Terminology

Focus

Focus is the clarity of detail in an image. It should be clear and sharply defined.

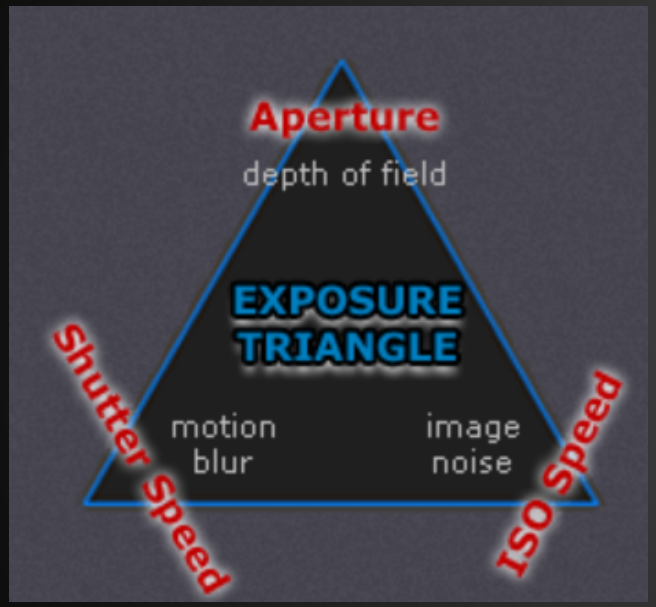
The image on the left is “out-of-focus”.

The image on the right is “in-focus”.

Terminology

Exposure

Exposure is the amount of light the image sensor captures when taking a photo.



Exposure control:

Aperture
ISO speed
Shutter speed

Overexposure

Too much light will wash out the color and make it too bright.

Underexposure

Not enough light will make it too dark.

Terminology

The shutter speed controls the duration of the exposure, or how long the light will be able to enter the camera.

Shutter speed

Shutter Speed	Typical Examples
1 - 30+ seconds	Specialty night and low-light photos on a tripod
2 - 1/2 second	To add a silky look to flowing water Landscape photos on a tripod for enhanced depth of field
1/2 to 1/30 second	To add motion blur to the background of a moving subject Carefully taken hand-held photos with stabilization
1/50 - 1/100 second	Typical hand-held photos without substantial zoom
1/250 - 1/500 second	To freeze everyday sports/action subject movement Hand-held photos with substantial zoom (telephoto lens)
1/1000 - 1/4000 second	To freeze extremely fast, up-close subject motion

A faster shutter speed will enable a photographer to capture movement.

Terminology

Aperture

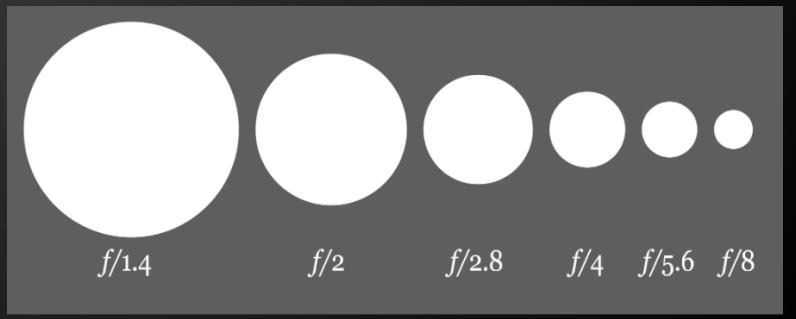
Aperture is the “opening” or “closing” of the lens to control the amount of light entering the camera.

Wide Aperture
f/2.0 - low f-stop number
shallow depth of field

Narrow Aperture
f/16 - high f-stop number
large depth of field

It is the aperture that determines a photo’s “depth of field” (range of distance in which objects appear in sharp focus.)

Aperture is measured in ***f-stop*** numbers.



