



# Technical Skills you will need for your A Level

**Week 2: Using the camera in PROGRAM &  
MANUAL**

# The Basics: A definition of Photography



Photography by definition translates as

*‘light drawing’*

As photographers we literally

*‘draw’* or *‘paint’* with light

- But how do we do it?
- How do we ‘paint with light’?



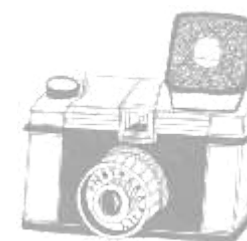
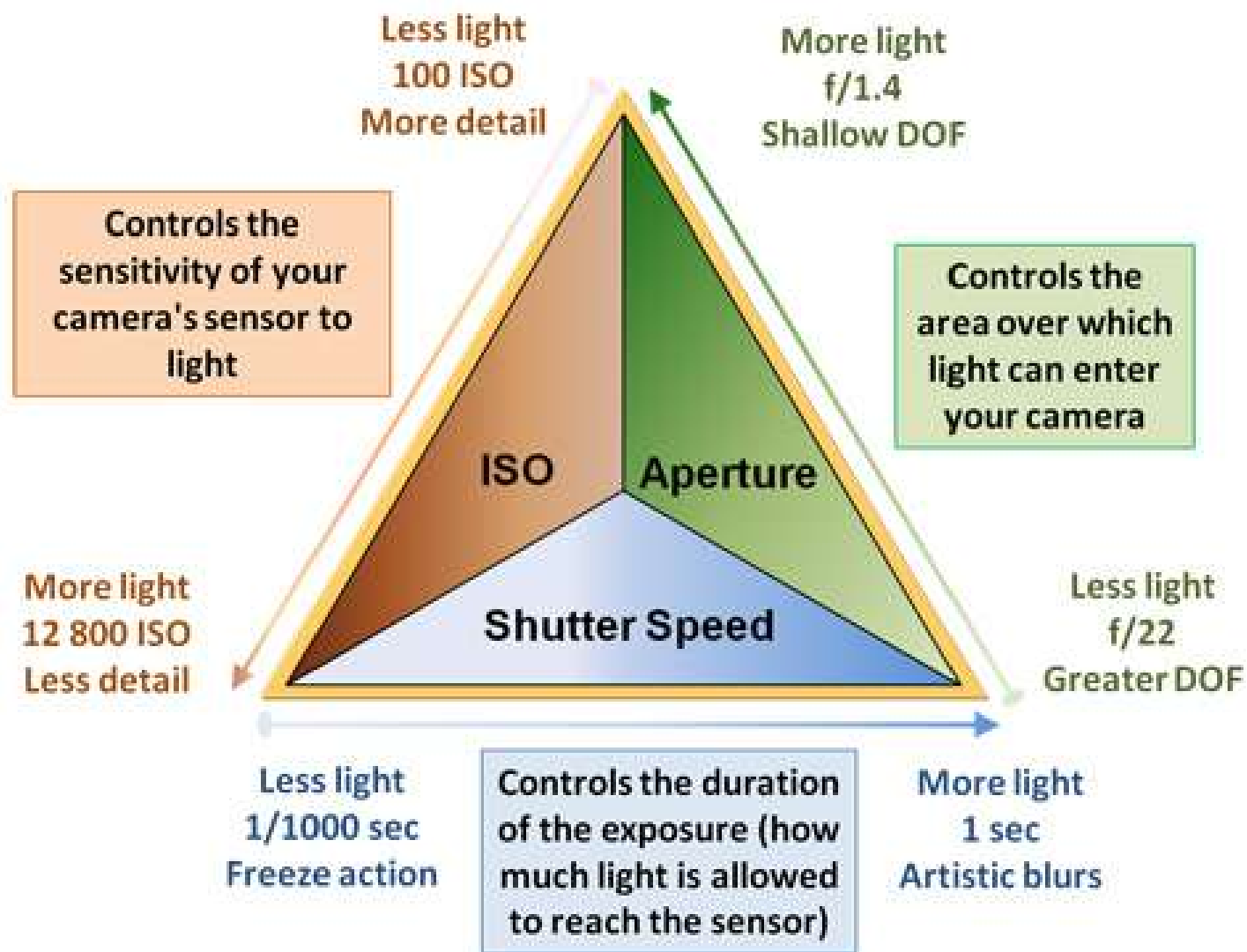
# The Basics of Exposure: A fine balancing act



