by decreasing the image size, or by recapturing the image at a higher quality setting.

RULES TO REMEMBER...

- Recommended minimum resolution for printing is 300 dpi; computer monitors generally have a display setting of 72 dpi.
- If your images have low resolution, they may not look bad on your monitor but will likely print blurry or jagged.

THINGS TO AVOID...

- Web images are predominately low resolution (72-96 dpi) GIF or JPEG files.
- This resolution is good for quick transmission over the internet, but is not acceptable for use in printing.
- Do not save images or graphics from a website to use in your print project!

IMPROVE RESOLUTION...?

- Upsampling is when a low resolution image is saved to a higher resolution with no changes in dimensions.
- Upsampling adds more pixels/dots per inch (dpi), but creates blurry images, ugly blocks of color, and high contrast in images.
- What is the best way to increase/improve image resolution?

PRINT VS ONLINE



REQUIREMENTS: PRINT

- Resolution must be high
- 300 DPI for micrographs, and similar photographic-type images.
- 600 DPI for images like graphs and drawings.
- Color - Printing is done in CMYK.
- Colors outside CMYK's gamut will not be printed.
- Remember, CMYK's gamut is *smaller than RGB's*.
- This can lead to loss of image detail when viewing the printed image if the source was in RGB.

REQUIREMENTS: ONLINE

- Resolution does not need to be very high
- Monitors display at 72 - 96 DPI, so 100-200 DPI is plenty for any kind of figure
- More than 200 DPI is overkill
- the files become very large.
- They may not display properly on a monitor.
- Color – Monitors display in RGB
- RGB contains almost all of CMYK's colors.
- Most images, whether in RGB or CMYK format, will display color properly in online media.

Thank You !

