
INTRODUCTION TO THE EXPOSURE TRIANGLE

Austin Miller





GOALS OF THIS PRESENTATION

- Cover the basic controls we have to manage exposure in camera:
 - Shutter Speed
 - Aperture
 - ISO
- Learn how each of these controls impacts your final image
- Give you the confidence to get away from using 'Automatic' mode



WHAT IS EXPOSURE AND WHY DOES IT MATTER?

HOW DO WE CONTROL EXPOSURE?



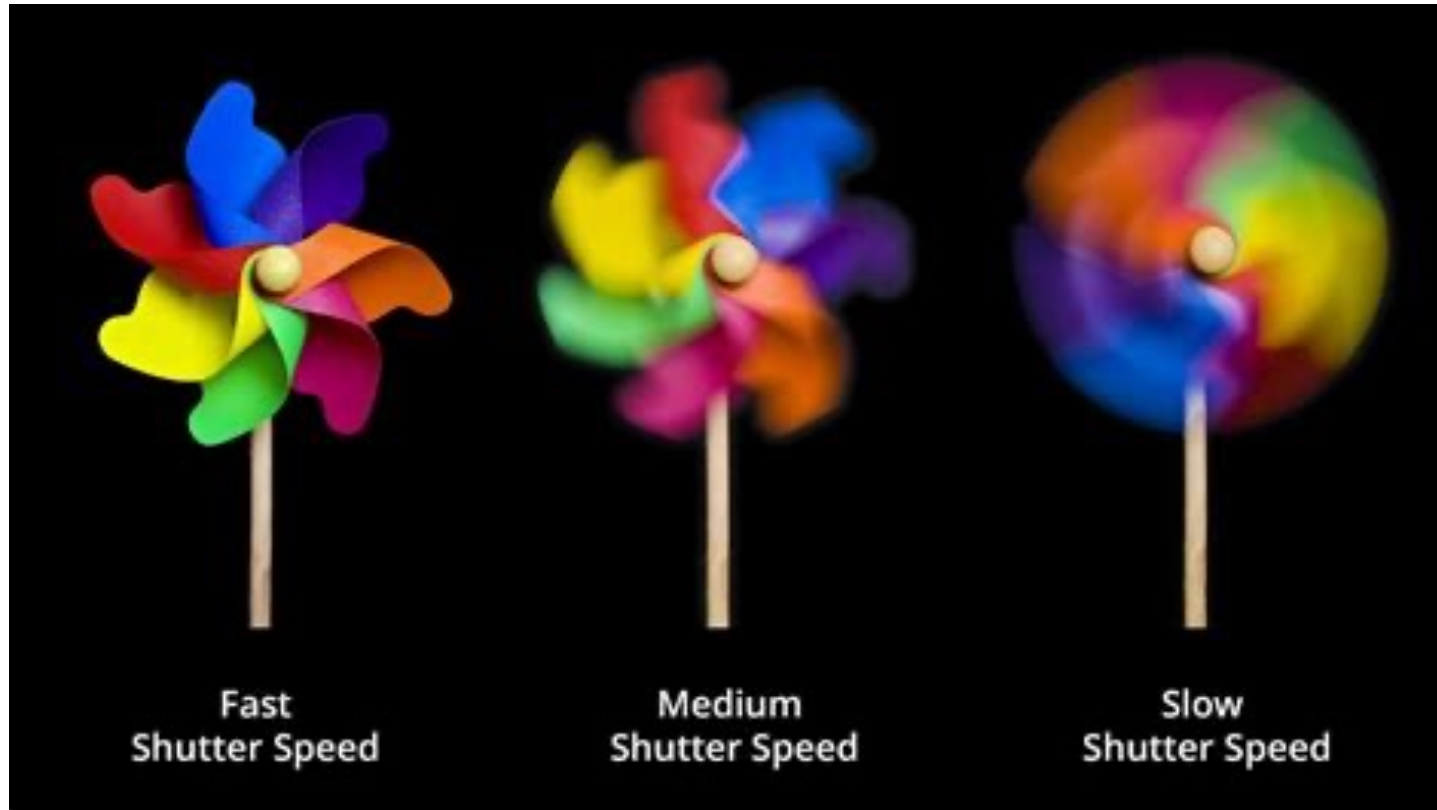
- There are three main ways for us to control how much light our camera's sensor captures
 - Shutter speed – how long we let light hit the sensor
 - Aperture – size of the hole we let light into the camera through
 - ISO – how sensitive your camera's sensor is to light
- These three controls are usually referred to as “The Exposure Triangle”
- Each control has a different effect on your final image