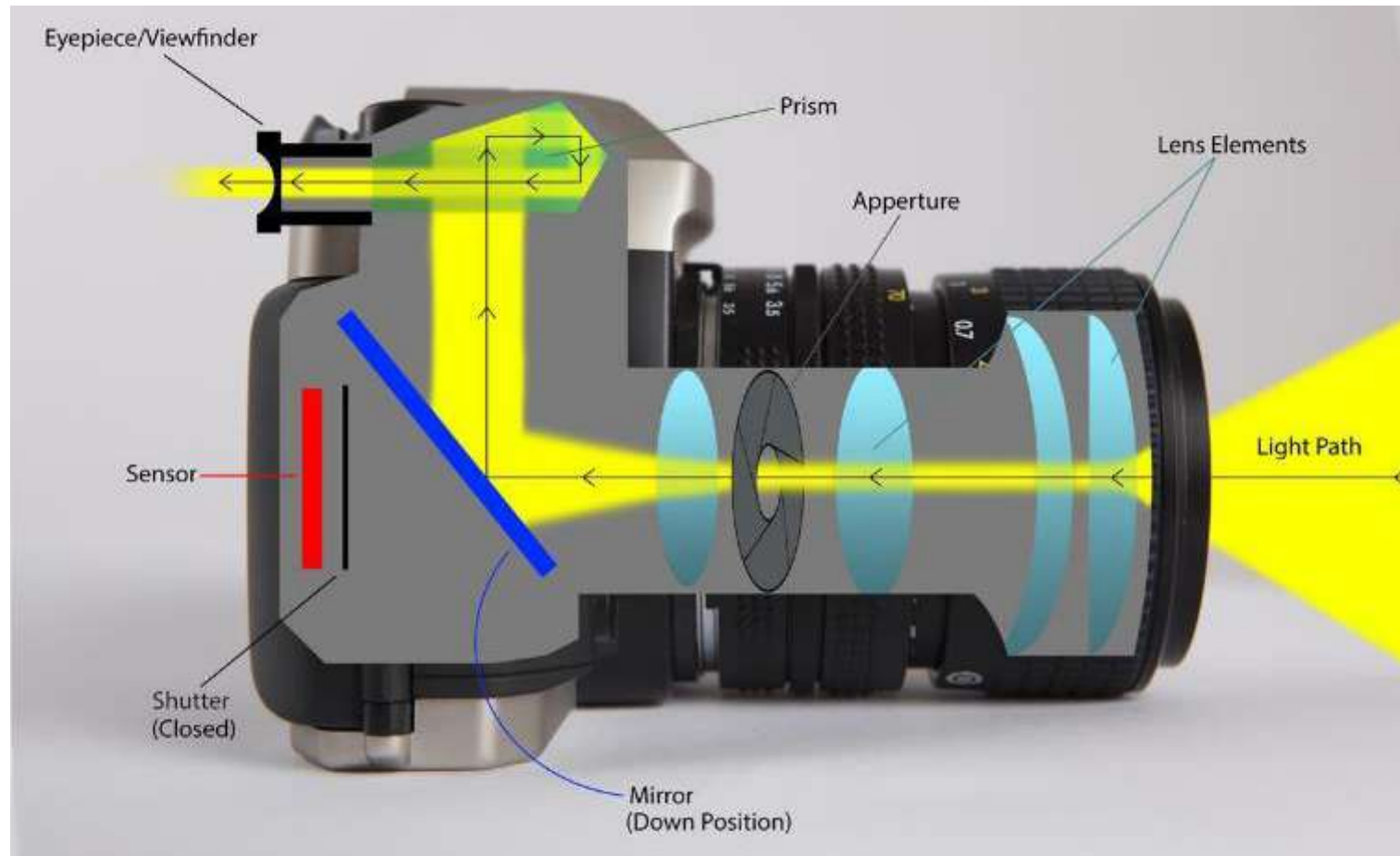
- The Lens allows *an amount of light* into the camera body
- The camera body allows light to pass onto a *light sensitive material* e.g. Film or digital sensor



