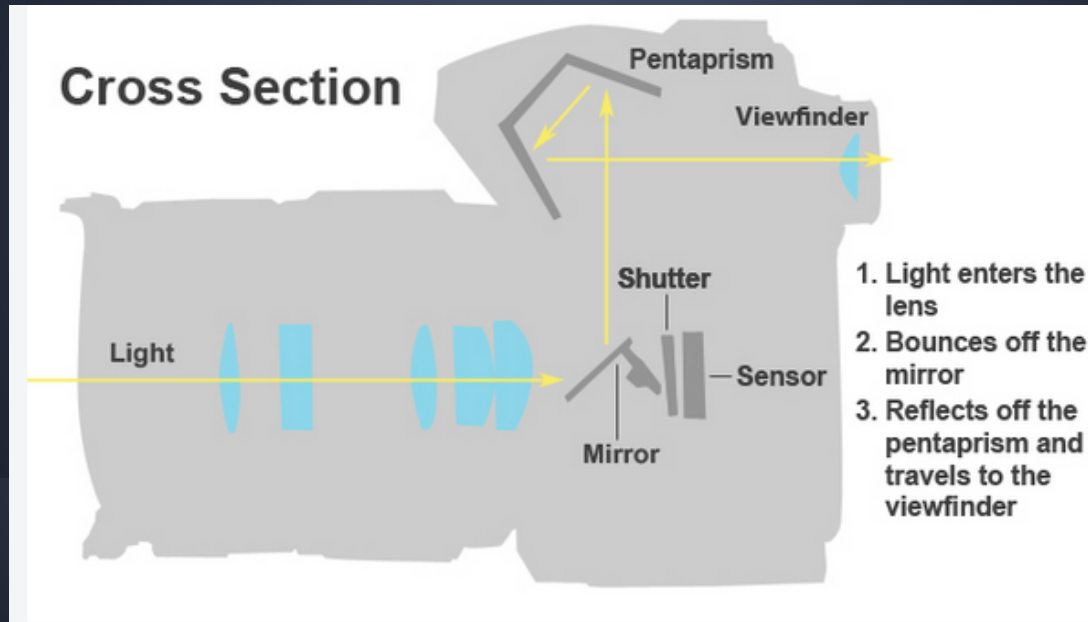


# Videography/ Cameras



# DLSRs - digital single lens camera

## Advantages:

- Ability to use different lenses
- Can take stills and video
- Shallow depth of field (Bokeh look) Bokeh refers to the portions of an image that are defocused or blurry
- large sensors
- highly portable
- relatively cheap :

<http://dslrvideoshooter.com/best-dslr-for-video/>

<http://www.videopro.com.au/cf-278--digital-slr-hybrid-cameras.aspx>



# DLSRs - digital single - lens camera

things to be aware of:

Sound..

- on board camera mic on DLSR's don't capture high quality audio
- you can get attachment microphones / or record on a zoom separately and sync with footage when editing

<http://www.videopro.com.au/cf-287--audio-equipment.aspx>



limit of length of Video Recording..

- 4GB file sizes is limit when recording on FAT32 SD cards so the camera is unable to record any more
- the higher the resolution setting you film with the shorter each clip will be
- you can just re hit record or use a higher class of SD card Class 10 is the best / install magic lantern on sd card

more info:

