

Focal Length: the magnification of a particular image (200mm is more 'zoomed in' than 50 mm). Zoom lenses go through a variety of focal lengths. Longer lenses (greater focal length) = more magnification.

Prime Lenses: do not change their focal lengths and cannot zoom; capable of lower F-numbers

Zoom Power: When factories say 30x, they're merely saying that the longest focal length of the lens is thirty times the shortest.

50mm: On a typical film SLR basically means that when you are looking through the camera/lens, things appear about as they would viewed by the eye

Wide angle lenses are less than 50 mm, and allow you to see more in your photograph

Telephoto lenses are greater than 50 mm, meaning they have long focal lengths.

Digital Zoom: bad. Don't use; disable if possible. Drastically decreases image quality.

Tilt-Shift Lenses: Lenses that can correct for some wide-angle distortion; able to move the focal plane slightly. This is accomplished by offsetting the different internal parts of the lens slightly. Also allow you to literally tilt the angle of the lens, evening out the distribution of recorded light. They are also used to alter the focus plane (to extend or contract the depth of field).

Fast lens: supports F-numbers that are low

Circle of Confusion: Basic: a value used to describe the point past which background blur begins to occur; roughly correlates to pixel size.
More specific: A point of light is said to be in focus when a lens causes the point to be smaller than the circle of confusion. A "true" circle of confusion will take into account a variety of things like the capability of our eyes to resolve detail (the "resolution" of our eyes, so to speak), the final size of the photograph and its print-resolution. In digital photography, though, it's usually sufficient to make the circle of confusion related to the size of a pixel on a sensor, because that will define how "in focus" the image will appear to be at full size.

Light Diffraction Artifacts: Occur when you increase F-number too much, which is one reason why point-and-shoot cameras don't often exceed F8. They usually appear as a softening of the image, as if it were slightly out of focus.

Bokeh: Bokeh is just the appearance of the out-of-focus areas of an image. Bokeh can be "good" (for nice, smooth out of focus areas) or bad (for poor out-of-focus areas like the one from the telescope), or anything in between. It's a fairly subjective term. Usually referring to points of light that manifests as a geometric shape (uniform circles preferred) that show up in out-of-focus areas of a photo.

Hyperfocal Distance: As you increase F number, you increase depth of field. Hyperfocal distance means: everything from 1/2 your focus distance to infinity will be in focus.

Image stabilization: feature of cameras that reduces camera-shake; cannot improve motion blur. Two types: lens corrected (preferred, more expensive), sensor corrected.

Filters: accessories that somehow alter the light entering the lens you put over a lens, like the following:

Neutral density filter: 'sunglasses' for your camera, but 'neutral' in that it doesn't affect the color. ND4 means a Neutral Density Filter that makes a given photo four times (two stops) darker.

Graduated NDFs: allow you to make a part of the photo darker selectively.

Graduated color filters: selectively bring out certain colors in photos; can be replicated fully in software.

Polarizer: increases contrast and color vibrance. A circular polarizer reverses the polarity of incoming light.