

Resolution

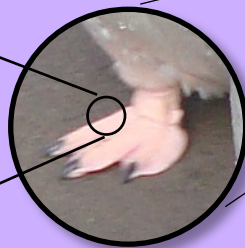
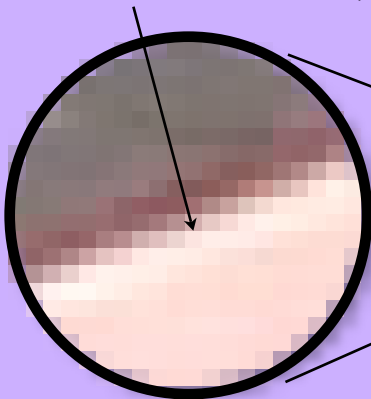
By the end of this task I...

- 1) should be able to explain the terms resolution and pixels
- 2) can explain when to use a high resolution digital photo
- 3) can explain when to use a low resolution digital photo
- 4) will be able to change the resolution of a digital photo

Resolution and Pixels

When you zoom into a digital photo, you will see that the photo is made up of thousands of tiny coloured squares.

These squares are called *pixels*.



The *resolution* of a digital photograph is the number of pixels in the photo. Resolution can be written in two ways.

1. The number of pixels along the length and height of the photo.
3000x2000 pixels
2. The total number of pixels
(3000x2000 = 6,000,000) in the photo.
6 Megapixels (or 6 million pixels)



Note - mobile phones and digital cameras both use the second example to state the maximum resolution of the photos they can take.

When Should I Use Different Resolutions?

Look at the table on the right.

There are advantages to having both high resolution and low resolution graphics, so its important to learn when we use each one.

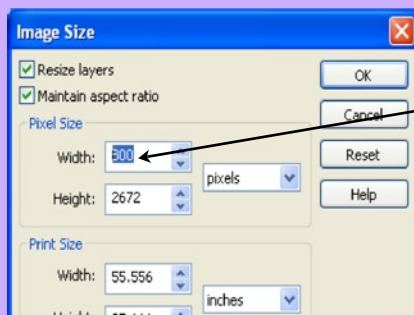
If you can, always start with a high resolution photo because you can easily reduce the resolution if you need to. It's far harder to increase the resolution as to do this we have to create new pixels.

	High Resolution	Low Resolution
Example Resolution	4000x3000 pixels	300x225 pixels
Quality	Very High	Very Low
File Size	3500Kb	116Kb
Printing	Very high quality when printed	Low quality when printed
Downloading, Uploading & E-mailing	Could take a long time to be transferred from one computer to another.	Can be transferred very quickly because of small file size.
Storage	292 similar photos could be stored on a 1Gb memory card.	8827 similar photos could be stored on a 1Gb memory card.
Viewing on a monitor (set to 1024x768 resolution)	Quality is far beyond what can actually be displayed.	Quality will be poor as the resolution of the monitor is better than the photo.

Changing the Resolution of a Photo

Step 1 Start up Serif PhotoPlus.
Open the file called "High Resolution" in the Resolution folder.

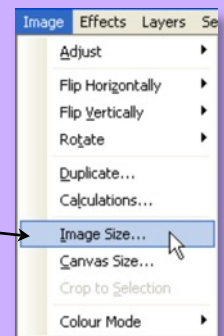
Step 2 Click on the Image menu and choose *Image Size*.



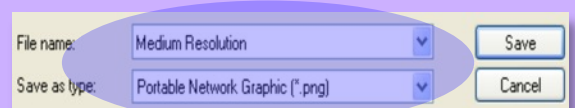
Change the width to 800 pixels.

Press the Tab key on the keyboard and the height should automatically change.

Click OK.



Step 3 Now click on the File menu and choose *Export*. Change the file name to "Medium Resolution", select png as the file type and click Save. Save the photo to your network folder.



Try - Save another photo called "Low Resolution" with a width of 200. Open up a blank word processing document and insert both photos. Change the size of both the photos to make them similar. You should see a difference in the quality of the two photos.