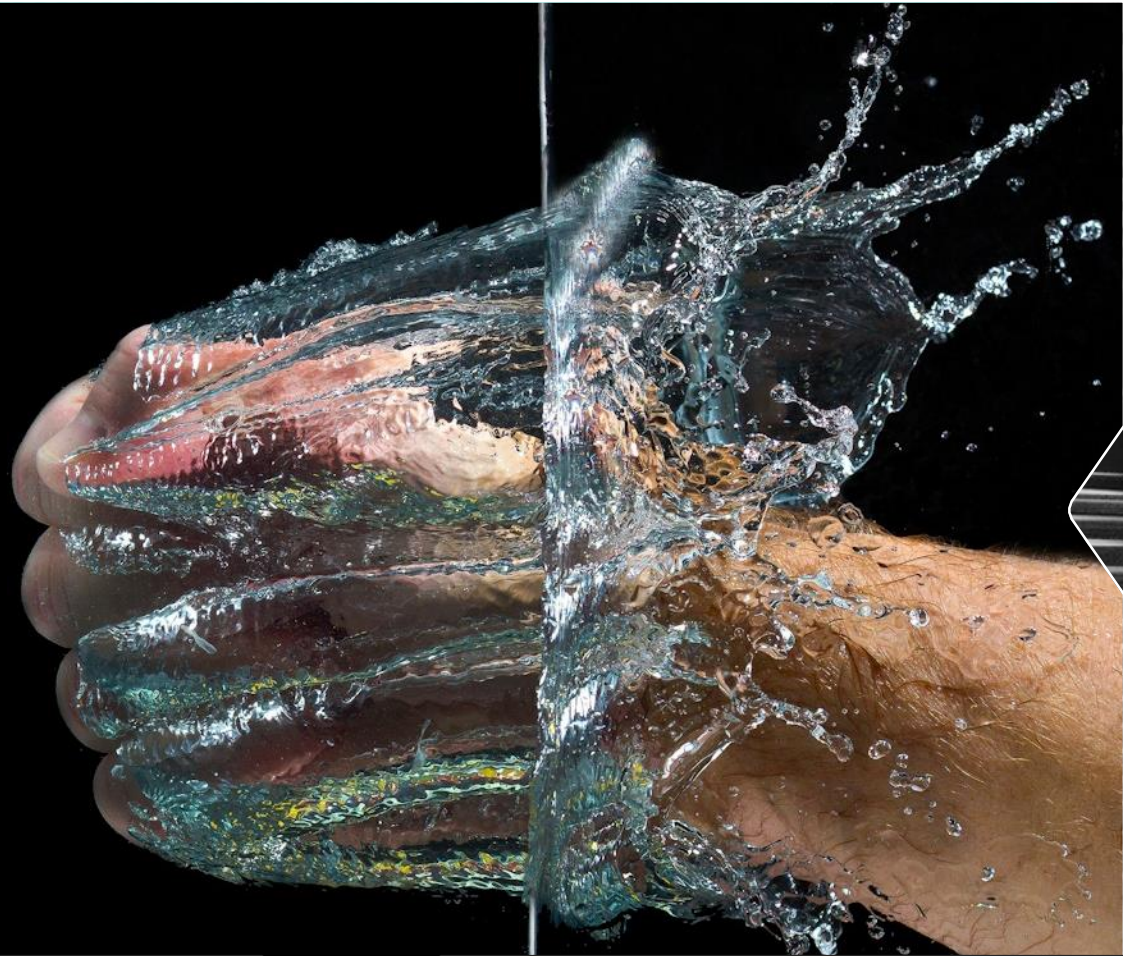




Shutter Speed

A Level Photography



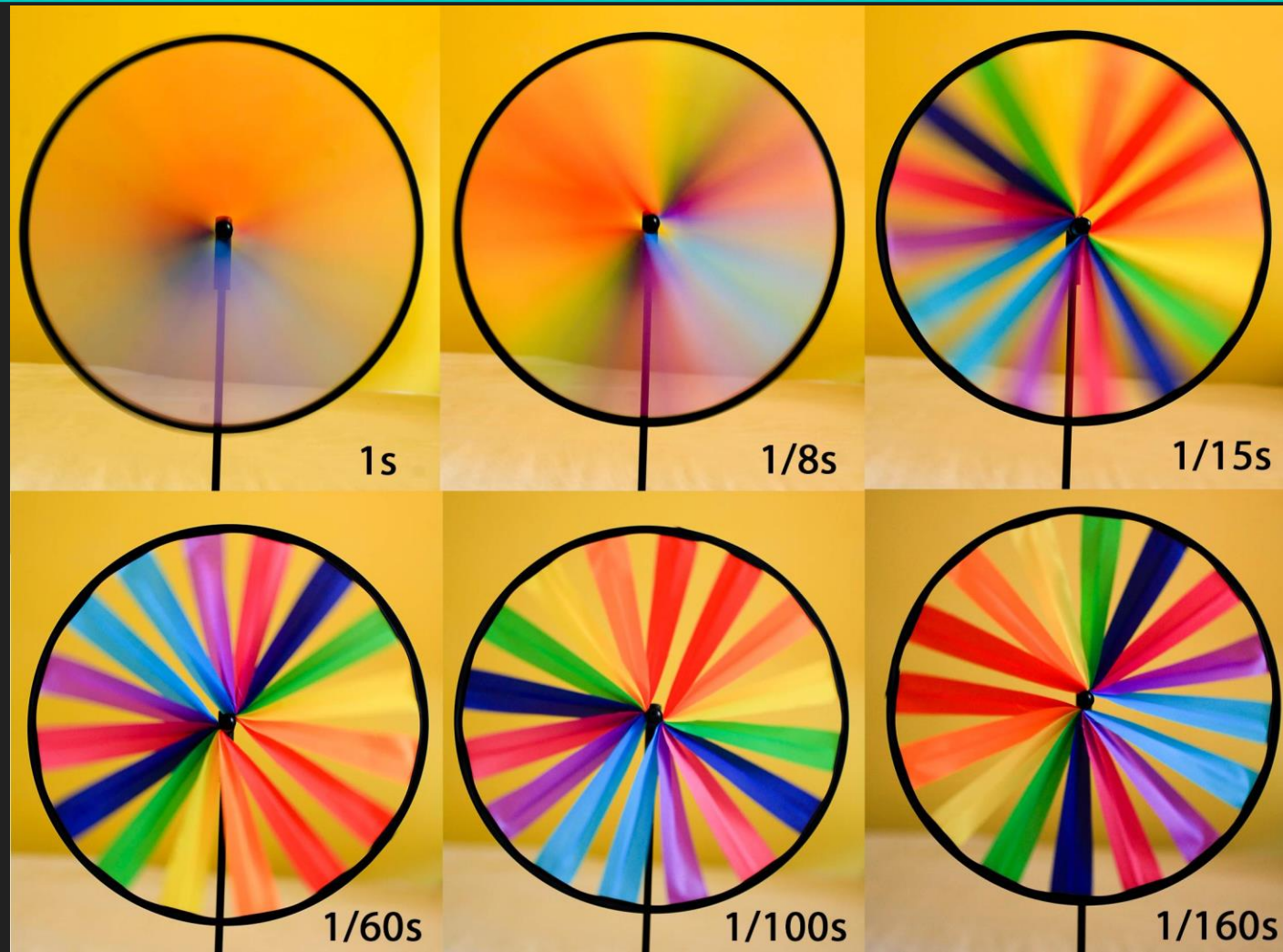
What is Shutter Speed?

In film photography it was the length of time that the film was exposed to the scene you're photographing and similarly in digital photography shutter speed is the length of time that your image sensor 'sees' the scene you're attempting to capture.

What is Shutter Speed?

• **Shutter speed is measured in seconds** – or in most cases fractions of seconds. The bigger the denominator the faster the speed (ie $1/1000$ is much faster than $1/30$).

• **In most cases you'll probably be using shutter speeds of 1/60th of a second or faster.** This is because anything slower than this is very difficult to use without getting camera shake. Camera shake is when your camera is moving while the shutter is open and results in blur in your photos.



