

NPL'S GUIDE TO *PHOTO RESOLUTION*

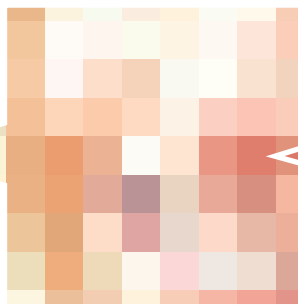
Pixel Dimension

The **PIXEL DIMENSION** is the number of pixels in an image file. This can also be called the **RESOLUTION** or **PPI** of an image (ppi stands for pixels per inch).

PIXELS are the smallest elements of a digital image. A digital photograph is made from millions of individual pixels that blend together when viewed by the eye to form a cohesive image.



ORIGINAL IMAGE



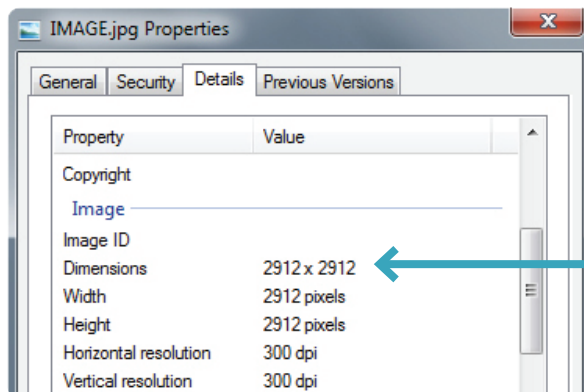
CLOSE UP OF IMAGE



SINGLE PIXEL

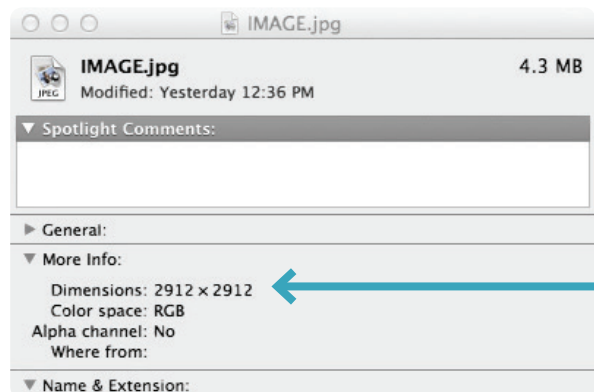
TO FIND PIXEL DIMENSION ON A PC

Right click on the digital file and choose **PROPERTIES**, then navigate to the **DETAILS** tab and locate the pixel dimensions there.



TO FIND PIXEL DIMENSION ON A MAC

Highlight the digital file on your computer, press command+i to **GET INFO**, and locate **DIMENSIONS** under **MORE INFO**.



Importance of Image Resolution



When ordering photographs, it is important to be aware of your images' resolution, as this will greatly impact the quality. The larger the print, the more pixels are needed (i.e. a 4x6 print will require at least 720x1080 pixels while a 30x40 print will require a least 5400x7200 pixels to print well).

Using an image with a low resolution to print a larger photograph will have an unsatisfactory result. For optimal printing, a ppi of 300 is required (please see pixel dimension chart on the next page for the conversion).



SAMPLE OF 4x6 PRINT WITH 300 PPI
(1200x1800 PIXELS)



SAMPLE OF 4x6 PRINT WITH 180 PPI
(720x1080 PIXELS)



SAMPLE OF 4x6 PRINT WITH 72 PPI
(288x432 PIXELS)



Enlarging a photograph using image editing software program (such as Photoshop) will have similar results. Taking an image that is 1200x1800 pixels and resizing it up to 6000x9000 will not add more detail or quality to the image, but merely lower the quality of the image.



SAMPLE OF ORIGINAL IMAGE
WITH 1800x1200 PIXELS



SAMPLE OF IMAGE AFTER BEING
ENLARGED TO 9000x6000 PIXELS

Pixel Dimension Chart

PRINT SIZE	180 PIXELS PER INCH (REQUIRE RESOLUTION FOR GOOD QUALITY PRINTS)	300 PIXELS PER INCH (OPTIMAL RESOLUTION FOR BEST QUALITY PRINTS)
4x6	720x1080	1200x1800
4x8	720x1080	1200x2400
5x5	900x900	1500x1500
5x7	900x1260	1500x2100
5x10	900x1800	1500x3000
5x15	900x2700	1500x4500
6x8	1080x1400	1800x2400
6x9	1080x1620	1800x2700
7x10	1260x1800	2100x3000
8x8	1400x1400	2400x2400
8x10	1400x1800	2400x3000
8x12	1400x2160	2400x3600
8x16	1400x2880	2400x4800
8x24	1400x4320	2400x7200
8.5x11	1530x1980	2550x3300
9x12	1620x2160	2700x3600
10x10	1800x1800	3000x3000
10x13	1800x2340	3000x3900
10x14	1800x2520	3000x4200
10x15	1800x2700	3000x4500
10x20	1800x3600	3000x6000
10x30	1800x5400	3000x9000

Pixel Dimension Chart, cont.



11x11	1980x1980	3300x3300
11x14	1980x2520	3300x4200
11x17	1980x3060	3300x5100
11x22	1980x3960	3300x6600
11x28	1980x5040	3300x8400
12x12	2160x2160	3600x3600
12x18	2160x3240	3600x5400
12x24	2160x4320	3600x7200
12x36	2160x6480	3600x10800
15x30	2700x5400	4500x9000
15x40	2700x7200	4500x12000
16x16	2800x2800	4800x4800
16x20	2800x3600	4800x6000
16x24	2800x4320	4800x7200
18x24	3240x4320	5400x7200
20x20	3600x3600	6000x6000
20x24	3600x4320	6000x7200
20x30	3600x5400	6000x9000
20x40	3600x7200	6000x12000
22x28	3960x5040	6600x8400
24x24	4320x4320	7200x7200
24x30	4320x5400	7200x9000
24x36	4320x6480	7200x10800
30x30	5400x5400	9000x9000
30x40	5400x7200	9000x12000