# The Basics of Exposure: A fine balancing act

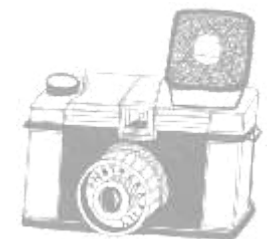
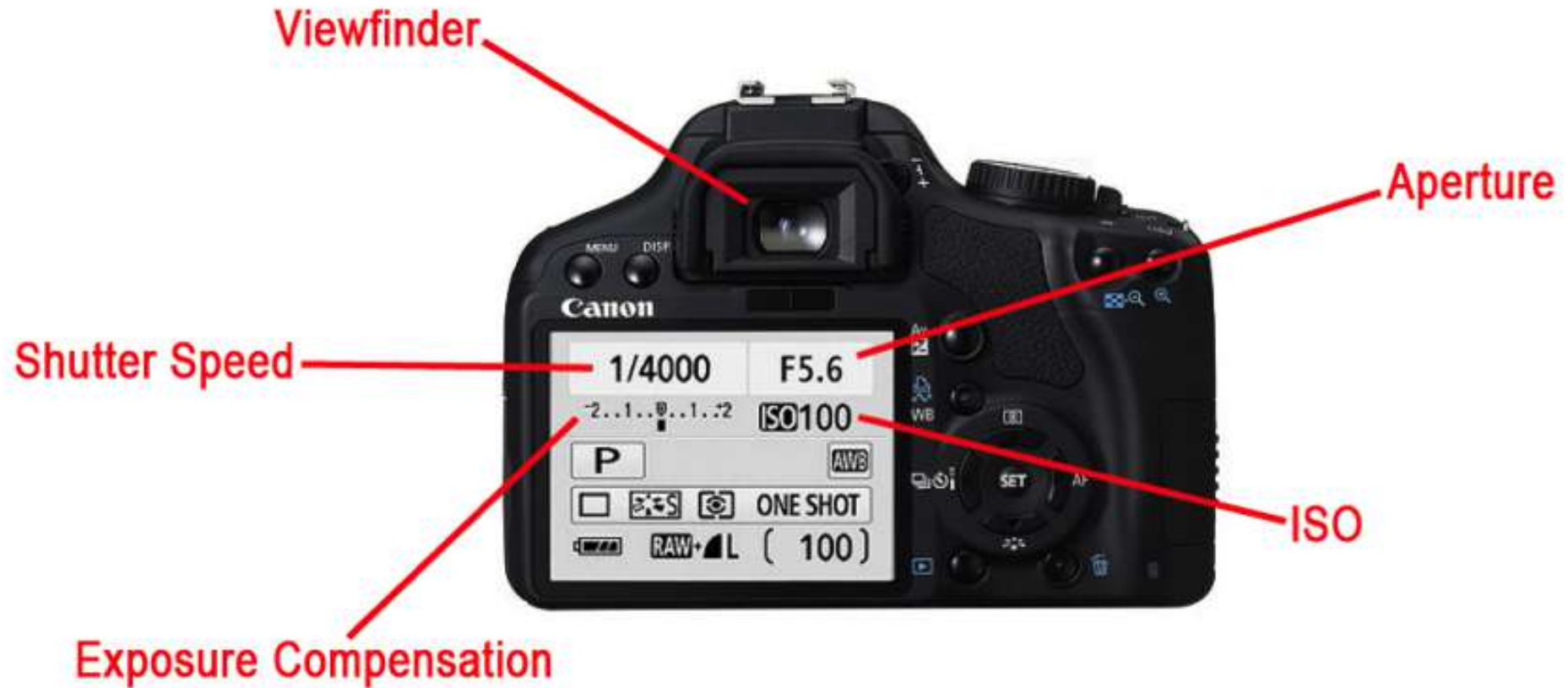


