BASIC APPROACH TO SHUTTER SPEED, APERTURE & ISO

LEARN HOW TO ADJUST EXPOSURE

Shutter Speed, Aperture and ISO all work together and affect exposure. **They all have artifacts.**

**Shutter Speed** – How LONG light hits the sensor (measured in fractions of a second)
**Aperture** – How MUCH light is allowed to pass through the lens to get to the sensor (measured in f-stops)
**ISO** – Measurement of how sensitive sensor is to light.

01 SHUTTER SPEED - SET TO 50 (1/50)

How LONG light hits the sensor (measured in fractions of a second); controlled by click wheel on top of Canon T3i

**ARTIFACT - Motion Blur**

**Slow Shutter Speed** - (longer than 30 1/30) lower you go, the more blur - gives you a dreamy/wispy look
  -> If too long - almost nothing will be in focus and there will be too much blur
  -> 10 (1/10) - might give you a look like the dream/remembering scenes in Jason Bourne movies

**Fast Shutter Speed** - (anything faster than 500 (1/500)) almost no blur - intense, uncomfortable feeling - jittery and intense vibe
  -> 2000 (1/2000) - Jittery and sharp like the beach scene in Saving Private Ryan

HOW TO SET SHUTTER SPEED - Set to 50 (1/50)
The Rule: Frame Rate x 2 = shutter speed which will give you a natural cinematic motion blur
We are shooting at 24 frames per second [24 x 2 = 48] so, the shutter speed should stay at 50 unless you want a dreamy or jittery look or to experiment.

Learn about Film: http://learnaboutfilm.com/making-a-film/exposure-explained/
How much light is allowed to pass through the lens to get to the sensor (measured in f-stops)

Aperture controls the blades in the lens that close down or open up.

This is controlled by:
- FOR ZOOM LENSES - holding down AV button and using the click wheel on the top of the Canon T3i. The f-stop number appears on screen.
- FOR PRIME LENSES - manually turning the iris diaphragm control on the lens. The f-stop number is read directly off of the lens.

**Artifact - Depth of Field**

**Shallow Depth of Field**
- Lens wide open (more light coming in)
- Lower number (ex. f1.6)

**Deep Focus**
- Lens closed down (less light coming in)
- Higher number (ex. f16)
- Might need to add light to scene

**How to Read F-Stop Numbers** (A classic pro will not read the dot.)
ex. f1.6 is read “eff one six” and f16 is read “eff sixteen”

**ISO - Try to keep as low as possible**

Measurement of how sensitive sensor is to light. Controlled by: Pressing ISO button once and then using the click wheel on top of the Canon T3i.

**Artifact - Noise and Grain**

**Low ISO** - (under 100)
- Good for exterior on a sunny day

**Medium ISO** - (around 200)
- Good for exterior on an overcast day

**High ISO** - (400 and above)
- Good for interiors, depending on light in room.
- The higher the ISO the more noise and the grainier the image

The higher the ISO the more possibility you will have a noise and a grainier image.

**In General for a Clear Image - Keep ISO as Low as Possible - You May Need to Adjust Aperture or Add Light if the Image is Too Noisy.**

**Once you choose an ISO, keep it consistent per location.**