

Sensor Speed (ISO)

- Alters the sensitivity to light. Does not alter the amount of light into the camera
- As sensor (film) speed goes up, light sensitivity increases, LESS light is required for proper exposure
- As sensor (film) speed goes down, light sensitivity decreases. MORE light is required for proper exposure
- Tradeoff: Image Quality – increased sensor speed (higher ISO) generally results in more "grain" in the image

Shutter

- Opens and closes to let light into the camera
- Amount of light is controlled by the length of time the shutter is open: Referred to as "shutter speed".
- Cameras generally display shutter speed as a fraction of a second. For example:
 - Setting: 40 Duration: 1/40th second.
 - Setting: 80 Duration: 1/80th second
- Tradeoff: Motion – decreased shutter speed make the image more sensitive to motion, both from the scene and from camera movement.

Aperature

- Adjusts in dimension to control the amount of light into the camera.
- Cameras display aperature as F-stop where F-stop is a ratio of the diameter of the aperature to the focal length
 - f4 indicates the aperature is 1/4th the focal length
 - f8 indicates the aperature is 1/8th the focal length
- Tradeoff: Depth of field – as the aperature size increases, the depth of field decreases.
- Remember that F-stop is a ratio, not a direct indication of aperature.
 - A zoom lens at 200mm and f4 has a larger aperature than a zoom lens at 55mm and f4!

Photography Quick Reference

Helpful Starting Values: ISO

100	Bright lighting, sunny days, outside
400	Cloudy days, sports, bright indoor locations
800	Regular indoor locations
1600	Dim indoor locations, night time, indoor sports

Shutter

25	Motion blur
125	Walking humans
160	Running humans, animals
250	Action, motorsports

F-Stop

2.8	Very dim light, shallow DOF
4	Dim light, shallow DOF, portraits (DOF)
8	Close to moderate landscape
16	Moderate to far landscape, bright sunny days