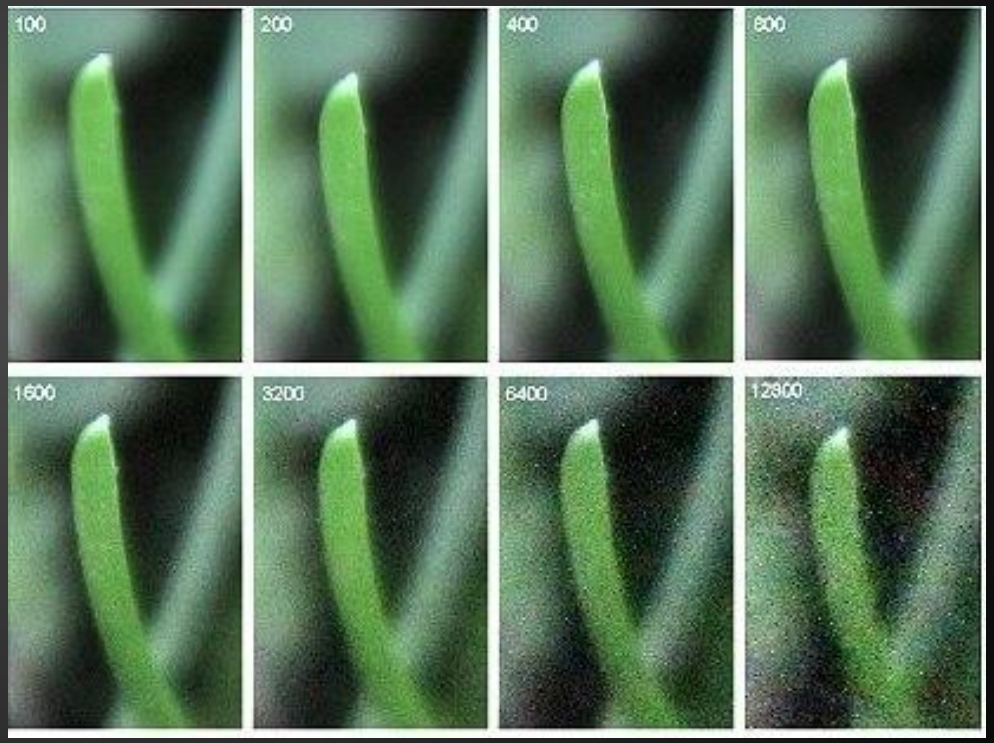
Terminology

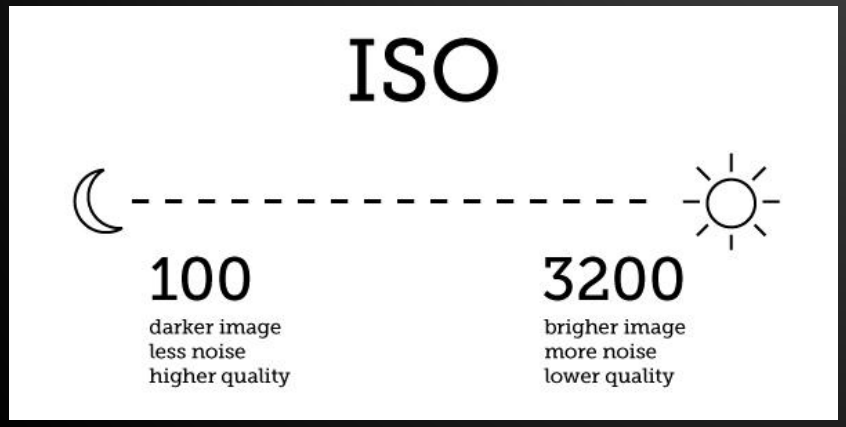
ISO determines how sensitive the camera is to incoming light.

ISO speed

A low ISO will produce a higher quality image.

The fuzziness is known as “noise”.





Basic equipment

DSLR Camera (and lens)

DSLR = Digital Single-Lens Reflex camera

Basic equipment

Tripod

A tripod is used to keep the camera steady.

Reflector

A reflector is used to redirect light onto the subject.

Parts of the camera

Body

The body is the main part of a digital camera.

This is where the “electronics” are located such as the controls and settings as well as the image-processor and other necessary features.

The body does not have a lens, unless it is a “compact” camera (point-and-shoot).

TIP: Never, ever, ever touch the mirror.

TIP: When changing lenses, minimise the mirror’s exposure to dust or small particles.

Parts of the camera

Interchangeable lens

Interchangeable lenses are lenses that can be removed from the camera body.

This enables a photographer to choose the lens that is most suitable for their task.

The smallest particle or scratch on the lens can ruin a photo.

TIP: Never, ever put your finger on the lens.

TIP: Only use a lens cloth to clean the lens (even a tissue will damage the lens).

Lens cap

The lens cap protects the lens from dirt, dust and scratches.

Parts of the camera

Card slot

This is where the external memory card is loaded.

SD cards

Physical size:

SD card (blue)
Mini-SD (green)
Micro-SD (red)

Capacity:

SDSC (Standard)	1 MB - 2 GB
SDHC (High)	2 GB - 32 GB
SDXC (eXtended)	32 GB - 1 TB

Greater storage capacity will enable you to take more photos using higher quality settings.

