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*Photography Tips and*  
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We are going to discuss ISO this week. ISO is also part of the exposure triangle along with aperture and shutter speed.

#### ISO

Acronym for International Organization for Standardization. Refers to the international standard for representing the sensitivity to light of an imaging sensor or film by a numerical value.

Remember those old film cameras, you used to buy a film that had a film speed, 100, 200 400? Well with film you had to use the whole film with the same ISO, you couldn't change with each shot. Well digital changed all of this, and now, each shot can be changed independently, depending on the situations. **The downside to this, I have done this, as I am sure others have also, is we change the ISO to 800, for example and forget to change it back for another shot. So the next photo just turns out wrong.** Oops, never mind we live and learn. So get into the habit of checking your ISO frequently.

So how does this work in the real life. As more light is allowed into the sensor you can use a faster shutter speed. The downside is that more digital noise is recorded. With the more modern cameras (specially the DSLR's) the technology has gotten better over the years and you can now shoot at fairly high ISO and the photo doesn't suffer too much noise.

Increasing the ISO and keeping the shutter speed the same will allow you to shoot at a smaller lens opening (f/stop). That will increase the depth-of-field and increase the zone of sharpness that extends behind and in front of the point of focus.

Leaving your camera's ISO setting on Auto is a mistake. The camera could use a higher setting than necessary and cause your image to appear grainy or noisy. You don't want that. Besides, **you cannot accurately control the aperture setting or shutter speed setting unless you also control the ISO sensitivity.**

- **The** higher the ISO, the more sensitive the sensor is to light. Faster shutter speed is allowed
- ISO speed affects allowed aperture and shutter speed combinations.
- Higher the ISO, the more grainy or noisy pictures may appear.

**What is the best ISO for each situation?**

When you have no tripod or there is low light it's best to increase the ISO of your camera. This will give you a slightly faster shutter speed. But increase the grain.

When you have a tripod, or the light is good use a low ISO to avoid the noise.

If the subject is still you can use a lower ISO, if the subject is moving and you require the shot to be frozen you may need to up the ISO.

If you are using flash or the light is good, use a low ISO

Do you want grain in the final result, use a higher ISO.

How big will the image be enlarged, often the grain can't be seen in regular size on the computer screen, but when you enlarge it, oops, there is it. If you have in mind to print large or crop the photo use a lower ISO.

What depth of field do you want to shoot with? – If you don't need a large depth of field you might be able to increase your aperture which allows more light into the camera and will allow you to lower ISO.

As a general rule you should use the lowest possible ISO.

Things to do this week.

Go out and use either aperture or shutter speed priority mode. You can go over the information and practice these modes some more.

Take a photo of anything, in daylight. Choose the lowest ISO your camera will allow and then the same photo with the highest ISO your camera allows. Compare on the computer screen.

Do the same exercise at night-time.

You will see from the results that the daytime shots the noise or grain will be less visible than the night time photos. Can you get away with the grain? Some photos look great, others not so.

Go over aperture and shutter speed modes. Remember practice is the best way to learn. We will go full manual next week, combining ISO, aperture and shutter speed.

Scroll down for photos.



This was taken on a bridge camera, to illustrate the difference between high and low ISO even better.

Above: Panasonic DMCFZ50, manual mode 1/160 f/5 **ISO 100**

Below: Same camera, manual mode 1/640 f/11 **ISO 1600**



.You can clearly see the noise, in the below photo, this is just an example and extreme, results are more noticeable at night time and on darker colours.

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