

# SHUTTER SPEED

Refers to the amount of the time the camera's shutter speed is open. The slower the shutter speed (1/60 sec or below), the greater the risk for motion blur. The faster the shutter speed (1/500 or above), the better action is captured. Normally, you never shoot at slower than 1/60 sec unless you are using a tripod.

**1/60 SEC** - can show motion

**1/250 SEC** - freezes normal motion

**1/1000 SEC** - freezes fast action

**TIP** Never shoot at a shutter speed lower than the focal length of the lens you are using. Ex: With a 200mm lens, shoot no slower than 1/200 sec. With a 55mm lens, no slower than 1/60 sec.

# ISO

Refers to how sensitive the image sensor is to light. A high ISO means the sensor is more sensitive to light, so you can use higher shutter speeds and/or shoot in lower light. BUT doing this will introduce "noise" (grainy texture) to the picture.

**100 ISO** - needs bright light and results in very fine detail

**400 ISO** - needs average light and results in nice detail

**3200 ISO** - needs much less light but results in less detail

Every camera has a different ISO range. Your camera may only go to 800 and that's okay.

**TIP** Unless you have a reason to change it, keep your ISO on 400.

# APERTURE

Refers to the opening in the lens that allows the light in. It is measured in "f" numbers. A larger opening (smaller "f" number) allows more light in, a smaller opening (larger "f" number) allows less light in. An important effect of the aperture you choose is DEPTH OF FIELD (area in focus).

**f/2.8** - larger opening and shallow depth of field

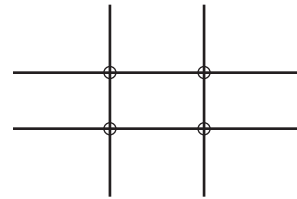
**f/5.6** - medium opening and average depth of field

**f/16** - small opening and excellent (deep) depth of field

**TIP** Think of your f-stop numbers like slats in a wooden fence. f/2.8 would allow at more 3 slats in focus. f/11 would allow at least 11 slats in focus.

# RULE OF THIRDS

Mentally divide the frame into a tic-tac-toe board. Put your center of interest in one of the four intersections.



**TIP** If your subject is vertical, hold your camera vertically to cut down on wasted background.

# SIMPLICITY

Isolate your subject as much as possible. Be aware of distracting backgrounds and focus in on the one compelling reason for the photo; this becomes your center.

# CAMERA ANGLE

Walk around your subject if possible. Shoot from above or below, from the side or with objects in the foreground. Be creative!

**TIP** The most flattering photos of people are those where they are looking slightly up at the camera.

# RECIPROCITY

Is how the aperture (f/stop) and shutter speed work together by adjusting either or both the f/stop and shutter speed (assuming the ISO is set already), you can achieve equivalent exposures.

Each of the following options lets in the same amount of light, yet results in a different photographic result.

**f/4 @ 1/500 = f/2.8 @ 1/1000**

**f/4 @ 1/500 = f/5.6 @ 1/250**

**f/4 @ 1/500 = f/8 @ 1/125**

**f/4 @ 1/500 = f/11 @ 1/60**

**TIP** f/stop controls depth of field. Shutter speed controls object motion.

# WHITE BALANCE

All light has a temperature. Every light source favors a color temperature. Your eye, which is attached to your brain, automatically compensates and makes any white object look white. The camera can't do this and captures the accurate color of the scene.

Adjusting the white balance allows your camera to compensate for different temperatures/colors.

# PATTERN & REPETITION

Patterns draw the viewer into the photo; put a break in the pattern to make the photo interesting. Look for patterns everywhere: stairs, lanes, rows, windows, shelves of books, etc.

# LEADING LINES

Use lines (roads, rivers, fences, sunlight in early morning) to lead the viewer's eyes into the frame. The S-shaped curve is the most pleasing line.

**TIP** Just as a line can lead the eye INTO the frame, it can also lead the eye OUT of the frame, so be careful where you place it.

# LIGHT

Always be aware of your light source. There are four types of natural light:

**1. DIRECT SUN** This can create harsh shadows. The shadows are the worst from 10 am to 2 pm when the sun is directly overhead.

**2. SHADE** Direct sun is blocked from your subject. Look for shade near the edge of direct sunlight and choose a spot where the background is the same as or darker than the subject.

**TIP** Since your light meter reads the entire scene to determine correct exposure, having a background that is significantly lighter than your subject often results in an underexposed photo.

**3. BACKLIGHTING** This occurs when the sun is directly behind the subject. It can cause sun flares and deep shadows on the subject. It can also result in beautiful halo effects. Be sure to expose for the subject, not the entire scene (manual mode is ideal for this type of lighting condition).

**4. DIFFUSED LIGHT** This occurs on hazy or cloudy days. Sunrise and sunset are the best times for diffused light, with sunset tones being warmer. The sun can still cast shadows on cloudy days, so be aware of its location.

**TIP** The use of a reflector in front of your subject in backlit situations allows more light to fall on your subject while still taking advantage of the natural light.

# FRAMING

Use items in the foreground to give the illusion of three dimensions. When possible, make sure the framed item(s) are slightly out of focus, while the subject is in sharp focus. Windows, doors, trees, branches and anything in the foreground can work.

# MERGERS

Position your subject so that the items (telephone poles, balloons, trees, etc.) do not appear to grow out of his/her body.

**TIP** Your eye adjusts to the subject and can ignore the background; your camera records what is in the frame, so look behind your subject before shooting.