

A Snapshot of the Camera

The Exposure Triangle

Overview

Exposure is the amount of light that reaches a camera's sensor, which affects an image's brightness.

ISO, Aperture, and Shutter Speed all affect exposure. Together, they form "The Exposure Triangle."

Aperture

Relevant Term(s)

Depth of field - how much of your image is in focus. For instance, a shallow depth of field may create a blurry background, while a deep depth of field brings more of the scene into focus

Description

The aperture refers to the size of the lens opening, and it's measured in f-stops.

A wide aperture (low f-stop, e.g., f/3.5) lets in more light and results in a shallow depth of field; this is good for portrait photography and close-ups.

A narrow aperture (high f-stop, e.g., f/ 22) results in a darker photo with a deep depth of field; this is good for landscape photography.

Shutter Speed

Relevant Term(s)

Motion blur - streaking or blurring of objects in motion. An easy way to see this is by waving your hand in front of your face

Description

The shutter speed refers to how long the camera shutter is open. In other words, it's the length of time your camera's sensor is exposed to light.

When the shutter speed is fast (e.g., 1/1000), the camera produces darker images. A quick shutter speed also reduces motion blur, which makes action shots clearer.

With a slow shutter speed (e.g., 1/10), motion blur is heightened, and images are brighter.

A good rule of thumb is to set your shutter speed to double your frame rate. For example, 24 frames per second should have 1/50th of a shutter speed. This will help you achieve a natural motion blur.

ISO

Relevant Term(s)

Noise - variation in color or brightness in an image, making it take on a pixelated effect

Description

The ISO determines your camera's sensitivity to light. A low ISO (e.g., 100) produces darker, better-quality images. A high ISO (e.g., 12800) brightens an image but introduces noise.

A good rule of thumb is to start with a low ISO and increase it only when necessary. Keep in mind that the ideal ISO values – those that maintain good quality pictures – vary depending on the type of camera.

THE EXPOSURE TRIANGLE

APERTURE

DEPTH OF FIELD →



F/3.5 F/22

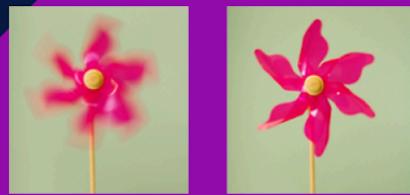
THE BIGGER THE NUMBER, THE DARKER AND DEEPER IT IS



SHUTTER SPEED

MOTION BLUR ←

THE BIGGER THE NUMBER, THE BRIGHTER AND BLURRIER IT IS

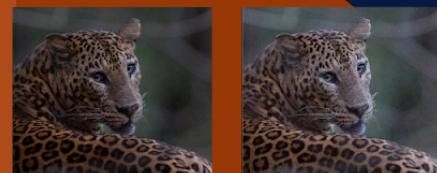


1/10 1/1000



ISO

NOISE →



ISO 400 ISO 1600

THE BIGGER THE NUMBER, THE BRIGHTER AND NOISIER IT IS