SD = Secure Digital

Parts of the camera

Flash

The flash is used to illuminate (brighten) the subject in poor or dark light. This is very important to use when inside.

Parts of the camera

"On" and "Off"

Always turn the camera "off' when you are not using it. This will enable to battery to last longer.

Shutter button

When the shutter button is pushed down completely it will take the photo.

If the shutter button is pushed halfway down, it will "autofocus" your image.

Parts of the camera

LCD monitor

The monitor can be turned on or off by pressing the “DISP.” button.

The LCD monitor has three functions:

1. Review photos
   - “Playback” images
2. Display menu settings
3. Live viewfinder

Parts of the camera

The battery compartment is on the bottom of the camera body.

Always check that you have a battery and that it is fully charged.

Battery compartment

Parts of the camera

Battery charging

Some camera batteries can be charged without removing them from the camera. A cable can be connected from the camera to a USB port.

The LCD will show how much battery power remains.

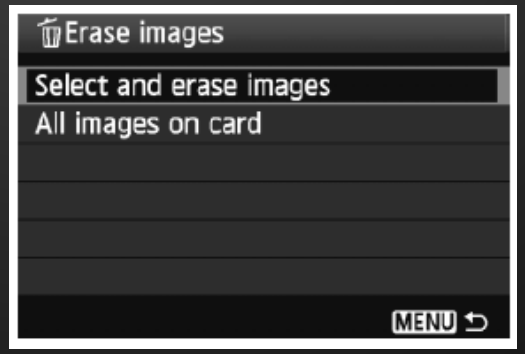
External charger

The battery is charged by connecting the charger to a power outlet.

Settings: Erasing images

How to erase ALL images?

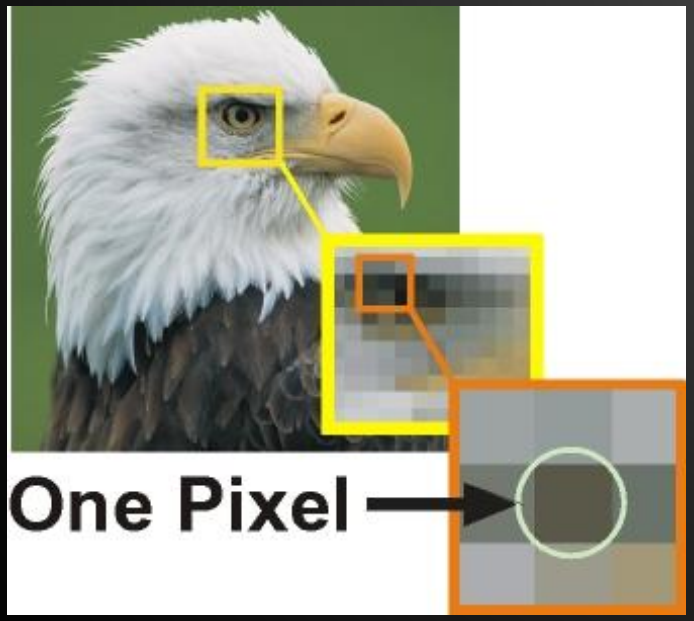
1. Press the “MENU” button.
2. Press the ◀▶ cross keys to select the tab.
3. Press the ▲▼ cross keys to select the setting “Erase images”.
4. Press the SET button.
5. Choose “Select and erase all images”.
6. Select “OK”.
7. Press the SET button.



Settings: Image quality

What is image quality?

The image quality refers to the number of pixels recorded in the photo.



Guide to Image-recording Quality Settings (Approx.)

Quality			Pixels Recorded	File Size (MB)	Possible Shots
L	High quality	JPEG	Approx. 17.9 megapixels (18M)	6.4	570
L				3.2	1120
M	Medium quality		Approx. 8.0 megapixels (8M)	3.4	1070
M				1.7	2100
S	Low quality		Approx. 4.5 megapixels (4.5M)	2.2	1670
S				1.1	3180
RAW	High quality		Approx. 17.9 megapixels (18M)	24.5	150
RAW + L				24.5+6.4	110