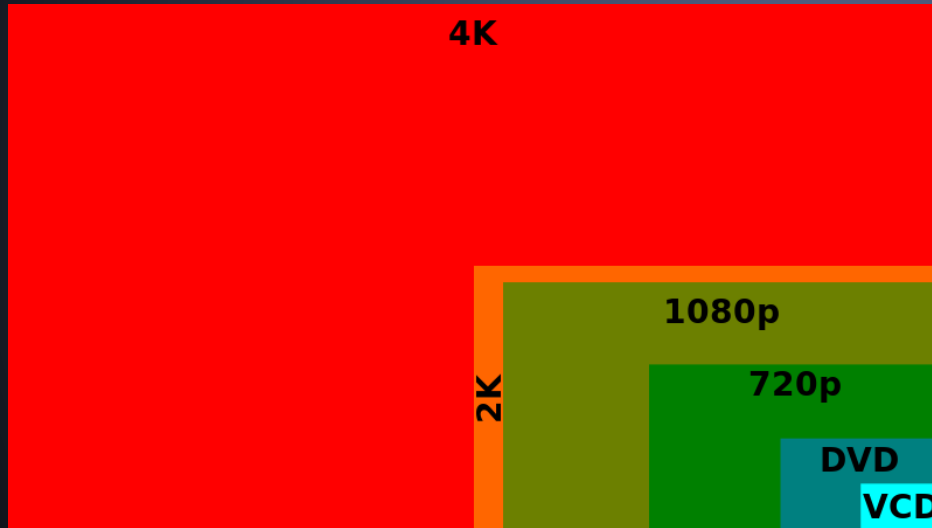
<http://forums.creativecow.net/thread/280/3126>

<http://www.magiclantern.fm/features.html>



# Video Resolution

- Refers to how many pixels makes up an image
- the higher the number of pixels the the higher the resolution and quality



More info:

<http://www.equasys.de/standardresolution.html>

[http://en.wikipedia.org/wiki/4K\\_resolution](http://en.wikipedia.org/wiki/4K_resolution)

Web Video, 320 x 240  
Web Banner, 468 x 60

NTSC DV  
NTSC DV Widescreen  
NTSC DV Widescreen 23.976  
NTSC D1  
NTSC D1 Widescreen  
NTSC D1 Square Pixel  
NTSC D1 Widescreen Square Pixel  
PAL D1/DV  
PAL D1/DV Widescreen  
PAL D1/DV Square Pixel  
PAL D1/DV Widescreen Square Pixel

HDV/HDTV 720 29.97

o HDV/HDTV 720 25

HDV 1080 29.97  
HDV 1080 25  
DVCPRO HD 720 23.976  
DVCPRO HD 720 25  
DVCPRO HD 720 29.97  
DVCPRO HD 1080 25  
DVCPRO HD 1080 29.97  
HDTV 1080 24  
HDTV 1080 25  
HDTV 1080 29.97

Cineon Half  
Cineon Full  
Film (2K)  
Film (4K)

# Depth of Field

- The amount to which objects in the foreground, mid-ground and background are all in focus
- A shallow depth of field would mean that only one plane was in focus
- A wide/ deep depth of field would mean that all planes are in focus at once.
- Depth of field is determined by the focal distance and aperture size
- DSLRs have the ability to render images with a shallow depth of field due to their massive sensor sizes which are larger than previous video cameras.

more info:

<https://vimeo.com/27556482>



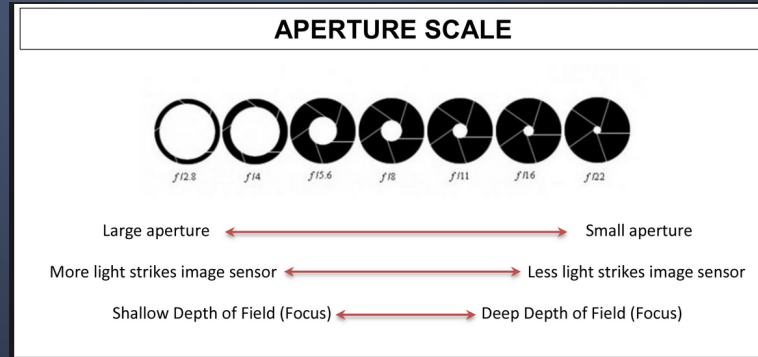
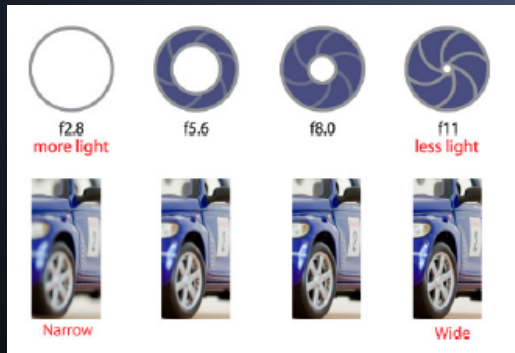
# Exposure & Aperture