# Internal Diagram DSLR





# Basic DSLR screen





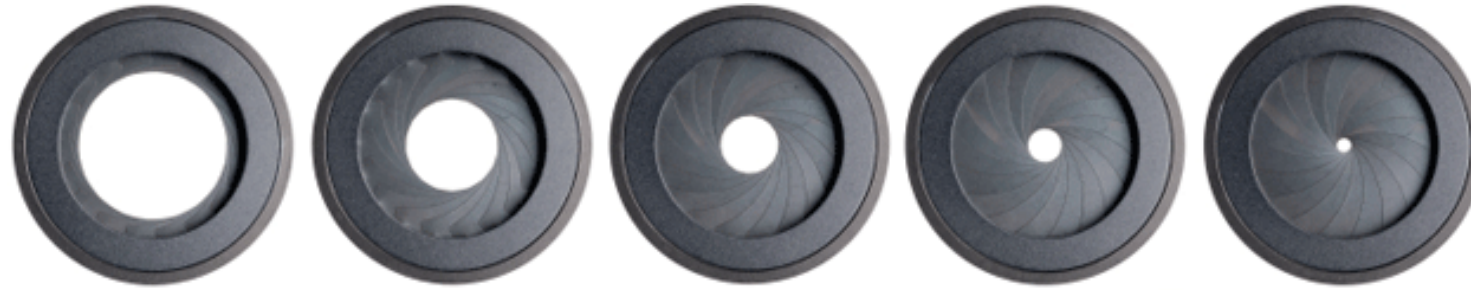
Aperture Priority - Canon

# Aperture (AV / A Priority)



Aperture Priority - Nikon

Shallow depth of field ← → Large depth of field



*f/1.4*

*f/5.6*

*f/11*

*f/16*

*f/22*

lots of light into camera  
fast shutter speed  
fuzzy background

*aperture*

limited light into camera  
slow shutter speed  
everything in focus

The **amount of light** that passes through the lens and into the camera body is determined by the **size of the aperture**

Apertures are referred to as **F/Stops**

F stands for '**Focal Length**'



# What is depth of field?



**f/1.8**



**f/2.8**



**f/4.0**



**f/5.6**



**f/16**



**f/22**

**Aperture Adjustment Sequence – Depth of Field**





# Large Depth of Field:



Gregory Crewdson



Andreas Gursky



Jeff Wall



Joel Sternfeld



Ansel Adams

Large Depth of Field: You can use a small aperture large (f) number i.e. f16/ f22 so that the fore, mid and background are all in focus.



# Shallow Depth of Field:



Tom



Philip-Lorca diCorcia



Sally Mann



Eve Arnold

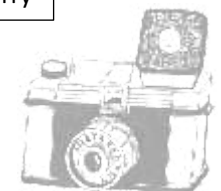


Keith Arnatt



Steve McCurry

Shallow Depth of Field: You can use a large aperture small (f) number i.e. f2.8 / f3.5 to focus on only one section of the fore, mid and background so the rest of the image is out of focus.







# Shutter Speed (TV / S Priority)



SHUTTER SPEED											
B	1	1/2	1/4	1/8	1/15	1/30	1/60	1/125	1/250	1/500	1/1000
<b>SHOWS MOVEMENT</b> SLOWERSPEED MORE EXPOSURE TIME						◀					
						▶	<b>FREEZES MOVEMENT</b> FASTER SPEED LESS EXPOSURE TIME				

Shutter speed is the length of time the shutter remains open.

Shutter speed is also referred to as '*exposure time*'.

The Shutter speed is measured in seconds and fractions of seconds.