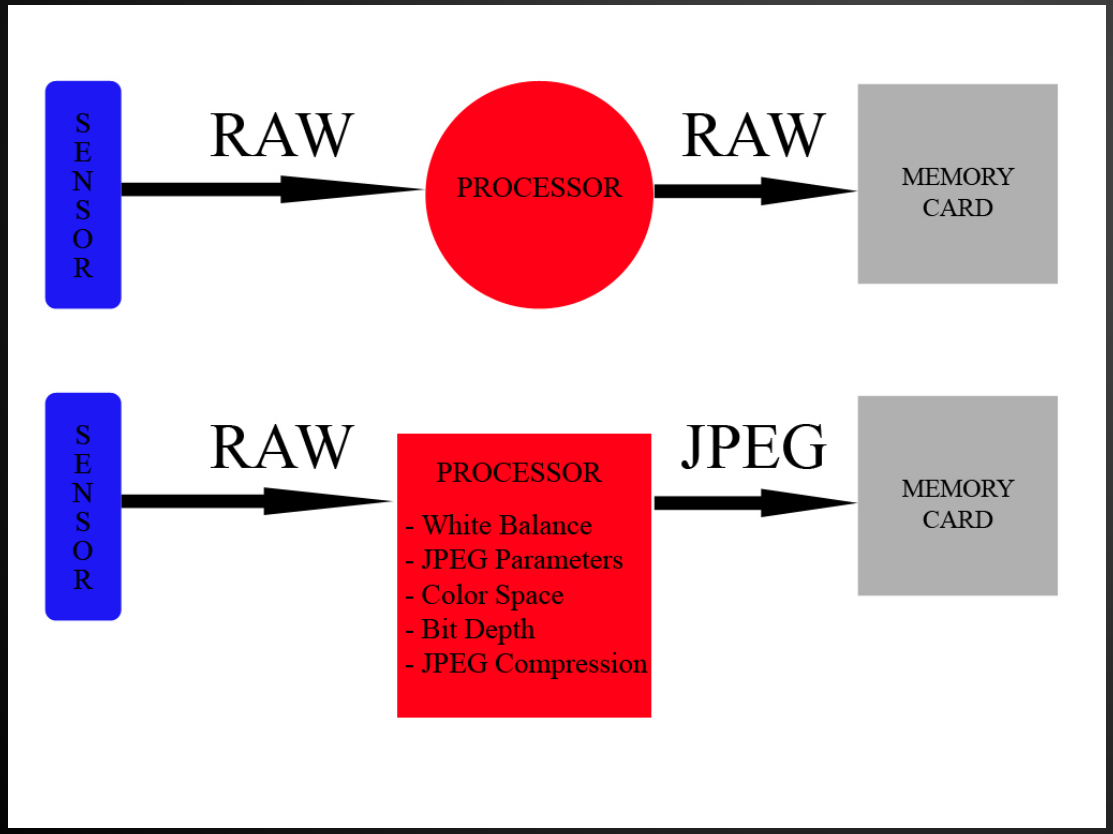
A pixel is a single point on a graphic image.

The more pixels the higher the quality of the image but a bigger file size (less storage).

Settings: Image quality

RAW is an image captured on the camera that has not been processed. It is the “raw” image which enables the photographer complete control over editing.

RAW



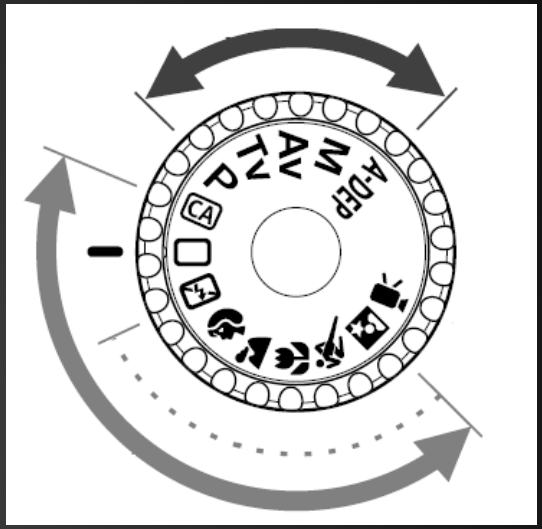
A JPEG will make changes and adjustments to compress the image for storage.

Settings: Image quality

How to change the image quality?

1. Press the Q button.
2. Press the SET button.
3. Press the ◀▶ cross keys to choose the setting.
4. Press the SET button again to confirm the file setting.

Settings: Shooting modes



Mode Dial

The mode dial enables you to choose your shooting settings.

Settings include:

- Basic zone
- Image zone
- Creative zone
- Movie shooting

Settings: Shooting modes

How to adjust the shooting settings?

