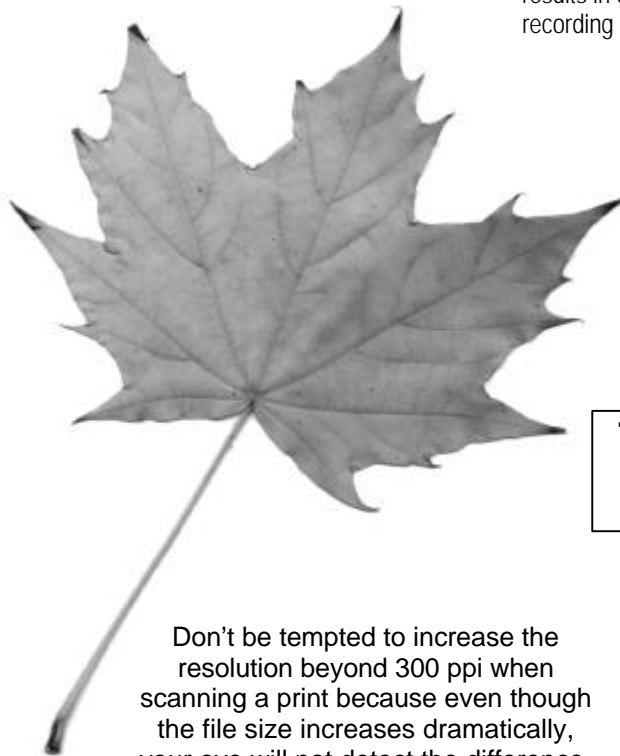


## Why is image resolution important?

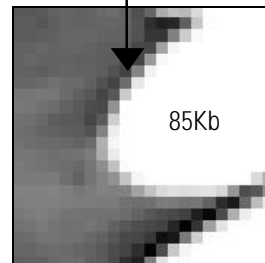
Digital images are comprised of squares or pixels. The number of these tiny pixels in your image will determine the overall quality.

The amount of detail in an image depends on how many pixels there are to record it and how you decide to distribute them.

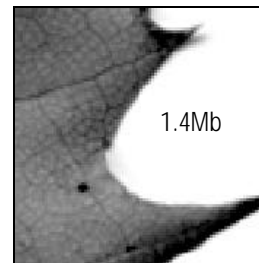


Don't be tempted to increase the resolution beyond 300 ppi when scanning a print because even though the file size increases dramatically, your eye will not detect the difference.

The pixels are clearly visible in this low resolution scan.



A leaf scanned at 72 ppi results in 85 000 pixels recording information.



The leaf scanned at 300 ppi results in 1.5 million pixels recording information.

We can see the effects of using a resolution that is too low to capture sufficient information. Detail in the photograph becomes blurred and indistinct. In extreme cases we can see pixelation – jagged edges

But how do we know when we have used too high a resolution? This is not possible to see by looking at the image, but the clues are just as obvious. All of the devices you use, from the scanner right through to the printer, will take much longer to complete your commands. The computer itself may even crash unexpectedly. You will consume valuable storage space unnecessarily on discs and hard drives, and your images will take too long to load over the internet. Many problems can be avoided by determining the optimum file size for your image and hardware.

### The optimum image resolution...

If the original you are scanning will be printed at either the same size, smaller or up to 20% larger, scan at 300 ppi.

The only time you need to increase the file size beyond 300 ppi is when you have a small original. It may be a negative or you may need to make an enlargement. When using a film scanner, use the maximum resolution available. Then use the image size dialogue box in Photoshop to arrive at the optimum resolution for the size of the output you intend producing.

This rule of thumb is based on the Q Factor which can be used to mathematically calculate the ideal scanning resolution. For more information on this and resolution consult the recommended text.

Obviously the image resolution and the resulting number of pixels will effect your file size. As you can see from the leaf example, scanning at a low resolution produces such a small file you could save 16 versions of it onto one floppy disc. However save it at a high resolution and you can fit just the one file onto your floppy disc.

## What resolution do I use for scanning?

**Even before you scan your original you need to know what you are going to do with it.**

Are you going to print it?  
What device will you use for printing?  
What size would you like it be?  
What quality are you expecting?