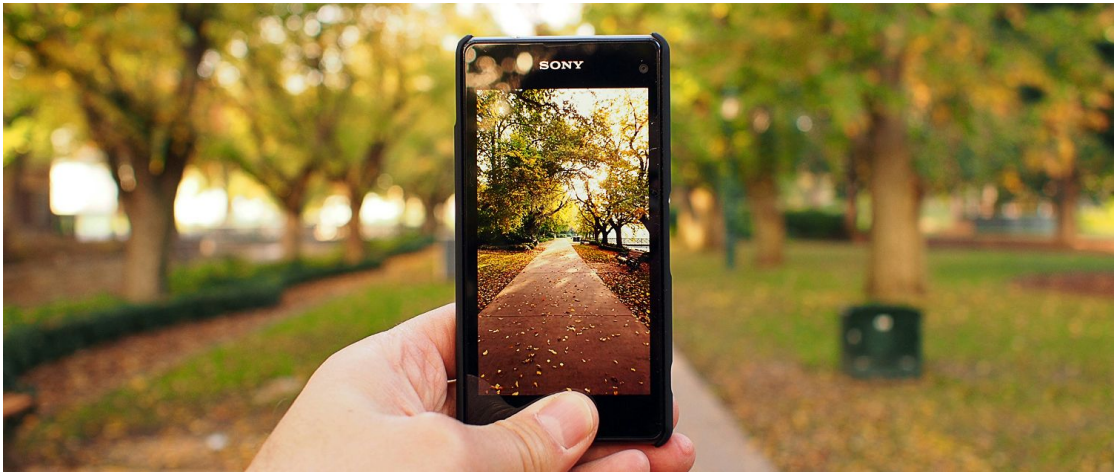
JOEL BRAMLEY JB PHOTOGRAPHY



Intro to Photography

Camera talk

Anatomy of a camera, How a camera works & Common terms

Composition

Rule of thirds, Leading lines & Angles/Perspective

Lighting

Ideal conditions for shooting

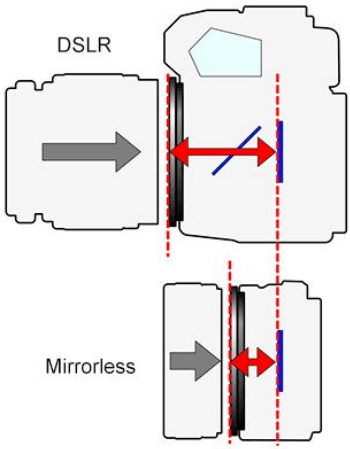
Depth of field (DoF)

Achieve blurry backgrounds

Exposure

What is exposure, Metering & Exposure compensation

Camera talk



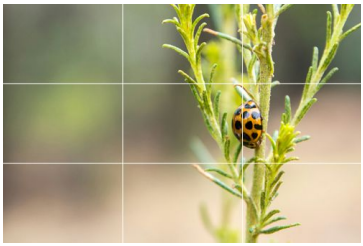
Anatomy of a camera/How a camera work

1. **Lens** - Light passes through and strikes a mirror (DSLR) or sensor (Mirrorless)
2. **Mirror** - Reflects light up to a focusing screen (DSLR). This mirror flips up so light hits the sensor when taking a photo
3. **Pentaprism** - Reflects the image so it can be seen in the viewfinder (DSLR)
4. **Shutter** - Opens to allow light onto the sensor
5. **Sensor** - Records the light information

Common photography terms

1. **HDR** - Stands for High Dynamic Range and is generally made from three or more images taken with different exposures to get details in the dark and light areas
2. **Aperture** - Controls the amount of light passing through the lens to the sensor much like the pupil in the human eye. The small the f number (e.g f/1.4) the more light can enter the lens
3. **Fast/slow lens** - Relates to aperture (amount of light that can enter the lens based on the f number)
4. **Bokeh** - Pronounced ‘boh-kay’ is used to describe the quality of the blur in out-of-focus areas of a picture, faster lenses smoother blur
5. **DoF or Depth of Field** - This is used to describe what is in focus in an image

Composition



Rule of thirds

This is a great tool to use to help keep the photo interesting and balanced. The flower image to the right uses this rule by placing the plant and beetle on one of the lines, placing the beetle on intersecting lines will also work.

Leading lines

Leading lines allow the eye to follow into the photo to a point of interest. Usually leading lines start at the bottom and lead into the photo, they do not have to be straight as they are to the right.

Angles/Perspective

One of the easiest to produce with dramatic effects even if the first two are not used is to change the angle and/or perspective. We see the world at standing height so shooting low or high helps to make a photo more interesting. The photo to the left was taken with the camera almost on the ground and uses DoF (Depth of FIeld) to isolate the leaf.