Shutter Speed



Moving subjects

Shutter speed choice becomes more important when you photograph moving objects. The quicker the subject is moving, the faster the shutter speed you need to freeze the subject. Go for a slower speed and the moving elements will appear blurred – but get the right degree of blur and your shot can look great.



• **Shutter speeds available to you on your camera will usually double (approximately) with each setting.** As a result you'll usually have the options for the following shutter speeds – 1/500, 1/250, 1/125, 1/60, 1/30, 1/15, 1/8 etc. This 'doubling' is handy to keep in mind as aperture settings also double the amount of light that is let in – as a result increasing shutter speed by one stop and decreasing aperture by one stop should give you similar exposure levels.

• **Some cameras also give you the option for very slow shutter speeds** that are not fractions of seconds but are measured in seconds (for example 1 second, 10 seconds, 30 seconds etc). These are used in very low light situations, when you're going after special effects and/or when you're trying to capture a lot of movement in a shot. Some cameras also give you the option to shoot in 'B' (or 'Bulb') mode. Bulb mode lets you keep the shutter open for as long as you hold it down.

•When considering what shutter speed to use in an image you should always ask yourself whether anything in your scene is moving and how you'd like to capture that movement. If there is movement in your scene you have the choice of either freezing the movement (so it looks still) or letting the moving object intentionally blur (giving it a sense of movement).

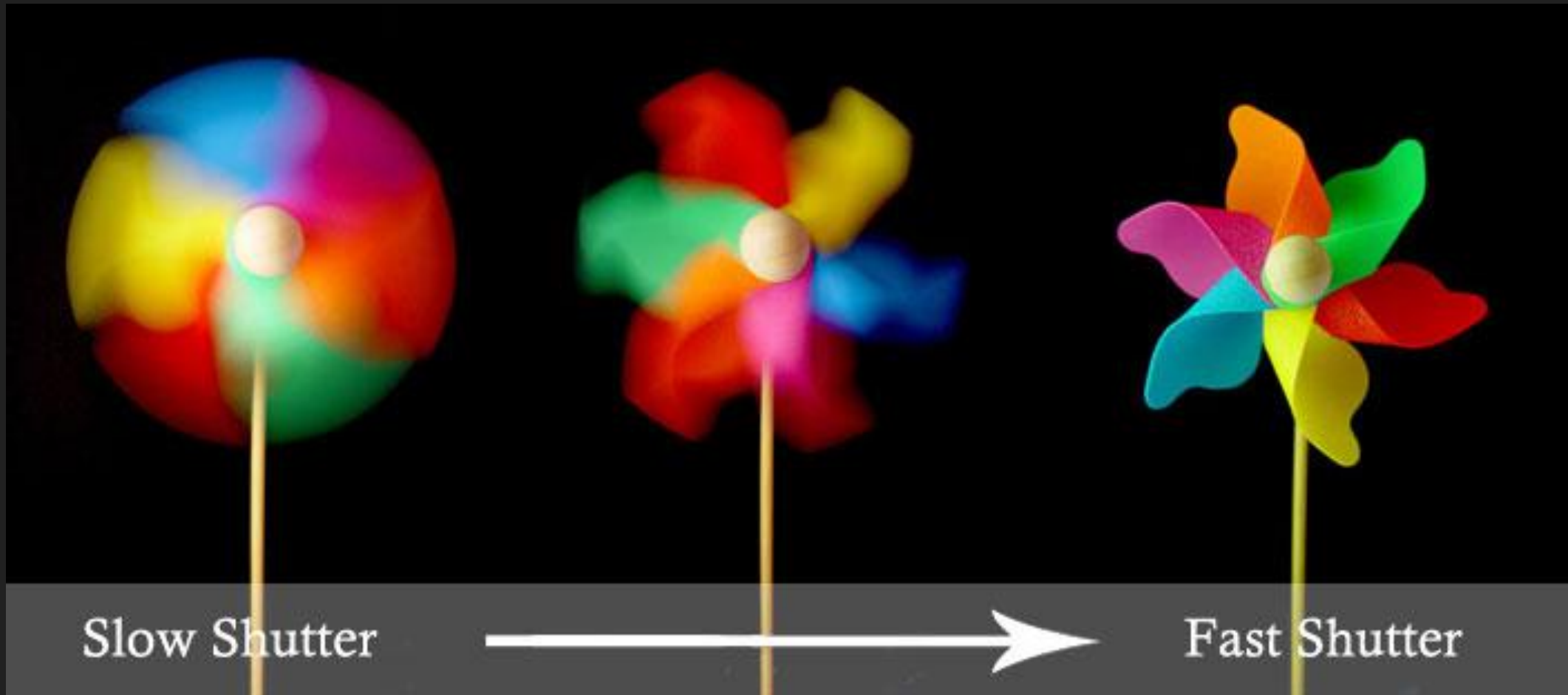
•To freeze movement in an image (like in the shots of the birds above and the surfer below) you'll want to choose a faster shutter speed and to let the movement blur you'll want to choose a slower shutter speed. The actual speeds you should choose will vary depending upon the speed of the subject in your shot and how much you want it to be blurred.





