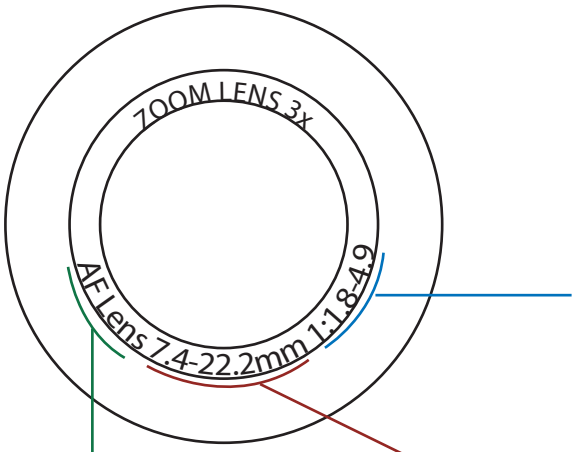
Anatomy of a Lens:



range in aperture size. f 1.8 is very large for a consumer digital camera. For most photographers, f 2.8 or smaller is fine.

camera is capable of auto-focusing, not just manual focusing.

focal length range of the lens. Note that maximum focal length is 3x that of the minimum focal length (hence 3x zoom lens written at the top.

Aperture - the opening that allows light to pass through the lens. Apertures are usually expressed in "f-stops", with an inverse relationship between the f-stop value and the aperture size. **A smaller f-stop means a larger aperture**. The larger an aperture, the more light hits the camera's CCD (twice as much light per full f-stop increase, to be exact). Aperture changes allow photographers to preserve the ambience of a scene without having to resort to artificial lighting.

Aperture also controls "depth of field" in a photo (distance between the closest and further objects in focus). The smaller the f value, the shorter the depth of field (So f2 has a shallower depth of field than f11).

***When to adjust aperture*:** When taking portrait shots and you want your subject to be in focus, but the background blurry (large aperture)

Shutter - How long the shutter is open, which controls the amount of time that light can hit the CCD. Shutter speeds are expressed in fractions of a second. The slower the shutter speed the more blurry moving objects (and even some you might not realize are moving!) become. The faster the shutter speed, the better the camera is able to capture moving subjects. Faster shutter speeds (1/250 or less) can even eliminate the effect shaky hands can have on a photo.

***When to adjust shutter speed*:** When taking photos of moving objects, lower it to capture "trails" of motion, and raise it to capture a fast moving subject (athletes, cars, animals, kids).

ISO - (International Standards Organization) This is a term borrowed from film photography, where the ISO has a set of standards for aspects of photography, one of which rates film speed. You can buy film a variety of speeds (ISO 100, 200 etc.) The lower the number, the less sensitive the film is to light. ISO 800 is far more light-sensitive than ISO 1000. Digital cameras use the concept similarly- so when you increase the ISO number you increase the camera's light sensitvity. The pixels receiving the electronic signal that makes up the image are made more sensitive (This process is called gain).

***When to adjust ISO*:** When the shutter speed needs to be fast but you don't want the photo to be underexposed. Action shots and night shots need higher ISO.

Flash - Very simply, the light built into your camera (although you can get external units) that illuminates a scene. It's a great assett in low-lighting, but it doesn't always help your photo! A good rule of thumb is that if someone is more than a car-length away from you, the built-in Flash probably won't be effective. On the other side, shooting too close to subjects can wash them out. When around reflective materials, try shooting them at an angle.

***When to adjust flash*:** When a subject is backlit or has some dark shadows (Fill Flash or "always on"), when you want to capture ambient lighting (turn it off), when a person or animal is going to be looking directly into your camera (red-eye filter- or try to get them to look slightly away), when photographing reflective items (turn it off, adjust ISO)