**Exposure:** refers to the amount of light allowed to enter the sensor (or any imaging surface).

**Aperture:** refers to the adjustable opening near the rear of the lens that lets light through — the amount of light it transmits is generally referred to as the F-stop

- A narrow aperture creates an image with a wide depth of field
- A large aperture creates an image with a shallower depth of field.

*the bigger the number of the F-stop - the smaller the aperture - the wider the depth of field*



more info: <https://vimeo.com/videoschool/lesson/6/glossary-of-common-video-terms>

# Focal length - lenses

Focal length refers to image magnification

- A longer focal length, e.g. 100mm lens makes distant objects appear larger whereas those same objects will appear smaller with a shorter focal

length, e.g. 35mm lens

Focal length also refers to angle of view longer focal lengths have a narrower angle of view, whereas shorter focal lengths have a broader angle of view



**Wide angle lens - 16mm** emphasizes the foreground and de-emphasizes the background. Be careful of image distortion while using this lens.

**Standard lens - 50mm** shows the foreground and background subjects as just about the same sizes.

**Telephoto lens - 200mm** has very little depth of field and highly compresses your image.

more info:

<https://vimeo.com/videoschool/lesson/113/behind-the-glass-part-2-focal-length>

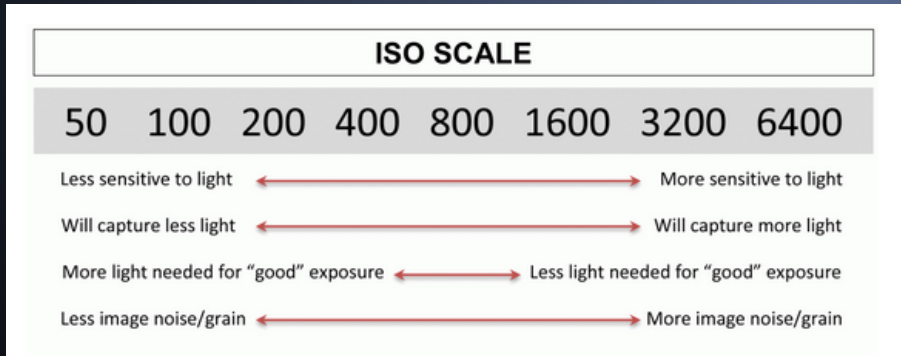
# ISO & Noise

ISO - is the measurement of noise in photography

- ISO is the setting that sets the image sensor's sensitivity to light and thus the amount of light needed for a "good" exposure.
- The Higher the ISO number, the brighter the image (higher exposure), but the more noise contained in the image

On your DSLR camera, you will generally see ISO measured in the following numbers:

100 ... 200 ... 400 ... 800 ... 1600



more info:

<http://godigitalslr.com/understanding-iso-digital-slr-photography/>



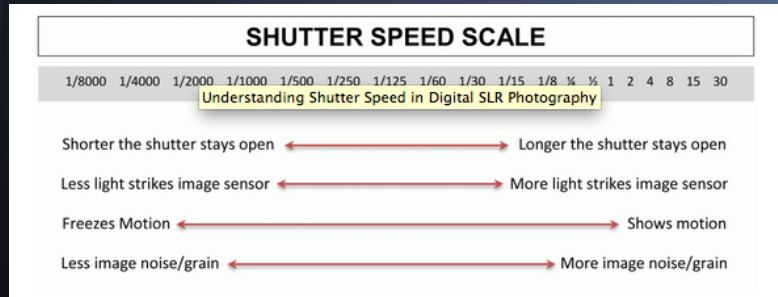
# Shutter Speed

Shutter speed refers to the length of time an image is exposed.