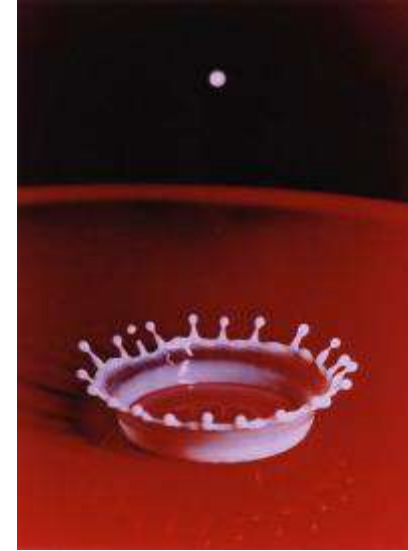
# Fast Shutter Speeds



Ori Gersht



Harold Edgerton



Harold Edgerton

SHUTTER SPEED											
B	1	1/2	1/4	1/8	1/15	1/30	1/60	1/125	1/250	1/500	1/1000
<b>SHOWS MOVEMENT</b>						<b>FREEZES MOVEMENT</b>					
SLOWERSPEED						FASTER SPEED					
MORE EXPOSURE TIME						LESS EXPOSURE TIME					





# Slow Shutter Speeds



Caroline Dyal



Naoya Hatakeyama



Thomas Joshua Cooper

SHUTTER SPEED											
B	1	1/2	1/4	1/8	1/15	1/30	1/60	1/125	1/250	1/500	1/1000
<b>SHOWS MOVEMENT</b>						<b>FREEZES MOVEMENT</b>					
<b>SLOWERSPEED</b>						<b>FASTER SPEED</b>					
<b>MORE EXPOSURE TIME</b>						<b>LESS EXPOSURE TIME</b>					

*Important to remember that you cannot use a slower shutter speed than 1/30 whilst handholding the camera, otherwise you will get camera shake.*



