# PHOTOGRAPHY

# Exercise: Exposure, Shutter Speed and Aperture

**Exposure** in photography is the total amount of light allowed to fall on the photographic medium (film or sensor) during the process of taking a photograph.

Photos need to be exposed properly or else they will be too dark or too bright. When shooting in full auto mode, the camera calculates the necessary exposure to produce an image that is exposed properly *on average*. We will be taking full control of our cameras and managing the exposures ourselves.

Once you have set the desired ISO, there are two other parts to proper exposure, and we will have to manage both in order to have a properly exposed image. Think about exposure this way:



**Aperture** is controlled by adjusting the size of the opening in the lens. Think of the aperture like the pupil of your eye. The larger the opening the more light can pass through. Consequently, the less time is required to expose the image properly. The size of the aperture is measured in a standard series of numbers called **f-stops**.



**Shutter speed** is the amount of time the shutter is open. The longer the shutter is open the more light can pass through to the film or sensor. The length of time the shutter is open is typically measured in fractions of seconds (very brief periods of time.) Shutter speed is measured in a standard series of numbers

1/2	1/4	1/8	1/15	1/30	1/60	1/125	1/250	1/500
←long time (more light)						short time (less light)⇒		

# Exercise

Experiment with and choose the appropriate aperture sizes and shutter speeds for your photographs (no more shooting in full auto mode!)

### 1. Playing with aperture



In this exercise, you will explore your camera's **aperture priority mode (AV)**. First, ensure that your camera is in **AV** mode by turning the mode dial so that the hash mark lines up with the AV. Then turn the dial to adjust the f-stop setting.





In a brightly lit location, have some friends stand together in a staggered line. Focus on the friend closest to you. Take the same photo twice – once with the smallest possible aperture, and once with the largest possible aperture. What do you notice?

## 2. Playing with shutter speed



In this exercise, you will explore your camera's **time priority mode (TV)**. First, ensure that your camera is in **TV** mode by turning the mode dial so that the hash mark lines up with the TV. Then turn the dial to adjust the shutter speed.





In a brightly lit location, have a friend jump into the air. Take the same photo twice – once with a slower shutter speed (try 1/30) and once with a faster shutter speed (try 1/200.) What do you notice?