SHUTTER SPEED

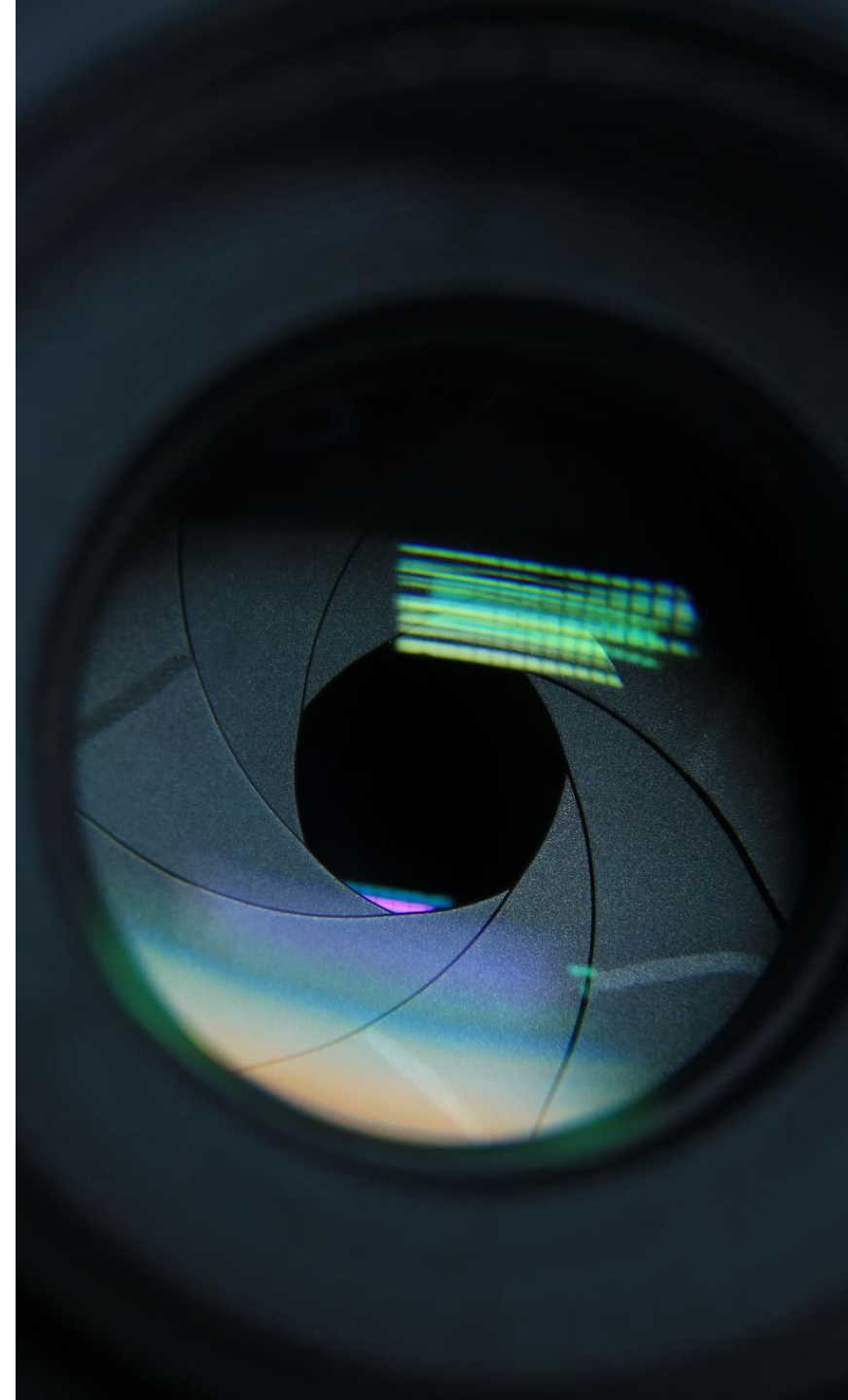
- Controls how long the shutter will stay open to expose your camera's sensor to light before closing again
- Also influences how moving objects appear in your image
- A faster shutter speed will allow you to keep moving objects sharp, but will allow less light to reach your sensor
- A slower shutter speed will cause anything moving in your scene to blur, but will allow more light to reach your sensor

SHUTTER SPEED EXAMPLES



APERTURE

- Controls the size of the hole in your lens that lets light through
 - Also influences how much of your image is in focus
 - A larger aperture will allow more light to reach your sensor, but will mean less of your image will be in focus
 - A smaller aperture will allow less light to reach your sensor, but will mean more of your image will be in focus
-