Lighting

Ideal conditions for shooting

Although you can take a photo under any lighting condition there are better times of the day/night/week/month/year to take photos depending on what you are after, see the below some examples:

Landscape - Morning and late afternoon work best due to the light being lower and softer, this can have a huge impact on the mood of the final image.

People/Portrait (Natural light) - this does depend on what style of photo you are going for but generally overcast days are best due to the clouds scattering the light. This softens the light and makes the shadows softer also.

Use of a flash and/or reflector can be used to help achieve the desired lighting conditions.

Depth of Field

Achieving blurry backgrounds

Two ways to produce blurry backgrounds are:

1. Fast lens with an aperture or 2 or less
2. Zoom lens (telephoto works best)

With both options the trick is to focus as close as you can to the subject (minimum focus distance, this varies from lens to lens) and increase the focal length or zoom (if your lens does zoom)

Exposure

What is exposure

Exposure refers to the amount of light that has been captured for a specific photo.

Overexposed photos will look too bright and can clip details in the highlights whilst underexposed photo will look to dark and can clip details in the shadows.

An even exposure will look like it has more even light and should not clip any details in the highlights or shadows.

Metering

Cameras measure the light coming into the lens and adjust the ISO, Shutter and Aperture to capture an even exposure. There are three common methods:

1. **Spot** - The camera will only measure from a very small area of the scene (can be great for sunsets or creating silhouettes)
2. **Center** - The camera will measure from a larger area around the centre of the scene
3. **Multi-zone/Matrix** - The camera will measure from the entire scene

Exposure compensation

Exposure compensation is a technique for adjusting the exposure indicated by the camera meter, mainly used when shooting in aperture priority.

e.g you can override the camera's exposure settings to suit your creativity, having this set to -0.3 can help remove some the harshness from the midday sun.

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Intro to DSLR Photography

Camera modes

Aperture priority, Shutter priority, Manual & Other including Auto

ISO

What is ISO & What is noise

Depth of field (DoF)

Using aperture priority mode

Technical

JPEG vs RAW & Memory cards

Camera modes

CANON

NIKON

Aperture priority (A or Av)

Gives you control over the aperture (amount of light entering lens) which in turn controls the DoF (Depth of Field). Both ISO and Shutter are controlled by the camera

Shutter priority (S or Tv)

Gives you control over the shutter (length of time light exposes on the sensor). Both ISO and Aperture are controlled by the camera

Manual (M)

ISO, Shutter and Aperture are controlled by you. This is the most advanced option but allows the most flexibility and creativity

Others

All cameras have an auto mode that controls ISO, Shutter and Aperture. Depending on the camera there will be numerous other options from P (Program) to art filters, macro, portrait, landscape etc.

ISO

What is ISO

ISO is the light sensitivity of the sensor, the lower the number the less sensitive but also has less noise. ISO can be changed to higher numbers to compensate for slow shutter speeds in low light situations.

What is noise

Noise is visual distortion - the grain that appears in photos mostly in low light images, if ISO is pushed to high the noise can be bad enough to ruin the photo.

Depth of Field (DoF)

Using aperture priority mode

In aperture priority mode you control the amount of light and DoF and the camera will control the ISO and shutter speed. Since aperture controls how much of the final image is in focus having a fast aperture of 1.4 will have just the subject in focus where 11 or higher will have more of the photo in focus.

Image to the left was taken with a telephoto lens at full focal length of 300mm and at its fastest aperture of 6.7 at this focal length.

Technical

File formats

Most cameras will save photos as a JPEG by default and higher quality ones will have an option to save the photos in a RAW format.

JPEG (.jpg) does not require any specialised software to read, they can be opened and shared on social sites or emails straight from the camera.

RAW is a lossless image format that allows far greater amounts of information to be retained over JPEG and allows for more editing options. File sizes are larger and software is needed to edit these files.

Memory Cards

Cards come in different dimensions, sizes, storage capacities & speeds. Be sure to get the right card for your camera or photographing needs.

Filters

There are numerous filters you can get to mount/screw onto your lens(s) that are used to help capture something a little different. Some common ones are:

CPL (Circular Polarizer) or Polarizing filters are used to darken skies, managed reflections or suppress glare from water surfaces.

ND (Neutral Density) filters come in different set or variable strengths and can be combined with other strengths to decrease the amount of light entering the camera, these are used to capture motion such as water and clouds by allowing the exposure to last longer.

UV filters offer protection for your lens and also absorb ultraviolet rays that often make outdoor photos hazy.