- Shutter speed affects the amount of light that reaches the camera
- affects the motion rendering of the moving

The number used in setting a camera's shutter speed refers to the denominator of that fraction of a second.

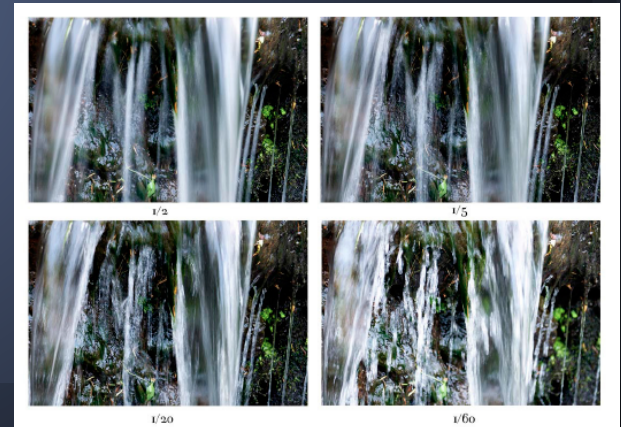
if you set your camera's shutter speed to 60, that means that each frame is being exposed for 1/60th of a second.



more info:

<http://godigitalslr.com/understanding-shutter-speed-digital-slr-photography/>

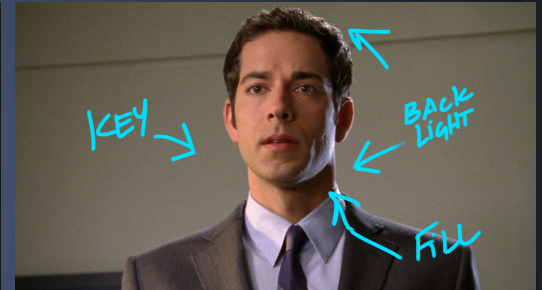
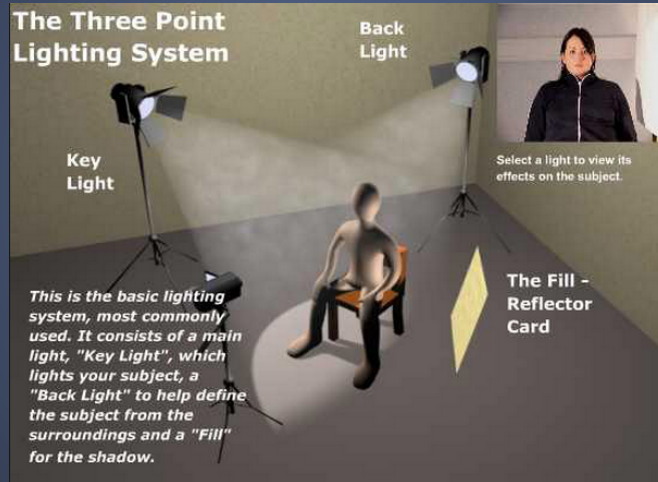
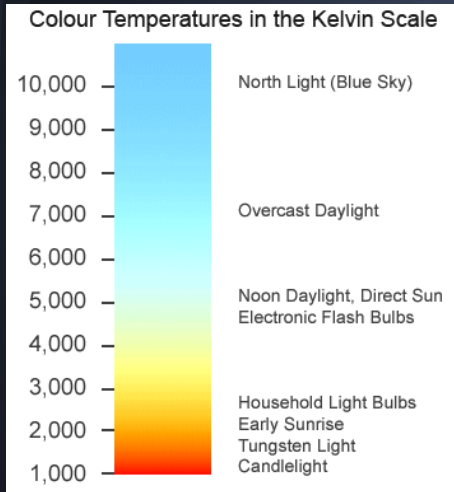
<https://vimeo.com/videoschool/lesson/56/frame-rate-vs-shutter-speed-setting-the-record-straight>