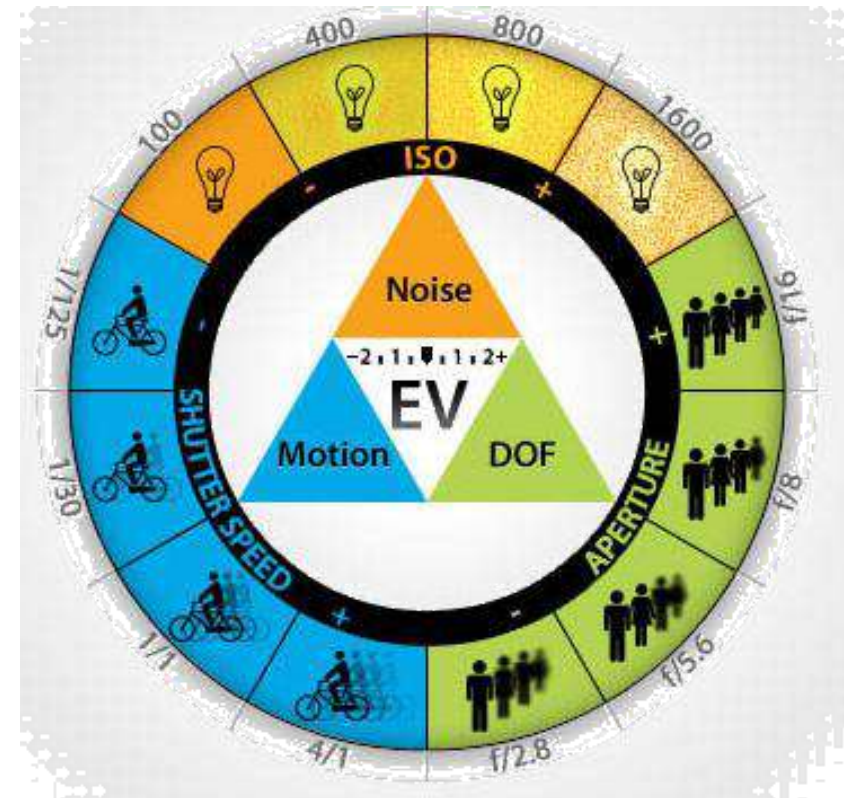
Use a tripod to avoid  
camera shake



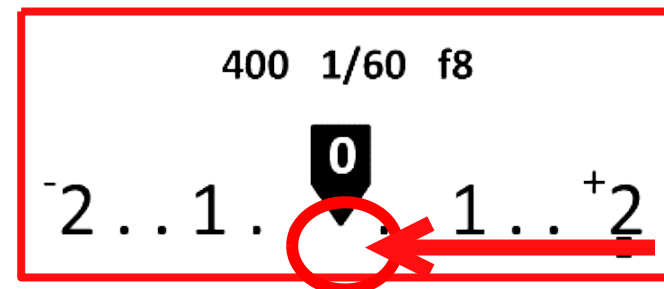


# Working together in Manual

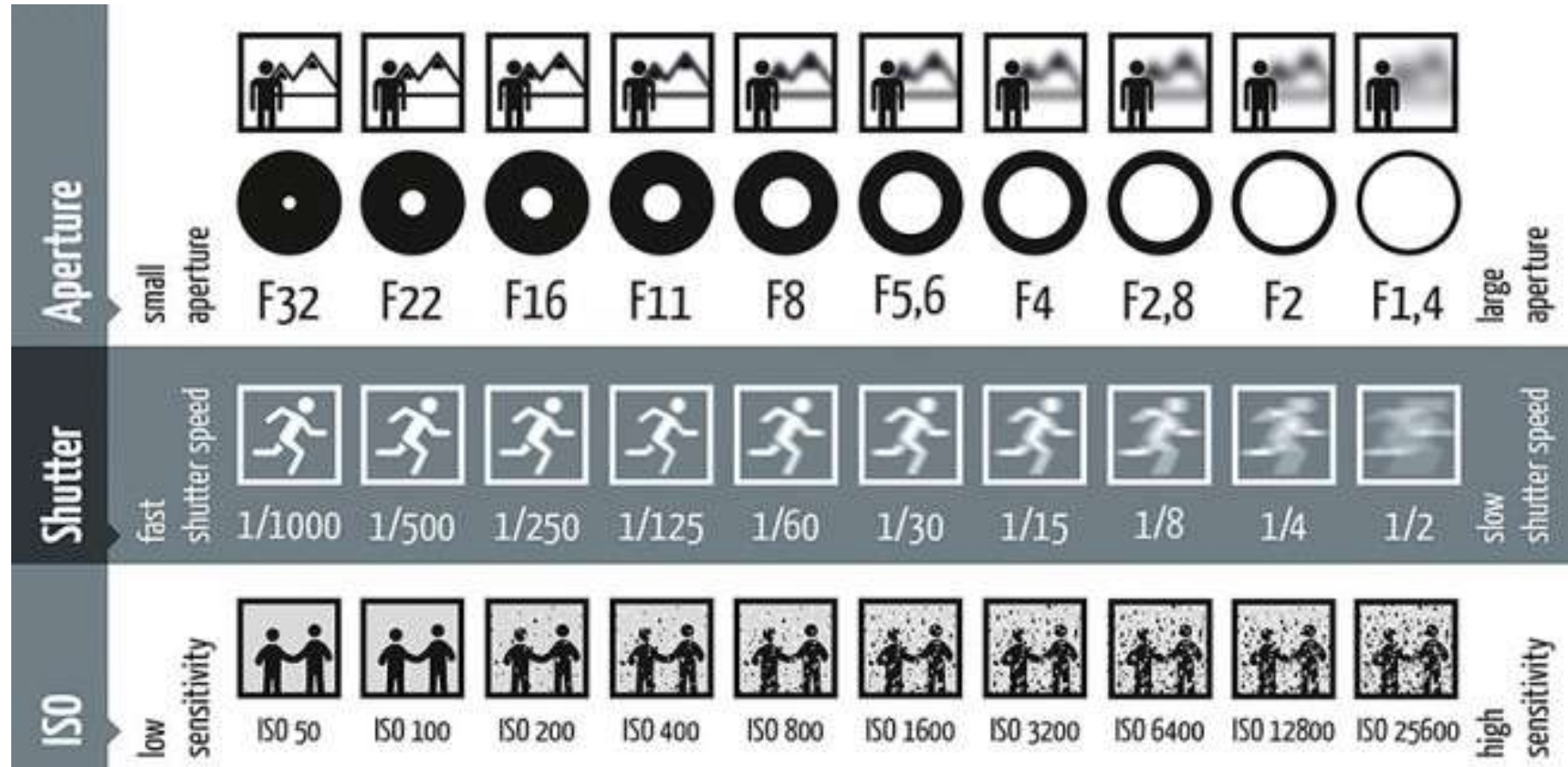
Manually you set both the shutter speed and aperture to you preferred settings.



