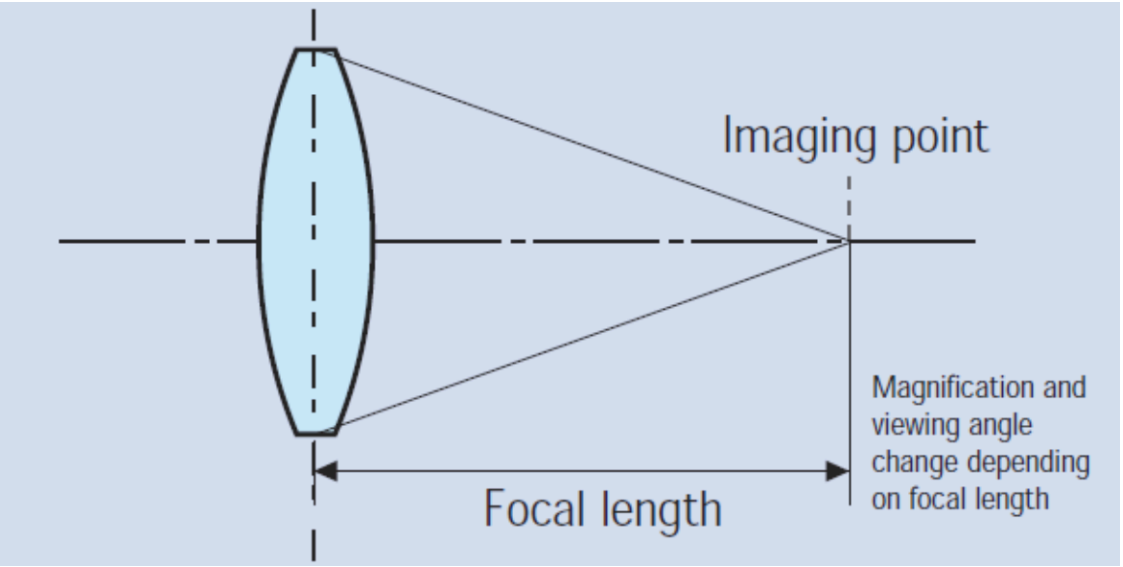
LVCC Meeting 25 February 2020
Practical Activity Briefing

Before we start we need to know:

- What does focal length mean
- What is an f stop, and how do they relate to each other
- How to place your camera on full manual
- How to control aperture, shutter speed and ISO on your camera
- Crop factor and what is a ‘normal lens’ on your camera

FOCAL LENGTH OF A LENS



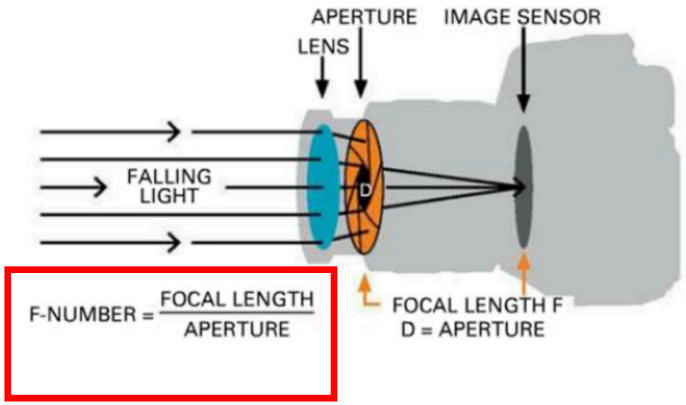
Long focal length – telephoto – brings distant objects closer and compresseses space

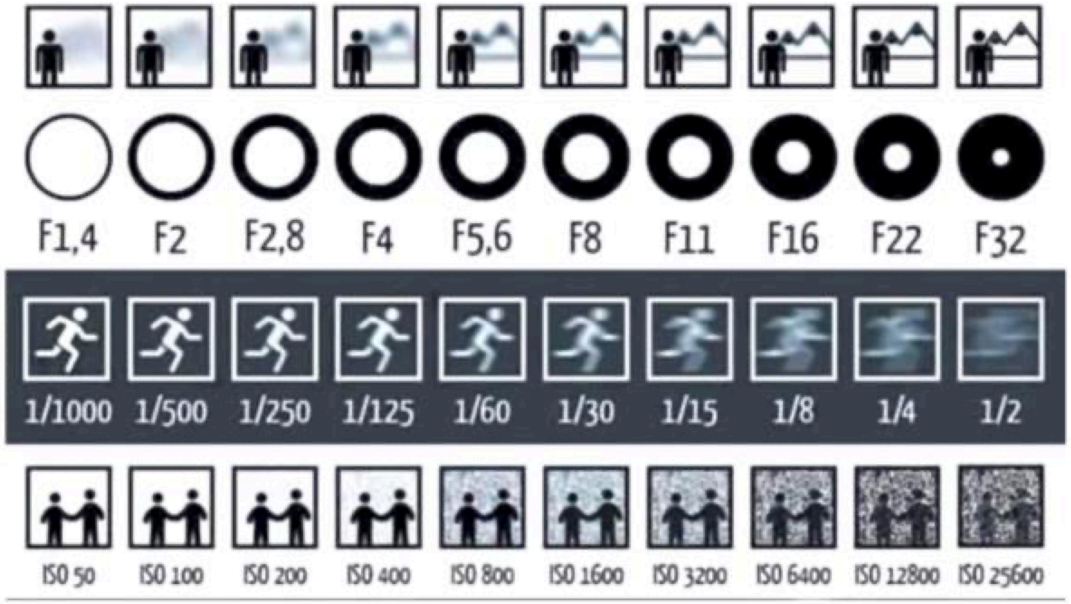
Short focal length – wide angle – pushes near objects further away – expands space

