Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_

*Controlling light with Shutter Speed*

Digital Photography I

Directions: Please read an answer the following questions about aperture and exposure.

The shutter speed refers to how long the shutter is kept open and light is allowed to strike the film or digital sensor. Most shutter speeds are given in fractions of a second. Below are listed the common shutter speeds on most cameras:

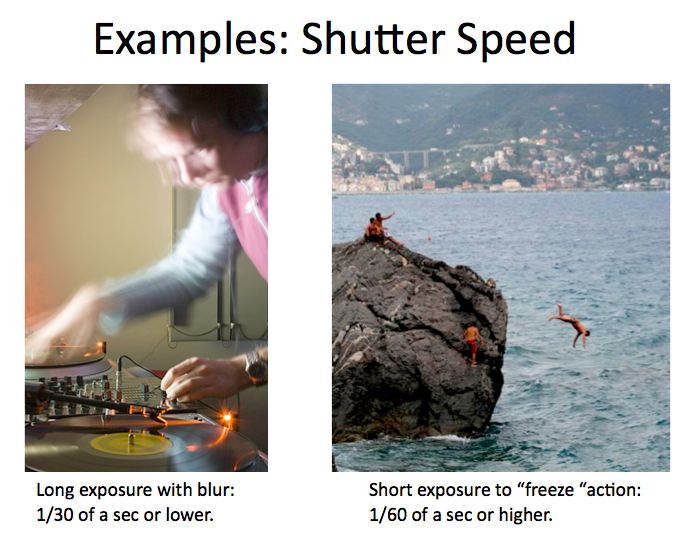
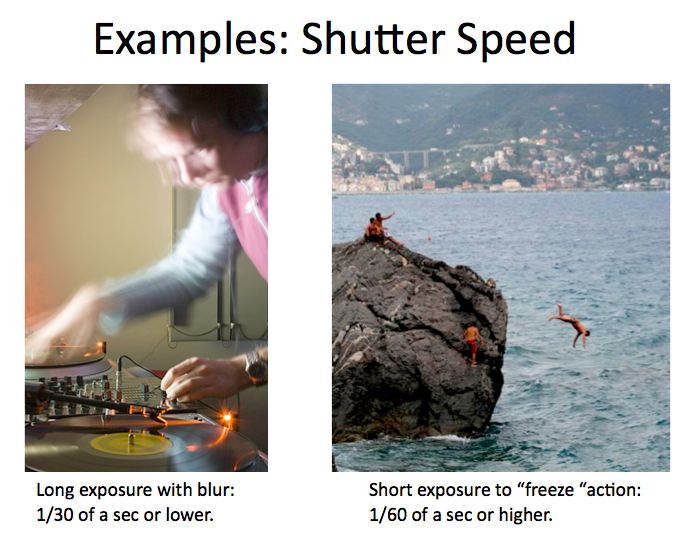
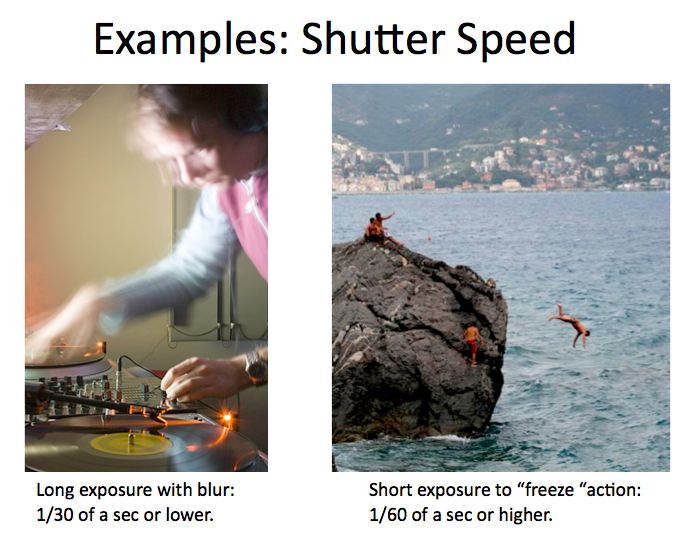
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1/2000 | 1/1000 | 1/500 | 1/250 | 1/125 | 1/60 | 1/30 | 1/15 | 1/8 | 1/4 | 1/2 | 1 | 2 | 4 | 8 | 16 |
| Shorter amount of time Longer amount of time (can be hand held) (use a tripod under 1/30) | | | | | | | | | | | | | | | |

Each shutter speed is about half or twice as fast as the adjacent one. This is similar to the relationship between f-stops. When using the faster shutter speeds you can usually hold the camera. At a speed of 1/30th you need to support your body and hold very steady. Shutter speeds of 1/30 and longer will need a tripod or other support. Otherwise, the picture will be blurry.

Some cameras have exposures longer than 1 second. They will also have 2 sec, 4 sec, or 8 sec settings. A setting called “B” stands for bulb and can be used for very long exposures. This setting allows the shutter to remain open until your finger is removed from the shutter button.

Generally, a faster shutter speed will give you a sharper image. The shutter speed can be used to create different effects in your pictures. A fast shutter speed can “freeze” motion, while a longer shutter speed will blur the movement to give the illusion of motion.

Photographers must always choose a lens opening (aperture) and find the corresponding shutter speed that will provide the proper exposure.



Answer the following questions about Camera Shutter speeds:

1. Give an example of a very fast shutter speed:
2. What two controls does the photographer use to determine the correct exposure?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. If you needed to take a picture with a long exposure of 15 seconds, how would you do this?
2. What is the longest shutter speed you should use and still hand hold the camera?
3. Circle the fastest shutter speed:

1/60 1/8 1/125 1/250

1. Circle the longest shutter speed:

1/1000 1/15 1/30 1/125

1. If you make a change from 1/125 sec to 1/60 sec, how will this affect the amount of light entering the camera?
2. If you were outside taking a picture of friends running during a soccer game, what shutter speed would you use to “freeze” or stop their motion?
3. You are going to take a picture of your friend outside at the front of the school on a VERY sunny day. What shutter speed could you use?
4. What other camera control would affect your choice in question #9?