1. Press the Q button.
2. Press the cross keys up or down to choose the setting you want to change.
3. Turn the dial to adjust the settings.
4. When finished adjusting settings, press the Q button again.

The Mode Dial

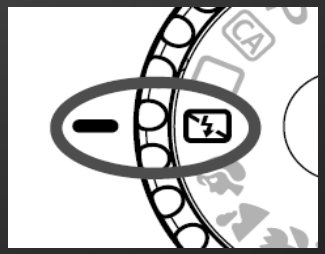
Basic zone

Full auto / Fully automatic

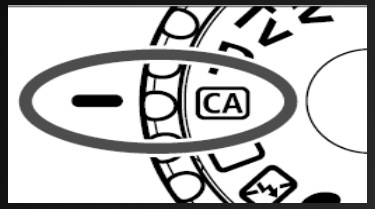
- The camera does everything for you.
- The camera analyzes the scene and tries to choose settings that produce the best results.

No flash

- Same as “full auto” but without the flash.



The Mode Dial



Creative auto

- The camera does *most* things for you.
- Whilst the camera analyzes the scene and tries to choose settings that produce the best results, there is some control over focus, exposure, and color.

Blurring/sharpening the background

Adjusting the picture brightness

Image effects

Image effects

- S — Standard
- P — Smooth skin tones (People)
- L — Vivid blues and greens Nature/ landscapes
- M — Monchrome Black-and-white

The Mode Dial

Image zone

Portrait

- Designed to produce softly focussed backgrounds for flattering portraits.

Night portrait

- Same as portrait but combines flash with a slow shutter speed to produce softer lighting and brighter backgrounds.

The Mode Dial

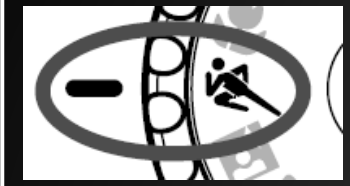
Close-up

- Produces softly focused backgrounds.
- Suitable for close-ups of flowers or other natural subjects.

Landscape

- Designed to keep both near and distant objects in sharp focus.

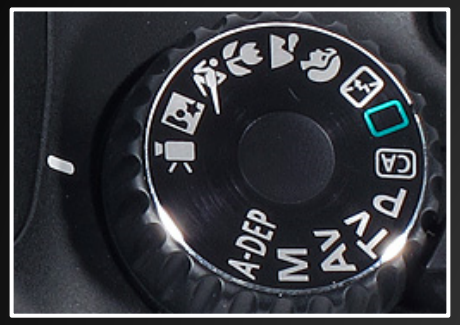
The Mode Dial



Sports/ movement

- Faster shutter speed.
- Captures moving subjects without blurring.

The Mode Dial



Movie shooting

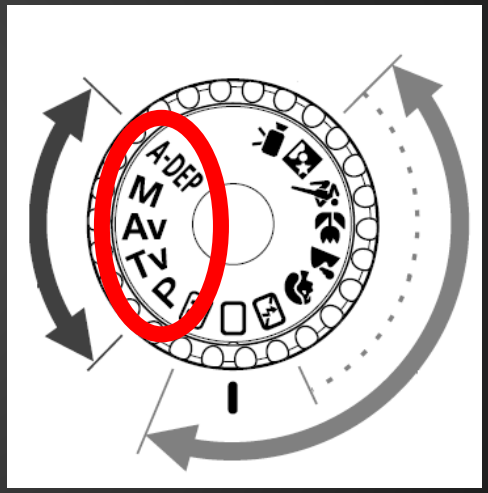
- Ability to record digital movies.

The Mode Dial

Creative zone

These are specialised settings that enable the photographer to have full control over the image they are creating.

- Program AE
- Shutter-priority AE
- Aperture-priority AE
- Manual exposure
- Automatic depth-of-field



Experiment ..

In a team, experiment with the different settings and see how creative you can be as a photographer.

How to take a photo?

1. Planning … Think about it
2. What is the purpose of the photo?
3. What do you want to achieve?
4. How will you achieve it?

Before you begin …

Is the battery charged?

Always check if the battery is full.

Is the lense clean?

Always use a lense cloth to avoid scratching the lense.

Ensure there is enough light

Natural light is best (sunlight)

If you're inside, raise the blinds and open the curtains to let in as much light as possible and, if you can, move your subject near the window. If you're limited to artificial lighting (anything that uses electricity), you'll want to make sure you place the lamps in a way that they're fully lighting your subject because artificial light tends to be uneven.