‘Normal’ lens – similar view to the human eye

These effects are all relative between cameras and depend on the CROP factor of the sensor

Aperture and f-stops





Example of f - stop

Zoom Lens 300 – 600 mm

Max aperture at 600mm = f6.3

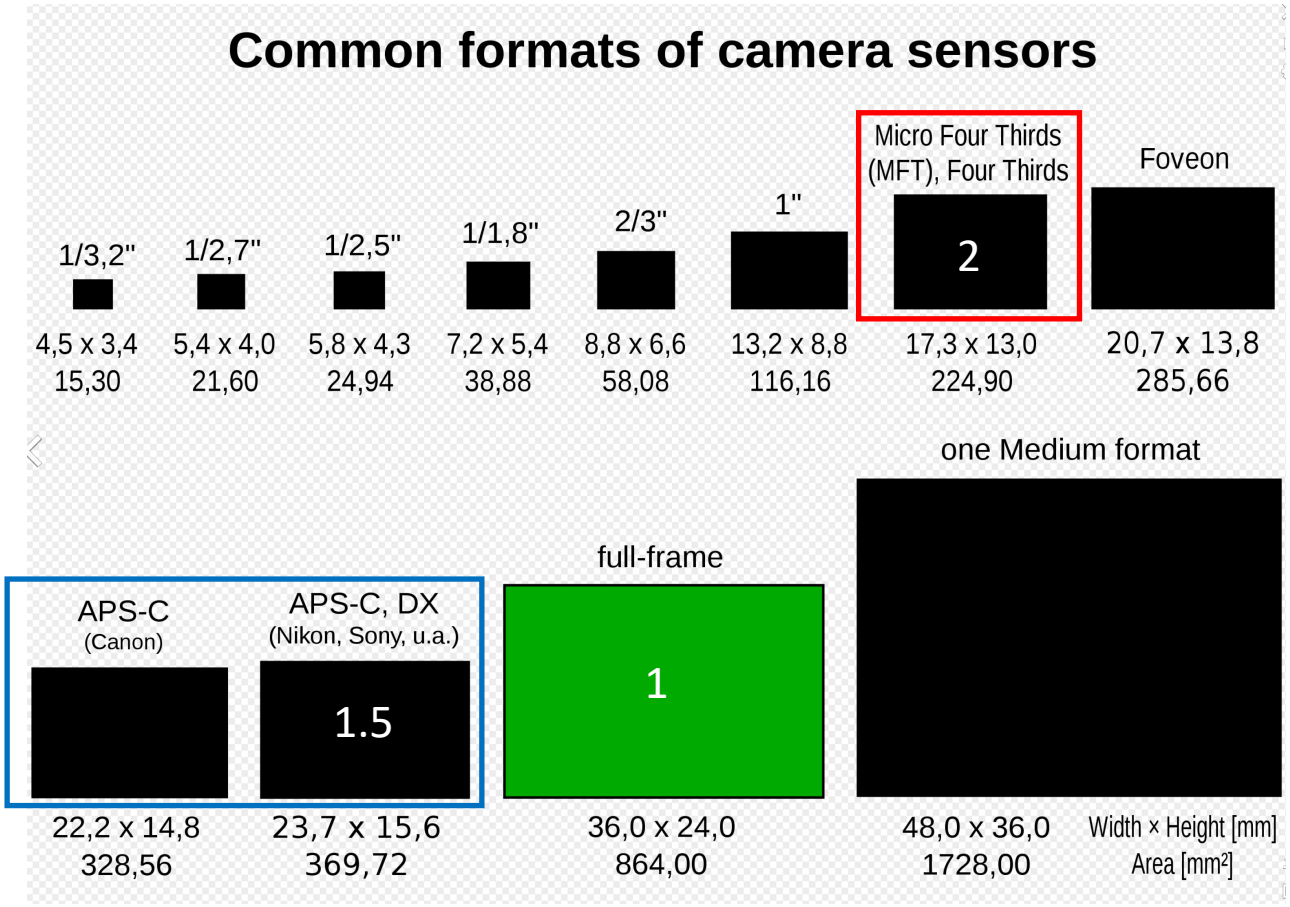
Aperture diameter at f6.3
= 600/6.3 = 95mm

12 – 35 mm

At the same aperture of f6.3

Aperture diameter at f6.3 and 35mm
= 35/6.3 = 5.5 mm

CROP FACTOR


Common formats of camera sensors
1/3,2"
1/2,7"
1/2,5"
1/1,8"
2/3"
1"
Micro Four Thirds
(MFT), Four Thirds
2
Foveon
4,5 x 3,4
15,30
5,4 x 4,0
21,60
5,8 x 4,3
24,94
7,2 x 5,4
38,88
8,8 x 6,6
58,08
13,2 x 8,8
116,16
17,3 x 13,0
224,90
20,7 x 13,8
285,66
one Medium format
full-frame
APS-C
(Canon)
APS-C, DX
(Nikon, Sony, u.a.)
1.5
1
22,2 x 14,8
328,56
23,7 x 15,6
369,72
36,0 x 24,0
864,00
48,0 x 36,0
1728,00
Width × Height [mm]
Area [mm²]

Lens equivalents

Full Frame	APS-C	Micro 4/3
50 mm	35mm	25 mm
25 mm	16 mm	12 mm
70 mm	45 mm	35 mm
200 mm	130 mm	100 mm
300 mm	200 mm	150mm

Tonight's exercise …..

- Practice getting similar point of view with different focal length lenses, noting any differences
- Practice adjusting exposure in manual mode
- Matting a print for competitions