



# Using Shutter Speed to control motion



Fast Shutter Speed  
Frozen Motion  
"The Decisive Moment"

Henri Cartier Bresson

Slow shutter speed  
Exaggerated motion - blur  
"Go Fish"

Paul Pearce

The goal of this assignment is to understand and master the use of shutter speed to control how movement looks within the photograph. You will need a tripod to do this assignment. Use a moderately lit subject, not too dark and *definitely not in sunlight*.



Use the "Equivalent Exposure" wheel to help check your changes in shutter speed and aperture.

**Start the roll with Grey, Black, & White exposures-** this time keep the grey exposure for all three shots- (see back of this sheet) this will be explained in class.

**Next (3 exposures)** see how steady you can hold the camera by hand holding the camera and shooting at different shutter speeds. Find a subject that is **not moving** in the shade or indoors. The subject should have strong contrast (strong lines or text) to make focusing easy. Make 4 exposures; Start at 1/30 sec then, 1/15 sec, and finally 1/8 sec. Remember to compensate for the change in shutter speed with the appropriate change in lens opening.

**Next make a series of photos of 3 different moving subjects**

- 1) Find a subject that is moving in moderate light. **Direct sunlight is too bright** to allow slow shutter speeds. If the light is too dim, you won't be able to freeze the motion with a fast shutter speed. Cloudy or shady outdoor light and bright indoor light should work best. The light in our classroom is just about right. Your subject should be predictable and consistent. When starting out you should simplify what you shoot. Pick something that won't stop or move away as you set up to shoot. The lighting should also be consistent.
- 2) Set up your tripod and compose your photograph, framing to concentrate on the motion and eliminate distracting elements. **You will make multiple exposures at different shutter speeds without moving the camera.**
- 3) Use your light meter to determine the proper exposure. Remember, for each photo there is only one proper exposure but there are many combinations of f/stop and shutter speed to choose from.
- 4) Adjust your lens opening (f/stop) to the smallest opening (highest number) like f/16. This will require a long shutter speed to give you the proper exposure.
- 5) Check your meter and adjust the shutter speed to get the correct exposure. Make your first exposure and record your settings.
- 6) Change your lens opening to the largest opening (lowest number) like f/2 or f2.8 and change your shutter speed to get the proper exposure. Your shutter speed should be much faster. Make your second exposure and record your settings.

**If the lighting is not optimal, you might not be able to use the largest and smallest lens openings.**

- 7) Shoot 2 more exposures that fall between exposures # 1 and # 2 and record your settings- this gives you four shots per subject.

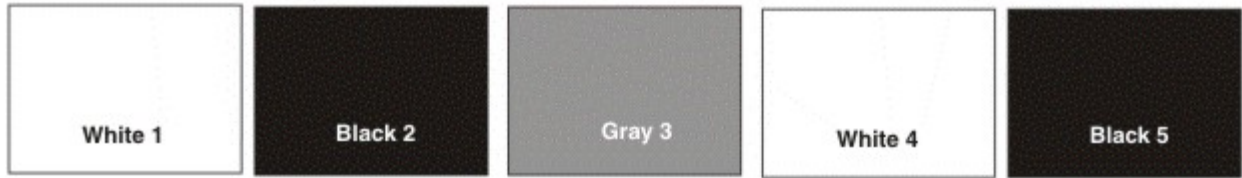
**Now repeat this sequence with 2 more subjects, try for variety.**

**Finish the roll** by experimenting with different shutter speeds and moving objects. Shoot to freeze motion with a sunlit subject and try long exposures in dim light or at night. Develop the roll and be ready to make a contact sheet.

**You will turn in a pair of prints (half sheet size) of the same subject showing the effects of a change in shutter speed.**

## Controlling Exposure- Camera meters and subject brightness

Use the target panels in class to make five exposures.



### Black, White and Gray are the building blocks of all photographs.

Our eyes and the camera capture a scene by processing the light reflected from objects that pass through a lens to the retina or film. Our eyes automatically compensate for variations in lighting, the camera needs to be controlled. Some cameras can work automatically, others need manual adjustment. We use a light meter to determine the proper settings. The camera is designed to work with “average” subjects and sometimes is fooled by subjects that are predominately light or dark.

This is a simple five frame exercise that can help determine if your camera is working correctly and also demonstrates the way your meter reacts to non average subjects. *You must complete this successfully- if it doesn't work the first time - check your camera and repeat the exercise on your next roll.*

This is just to get you started, we will cover exposures in more detail later in the class.

Load the camera and make sure the meter is set to the correct film speed (ISO Number) Move in close to the targets to fill the frame with only the appropriate color for each shot. Focus carefully, use a tripod to eliminate any camera movement. Record your exposures; the lens opening (f stop) and the shutter speed.

1) With first white target, adjust your camera settings to match the reading your meter indicates. Compose the frame to include the number 1 and the word White. Make one exposure.  $f$  \_\_\_\_\_  $1/$ \_\_\_\_\_ sec.

2) With the black target, change the settings to match your meter readings. It should be different from the white target. Compose the frame including the number 2 and the word black. Make the second exposure.  $f$  \_\_\_\_\_  $1/$ \_\_\_\_\_ sec.

3) With the gray target, change your settings to match the meter reading. This should be different from the Black & White exposures. Make your third exposure including the number 3 and the work Gray.  
 $f$  \_\_\_\_\_  $1/$ \_\_\_\_\_ sec.

4) DO NOT CHANGE your settings from the Gray #3 target. Move to the White #4 target and expose frame 4 including the word White and the number 4. Your meter tells you that you are over exposing.  
 $f$  \_\_\_\_\_  $1/$ \_\_\_\_\_ sec.

5) DO NOT CHANGE your settings from the Gray #3 target. Move back to the Black target and expose frame 5 including the word Black and the number 5. Your meter tells you that you are under exposing.  
 $f$  \_\_\_\_\_  $1/$ \_\_\_\_\_ sec.

**Process your film and make a proper proof contact sheet. your results should look like this**