APERTURE EXAMPLES

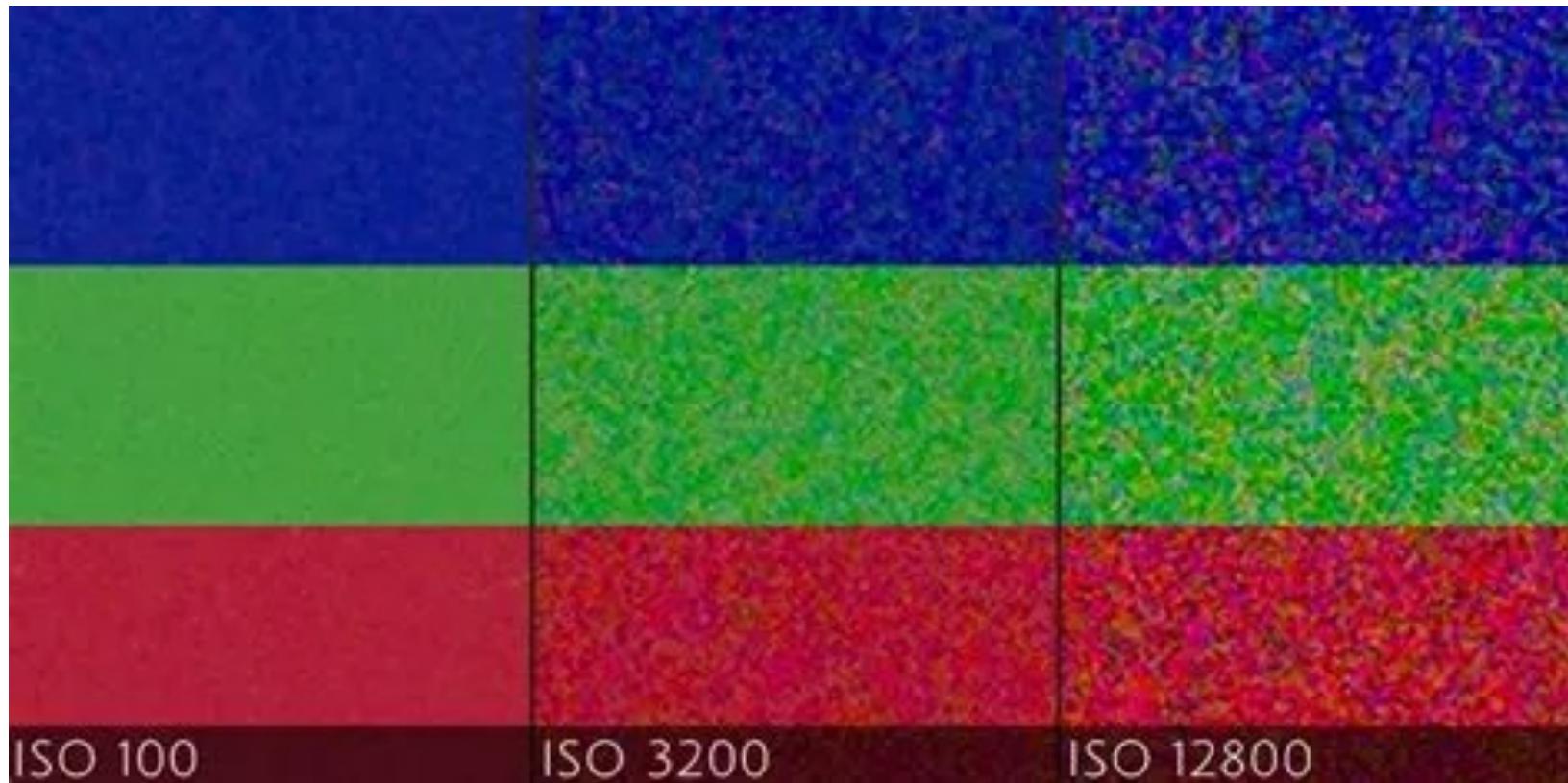




ISO

- Controls how sensitive your camera's sensor is to light
 - Also influences your final image quality by increasing or decreasing the amount of noise
 - A lower ISO will require more light to hit the sensor, but will have less noise
 - A higher ISO will require less light to hit the sensor, but will have more noise
-

ISO EXAMPLES



HOW DO I USE THESE IN THE FIELD?

- **Is capturing something moving in a specific way a priority in your image?** If so, focus on getting the right shutter speed, then use aperture and ISO to balance the exposure. **'Shutter Priority'** mode (either S or TV on your dial) on your camera will allow you to set the shutter speed and let the camera automatically adjust aperture and ISO.
 - **Is having a specific depth of field in focus a priority in your image?** If so, focus on setting the right aperture, then use shutter speed and ISO to balance the exposure. **'Aperture Priority'** mode (either A or AV on your dial) on your camera will allow you to set the aperture and let the camera automatically adjust the shutter speed and ISO.
 - **Do you need both a specific shutter speed and aperture to capture the scene?** If so, use **'Manual'** mode to set the required shutter speed and aperture and adjust the exposure using ISO or ND filters.
 - **Always use the lowest ISO possible with the other required settings to get the best image quality.**
-



QUESTIONS?

- If these are all new concepts, they might seem overwhelming at first. Don't be intimidated! Once you get the chance to sit down and experiment with the different settings it eventually becomes second nature!