# Leaving Automatic Mode

After you have taken heaps of images to hone in your composition skills, it will be time to start experimenting with creative exposure.

## The Creative Exposure Trilogy

There are three setting on your camera that control exposure

* Shutter Speed
* Aperture
* ISO

Here are some brief explanations of what these three things are:

### Shutter Speed

The shutter in your camera is a curtain made of ultra-thin, light weight metal that opens and closes at varying time frames when you press the shutter release button. How long this window remains open to let light from your lens fall onto the cameras sensor is what we refer to as the shutter speed.

Fast shutter speeds can be used in well-lit/ outdoor situations and are good for capturing on-blurred sharp images or to simply limit the amount of light entering the camera in very bright conditions.

Slow shutter speeds have to be used when there is little available light so you need a longer exposure to let the light saturate onto the sensor. Longer shutter speeds often mean you will have to steady your camera, either by bracing yourself against a wall or better still, use a tripod. This is so your images won’t be blurred.

Shutter speeds on most modern SLR cameras can range from 30 seconds to 1/4000 of a second and beyond.

### Aperture

The aperture is a mechanical iris located in the lens itself. It is able to create a circular opening that can vary in size. This is another way light entering the camera can be controlled. Varying the size of the opening also controls how much of the image is rendered in sharp focus. This is a wonderful optical phenomenon that photographers take great advantage of.

Aperture values are measured in ‘f’ stops (‘F’ocal Ratio)

Aperture values can range from f1 to f22. The smaller the number the wider the aperture and therefore more light is allowed to enter the camera to make the exposure.

Very few lenses actually go down to f1 f1.2 or 1.8 is more common.

At f1.2 there will be a very narrow depth of focus whereas at f22 nearly everything near or far from the camera will be in focus.

### ISO

The ISO is a rating of how sensitive the cameras sensor is to light. At ISO 100 the sensor is usually at its lowest sensitivity. ISO can go to 6400 and beyond which is extremely sensitive and would be used in very low light situations.

The trade off to using higher ISO settings is that grain or noise is introduced to the image. This means the image will not appear as clear and sharp as one taken at ISO 100.

Again ISO can also be used to create an earthy, grainy effect if desired.

# Using Depth of Field

Apart from being one of the elements in creating exposure, the aperture can be used for creative effect. At f1.2 there will be a very narrow depth of focus whereas at f22 nearly everything near or far from the camera will be in focus.

Sometimes you will want as much of the image as possible to be in sharp focus in this case use an f stop closer to f11 or f16. If you want a beautifully blurred background and foreground with only the subject in focus then use an f stop closer to f2.8 or F1.2.

## Best lenses for Shallow Depth of Field

Although any lens that can stop down to f1.2 will produce great shallow depth of field, a lens with a focal length of 100mm or greater will produce excellent results.

# Processing Digital Images

Just like the analogue darkrooms of old, downloading the image to your computer is not the end of the process.

Modern imaging software gives you the ability to properly adjust your images to   
correct such things as:

* Saturation
* Contrast
* Levelling the light and dark areas of your image
* Colour Tone
* Sharpness
* Much more…

## Shooting in RAW vs JPG

Your modern SLR camera can capture your images in a variety of image formats. The typical one will be .JPG which is the most popular and easy to manage image format today.

The down side about post processing this image type if that it is a “Lossy” image type in that it is designed to remove unwanted colour to allow for a smaller file size. You will not be able to post process as much without losing quality.

Most modern digital cameras allow to capture in a “RAW” file type. This file type is “Non Lossy” and can be considered as the post processed image. This file type has greater latitude for post processing without losing quality.

# Printing Digital Images

One of the joys of photography is to see your image printed on professional photographic paper. It is well worth finding a professional photo lab. Landscape style images are best printed on glossy materials. Some well known papers for this purpose are Kodak Endura Metallic or Fujiflex Super Gloss. Portrait style images often prefer matt or textured surfaces.