We talk
about shutter
speed as
being **FAST**,
MEDIUM or
SLOW

SLOW shutter speed creates time and movement and **FAST** shutter speed freezes time and stops movement.



Slow Shutter

Fast Shutter



Freezes Action



1/2000



1/1000



1/500



1/250



1/30



1/15



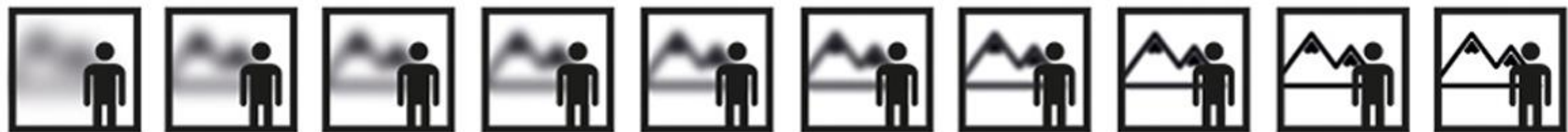
1/8



1/3

Blurs Action





F1,4 F2 F2,8 F4 F5,6 F8 F11 F16 F22 F32



1/1000 1/500 1/250 1/125 1/60 1/30 1/15 1/8 1/4 1/2



Range

Remember that in photography time is very fast.... While we can open the shutter for an infinite amount of time using the BULB setting you can also preset the shutter, depending on the camera you have from as long as 30 seconds to as short as 1/8000th of a second



Range of Shutter Speeds

(and their uses)

1/8000 second

1/4000 second

1/2000 second

1/1000 second

1/500 second

1/250 second

1/125 second

1/60 second

1/30 second

1/15 second

1/8 second

1/4 second

1/2 second

1 second

2 seconds

4 seconds

8 seconds

15 seconds

30 seconds



Fast Speeds

For stopping action



Moderate Speeds

Handholding Generally Ok



Slow Speeds

Use a Tripod



Very Slow Speeds

For Creating Blur or Trails

Slow Shutter Speed

- Slow shutter speed will result in movement in your image similar to that of the image below taken by photographer Michael Bosanko and Alexey Titarenko



Slow Shutter Speed

- For a slow shutter speed your camera must be set to $1/50^{\text{th}}$ or below.... The longer the shutter is open the more light comes in and the more movement is created...
- Remember that you must take into consideration the natural and/or artificial light... the more there is the brighter the image leaving it over exposed.



Fast Shutter Speed

- For a slow shutter speed your camera must be set to 1/125th or above.... The quicker the shutter closes the less light comes in and the movement is frozen...
- Remember that you must take into consideration the natural and/or artificial light... the less there is the darker the image leaving it under exposed.



Tasks... Tasks... Tasks... Tasks... Tasks... Tasks... Tasks... Tasks... Tasks... Tasks... Tasks... Tasks...

1. Write up what shutter speed is and how it works

2. Take a series of images that explore different shutter speeds... look at the same subject and change the shutter speed from fast to slow. Put these images in your sketchbook with all the camera information by each image.

3. Using the concept of fast and slow shutter speed take a series of images in different situations using different subject matter that show that you know how to control shutter speed and ensure that all the technical information is included.