

ISO Project

ISO (Industrial Standards Organization 6:1993) in photography refers to how fast film crystals (for negative film), or the pixels of a digital sensor, can capture light. (These will now be referred to as “the media”)

The higher the ISO number, the faster the media is able to record the correct amount of light to create an image that mimics what our eyes see (assuming you have correct exposure.)

This allows the photographer the ability to have a faster shutter speed, or higher aperture number simply by “boosting” his or her ISO #.

So why not have a high ISO # all the time? Because.....

- In bright environmental conditions, you may actually not be able to have a fast enough shutter speed to avoid overexposure

The higher the ISO, the lower the overall picture quality. With Digital images this means “noise” and fuzziness, and with film, it means very visible grain structure.

1.

For this project I would like you to take a series of photos with your camera in the **Manual mode**.

These photos will be of the same subject in much the same setting.

You will begin by setting the camera ISO to 100 or 200, whichever is the lowest you can set your camera to. Place your camera on a tripod, on a stable surface, or move outside during daylight hours.

Using your light meter to ensure correct exposure, take a photograph of a scene.

This will involve changing your shutter speed or aperture. You may change whichever one you feel like.

(Remember that you will need a shutter speed of at least 1/30th of a second or higher to avoid blur, however.)

Now adjust the ISO # to 800 and take another photograph using the light meter to ensure correct exposure.

Remember to meter your subject again!!!

Repeat the above step with the ISO set to 1600, or whatever the highest ISO is. (If your camera has an ISO setting of 12,800 or “HI 1.0” take a photo at this setting.)

2.

Move the images you have just taken from the camera to a folder on your desktop. I suggest labeling this folder "ISO"

3. Open each of the photos in this ISO folder in MS Photos (or any similar preview software) and record the shutter speed, aperture and ISO each photo was taken at (you'll need to select "File Information" or similar.)

4. Rename, or "Save As" each of the images in the folder with the shutter speed, ISO, and aperture as the new file name. For example "-MG-4576.jpg" would be renamed "1-60F8ISO1600".

5. Open each one of these renamed images in MS Photos, and Zoom in as close as you can using the zoom slider. Now use Snip and Sketch (Windows->Snip and Sketch->New) and click and drag an area of your zoomed in image. Save this to the ISO folder on your desktop by adding the word CROP to the end of the file name (eg. "1-60F8ISO1600CROP.jpg). Do this for each of your ISO photos.

6.

Upload this folder from the desktop to your OneDrive and create an MS Word Doc where you will place your **cropped** photos using the insert command.

Insert the full image taken at the lowest ISO first, and clearly label it below the image (shutter speed, ISO, and aperture). Below this image, insert the cropped image of the same photo. Label this as well. Next, insert the full image taken at the mid level ISO, and so on. Your document will have 6 labeled photos.

At the bottom of this document, please answer the following:

1. What do you notice about the f-stop number and shutter speed of your photo taken at the lowest ISO compared to the photo taken at the highest ISO?
2. In your photo viewing software (MS Photos), take a close look at the cropped photographs taken at the lowest ISO and the highest ISO. What is the difference between the images?
3. What are two situations where you would choose to use a low ISO #?
4. What are 2 situations where you would choose to use a high ISO#?

Below is a sample document, but it does not include the source image...yours must!
Your instructor will tell you what format, and where, you will be submitting your project.

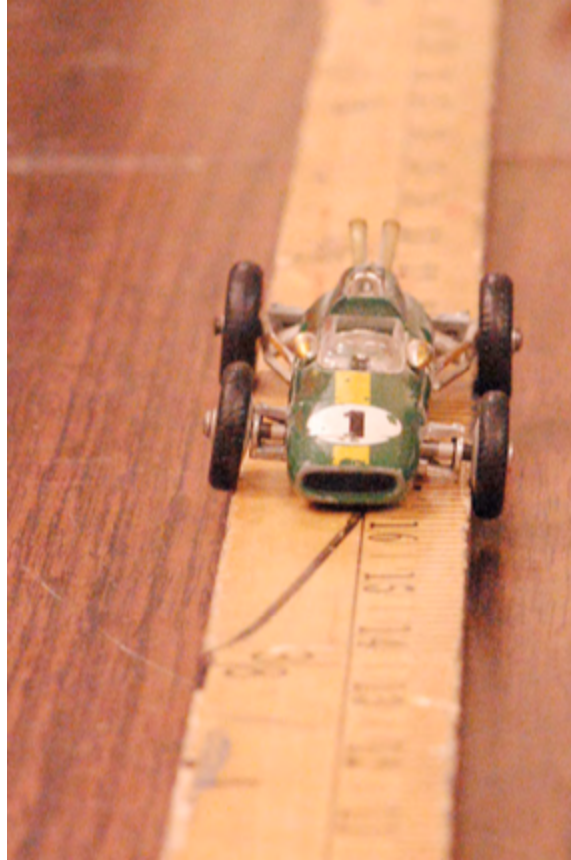
Biff Turkle Block 9 Nov.28, 2013



This photo was taken at ISO 100 @ 1/25th second @ f 1.8



This photo was taken at ISO 400 @ 1/25th second @ f4



This photo was taken @ ISO 1600 @ 1/25th second @ f 10 Questions:

1. I noticed that as the ISO # goes _____, the aperture # got _____. I was also able to change the shutter speed instead of the aperture to get correct exposure; as ISO # got higher, I was able to use a _____ shutter speed.

2. Wow! The pixels of the photo taken at ISO 3200 are really, really _____. The photos taken at ISO 100 are extremely _____.

3. I would probably use a low ISO# if I was taking photos at the _____ in the middle of the _____, or trying to take _____ photos of _____ for a journal of Medicine.

4. I would use a very high ISO # if I had to take photos of _____ in the school gym, or _____ in the forest in the middle of the _____.