The light meter indicates the best exposure

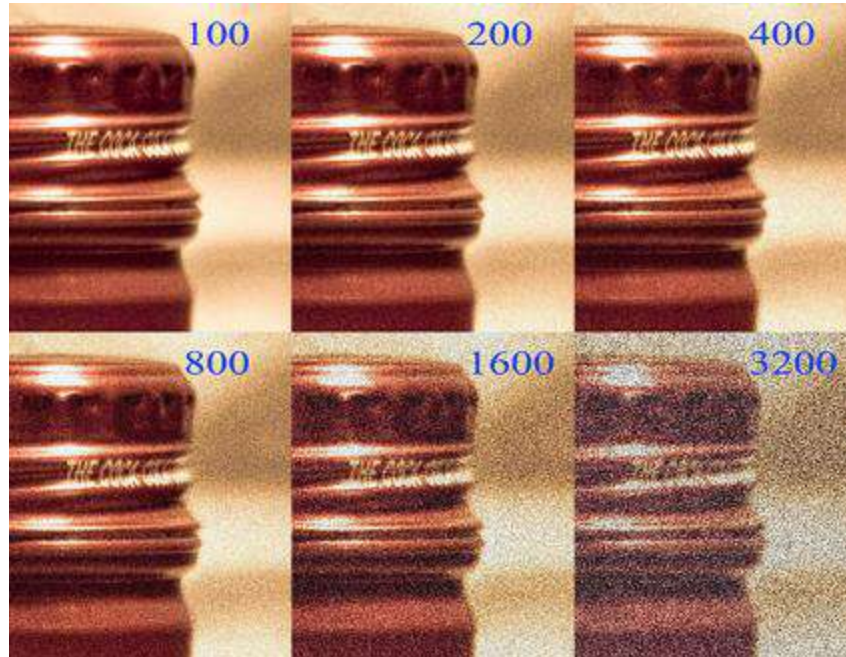


# Shutter Speed and Aperture Combinations Chart





# ISO



William Klein

High Quality

Poor Quality *Grainy*

50 - 100 - 200 - 400 - 800 - 1600 - 3200

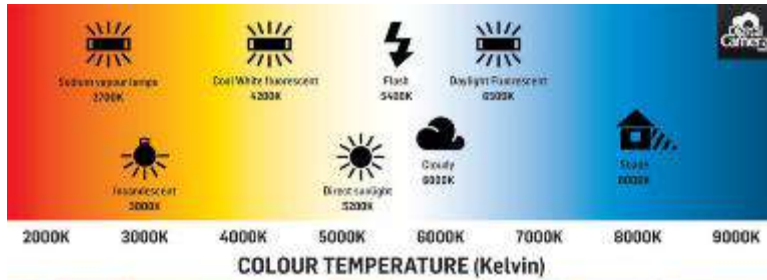
bright light conditions

low light conditions

ISO measures the degree to which the camera sensor is sensitive to light.



# White Balance



- AWB** AUTO  
camera sets white balance
- DAYLIGHT**  
camera adds warm tones
- CLOUDY**  
camera adds warm tones
- SHADE**  
camera adds warm tones
- TUNGSTEN**  
camera adds cool tones
- FLUORESCENT**  
camera adds warm (red) tones
- FLASH**  
camera adds warm tones
- CUSTOM**  
photographer sets white balance



Ryan McGinley