# Lighting

## Colour Temperature: (White Balance)

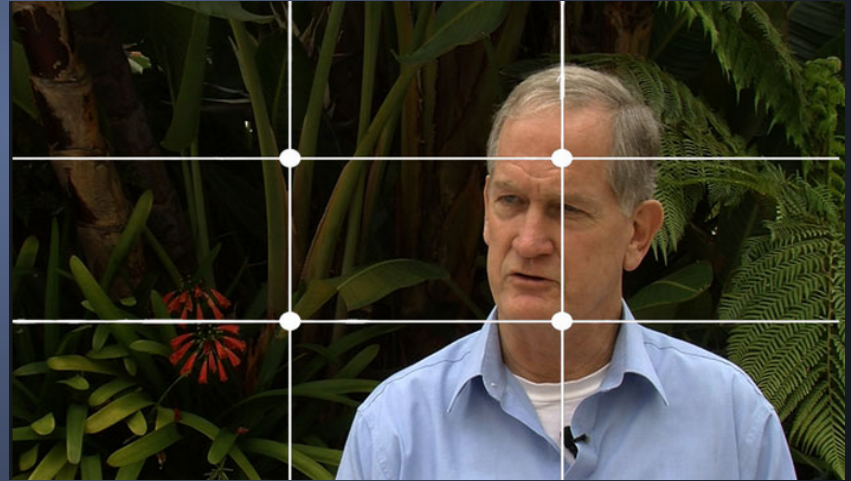
## 3 Point Lighting:



- Have your scene or composition evenly lit to avoid over or underexposure
- Avoid adjusting to ISO to high as footage will become grainy/noisy - this is very difficult to fix in editing

# Composition

## Rule of Thirds



more info : [http://en.wikipedia.org/wiki/Design\\_elements\\_and\\_principles](http://en.wikipedia.org/wiki/Design_elements_and_principles)

# Shooting in Manual Mode

**STEP 1: SET WHITE BALANCE**

Automatic    Shade    Cloudy    Flash    Daylight    Fluorescent    Tungsten    Custom

Cooler ←    Temperature    → Warmer

**CORRECTIVE CONTROL:** Match Icon to the Light Source

**CREATIVE CONTROL:** Set to the OPPOSITE of what you want

← Warmer scene WANT Cooler scene →

---

**STEP 2: SET ISO**

50    100    200    400    800    1600    3200    6400

Lots of light available ←    → Little light available

Slower the Shutter Speed will be    →    ← Faster the Shutter Speed will be

Wider the Aperture will be    ←    → Smaller the Aperture will be

---

**STEP 3: WHAT IS MORE IMPORTANT?  
APERTURE or SHUTTER SPEED?**

**IF APERTURE ...**

1. Set to Aperture Priority Mode  
 2. Choose Aperture  
 (Shutter Speed is set automatically)

**OR**

1. Choose Aperture (Manual Mode)  
 2. Choose Shutter Speed (as below)  
 until Exposure Level Indicator reaches "zero"

f2.8    f4    F5.6    f8    f11    f16    f22

Shallow Depth of Field (Focus) ←    → Deep Depth of Field (Focus)

---

**IF SHUTTER SPEED ...**

1. Set to Shutter Speed Priority Mode  
 2. Choose Shutter Speed  
 (Aperture is set automatically)

**OR**

1. Choose Shutter Speed (Manual Mode)  
 2. Choose Aperture (as above) until  
 Exposure Level Indicator reaches "zero"

1/4000    1/2000    1/1000    1/500    1/250    1/125    1/60    1/30    1/15    1/8    1/4    1/2    1    2    4    8    15

Freezes Motion ←    → Blurs/Shows Motion

# Resources

- Vimeo Video School: <https://vimeo.com/videoschool>
- No Film School: <http://nofilmschool.com/dslr/>
- Go digitalslr: <http://godigitalslr.com/>
- Media college: <http://www.mediacollege.com/>
- Dslr video shooter: <http://dslrvideoshooter.com/>