

TAKE PHOTOS IN LOW LIGHT

EXTERNAL FLASH

- When you are taking pictures of people or objects
- Consider using a diffuser to lesson the harsh shadows

DSLR

- Camera with manual controls
- High ISO
- Burst shooting capabilities
- Ability to shoot in RAW

LENS

- Preferably with an aperture below f/2.8
- Look for one with image stabilization or vibration reduction

REMOTE SHUTTER RELEASE

- You can shake the camera when you press the shutter release, a remote should help to eliminate that shake

TRIPOD

- To steady your camera & reduce shake
- Essential for long exposures

HOW TO GUIDE:

- **Put your camera in aperture priority mode**, this will ensure that you control all available options.
- **Crank up ISO.** This may result in a image with additional noise, but this can be fixed with some post-processing (shoot in RAW if available).
- **Use a large aperture.** Larger apertures let in more light.
- **Slow down shutter speed.** The longer your shutter is open the more light that will get in.
- **Use an off camera flash.** Try to direct the light so that it doesn't hit your subject straight on, try deflecting the light to soften it.
- **Use your cameras exposure compensation capability.** The scale on many of today's DSLR's allow from -3 to +3 stops in 1/3 stop increments. Dial the exposure compensation to the positive side to purposefully "overexpose" the photograph.

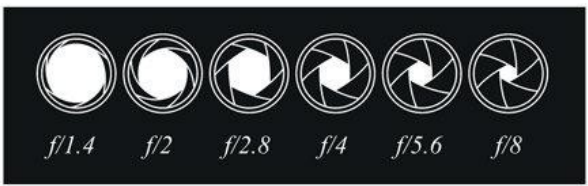
SETTING'S FOR YOUR CAMERA:

	Tripod	Flash	ISO	Aperture	Exposure
Indoor	-	✓	High	Wide	Fast
Hand Held	X	-	High	Wide	Fast
City Lights	✓	X	Low	Medium	Long
Stars	✓	X	Low	Medium	Long
Light Painting	✓	X	Low	Narrow	Long

QUICK TIPS:

- **Shine a light** on your subject and auto focus on that, then turn your light and auto focus off and take the picture.
- **Do not be afraid** to turn up your ISO, crank it up as high as you need, do not worry about the noise, get the shot.
- **When using a flash** bounce the light off a wall or other object will help to reduce harsh shadows on your subject.
- **Motion blur** can be a cool effect, experiment with a moving subject and a longer exposure time.
- If your camera, or lens has **image stabilization** make sure its on.
- **Do not be afraid** to make a mistake, you can learn a lot from a mistake.
- **Hand-held shots** should be no slower then 1/60th of a second other wise use a tripod to reduce blur.
- Buy a **50mm lens** f/1.8.
- If you aim your camera towards the **north star**, the stars will appear to spiral.

- **What is ISO:** How sensitive the camera sensor is to light.
- **What is Shutter Speed (Exposure):** How long your shutter is open, allowing light to reach the sensor.
- **What is Aperture:** The diameter of the lens opening, which controls how much light gets to the sensor.



LIGHT GRAFFITI AND PAINTING WITH LIGHT:

- Wear dark clothing.
- Find a dark location.
- Set your camera shutter speed to a long exposure, 20+ seconds or bulb setting.
- Set your camera on a tripod.
- Press shutter.
- Begin painting with your flashlight, sparkler or glow stick.
- Experiment with aperture, ISO and shutter speed until you get the look you are going for.
- Check your work and try it again if you are not happy.

TAKE A PHOTOS LIKE A SNIPER:

- Brace yourself and your camera against wall, ground or other solid object.
- Relax when you hold the camera, a tense hand will cause you to shake the camera.
- Avoid zooming in on your subject.
- Take a deep breath, and exhale slowly then photograph.
- Gently press the shutter button and leave your figure on it.
- Triple tap your subject (take multiple photos in a short succession).

