

Lighting

Direction – The light source, whether above, to the side, or behind the subject determines shadows, and the overall effect.

Backlighting – Can create interesting silhouettes halos, and glowing effects.

Bright/Dark Background - When shooting with a subject on a very brightly-lit background, take meter reading on darker object and use manual mode or subject will be under exposed. Expose for the shadows. You will need to overexpose by 1.5-2 stops. If subject is very dark then you will need to under expose.

Sunny f/16 Rule – Set aperture at f/16 and shutter speed at the film speed. Good for water and sky. May be underexposed for grass, trees, etc.

Time-of-Day (TOD) – Mid day is worst, causing the most unpleasant facial shadows. Subjects tend to be flat without dimension. It also creates washed out photos. Early morning and late afternoon are best since the light is diffused, reddish, and coming from the side rather than overhead. Revisit places when the lighting will be right.

Flash – Bounce flash to avoid shadows behind subject and a general washed out look. Use fill flash during daylight to fill shadows. Pop a strobe during long night exposures to light focal point.

Bracketing – Take two more photos at +1 and –1 stops to insure getting good shot.

Pocket Guide to Photography John C. Kelly

Portraits

Totally candid shots rarely work. Compose, don't pose. Position your subject in a natural or interesting manner. Avoid the mug shot. Turn head at an angle to body. Get closer for more interest. Avoid facial shadows by taking off hats, using fill flashes, and using reflectors. Avoid the mid-day sun. Watch for speckled light on faces. When shooting the whole body, avoid the pole look. Put the subject in action or repose other than standing like a post. Pay attention to the background, especially polls and trees coming out of people's heads. Watch for flares from shiny surfaces behind the subject. Save interesting portraits in magazines and attempt to reproduce them.

Groups

Avoid the **lean**, which occurs when a group feels the need to lean toward the center of the photo to insure that they are included. Avoid the **fence-look** with everyone lined up neatly in a row. Arrange the people in a variety of ways, some standing, sitting, leaning kneeling, etc. Do something interesting with the arms and hands. Hold a menu, tour book, or newspaper. Avoid the **claw**, which is a hand extending over the shoulder of another person.

Experiment and record. Keep a photo journal.

Shutter Speed

Shutter speed controls the length of time the shutter is open, or the exposure time. A longer shutter opening time lets in more light and sees the subject for a longer period of time. A shorter time lets in less light and has the added ability to freeze motion. A shorter time requires a brighter day since less light is entering the camera. Shutter speeds are usually measured in fractions of a second. On most cameras, only the fractional portion of the shutter speed is shown, for example, 30 means 1/30th of a second. On the Canon EOS shutter speeds of one second or longer are shown as the number followed by two tick marks (one second = 1"). Shutter speed/exposure time affects the following items:

- Amount of light entering the camera
- Ability to freeze motion
- Ability to hold camera steady

Tripod

Always have a tripod with you, if only a table one, to steady the camera. Use the self-timer to take personal portraits and to avoid camera shake.

Composition

Rule of Thirds– Avoid putting focal point in center of photo. Shift left/right, up/down to create more interest.

Framing – Look for natural objects to frame your focal point: tree branches, windows, arches, etc.

Leading Lines – Use leading lines like rivers, roads, and fences to guide the eye across the composition.

Single Theme – Avoid too many subjects or focal points in your photo, give it a focus.

Background Clutter – Avoid it, remove it, or blur it. Use DOF to blur background (Aperture priority or manually set high f-stop).

Panning – Move camera with moving subject to create sense of motion by excessively blurring background.

Horizontal or Vertical Composition –

Consider the shape and orientation of the subject.

The ultimate use of the photo also impacts the decision, for example, magazine covers are vertical and computer screens are horizontal.

Postcards–Attempt to replicate postcards and travel book photos when you are in a new city or place. Pay attention to light and composition.

Sunsets/Rises– Use telephoto to get big solar disk. Meter about 45° away from the direct sun. Objects silhouetted in the front can be interesting.

Patterns– Look for patterns to add interest.

Lenses

Lenses are measured in terms of focal length in millimeters (mm). Telephoto lenses have long focal lengths (100+ mm). Wide-angle lenses have short focal lengths (<50mm). The focal length determines the amount of zooming (magnification) and the field of View (FOV). A 28mm lens sees about 75°, which is roughly equivalent to what you see with both eyes. The 50mm lens has a FOV of 45°, about the same as one eye and provides good natural perspective for portraits. It is, however, somewhat short, forcing you to get uncomfortably close to your subjects, so an 80mm might be better for portraits. A fish-eye lens has a FOV of 180°. A major disadvantage of longer lenses is the weight and increased size they add to the camera. Another disadvantage of long lenses is the additional light needed, requiring large apertures and/or tripods. A 28-200mm f/2.8 is a very versatile lens. Macro lenses allow you to focus very close, ideally an object would be rendered at 1/2 or better of real size.

Filters

Polarizer – Enriches, saturates colors, darkens sky

81A Pale Amber – Warming effect for mid day.

Graduated Neutral-Density – Compensates for half of photo that is bright sky or water.

Starburst – Creates sparkles for light.

Contrast – Enhances black and white photos.

Aperture Opening

Aperture is the size of the diaphragm opening, which lets light into the camera. A larger opening lets in more light. The size of the opening is measured in units called f-stops. These are standard on all cameras. Each increment of f-stop represents a doubling or halving of the adjacent f-stop number. Larger f-stop numbers represent smaller openings.

Depth of Field (DOF)

DOF is the range of composition from front to back that is in focus. A greater DOF means more things are in focus. Small apertures (large f-stops) have greater DOF. A long depth of field is used in landscapes to get every-thing in focus. A short depth of field is used in portraits to blur a background.

f/1.4 (large opening, short DOF)

f/32 (small opening, long DOF)

DOF is also affected by **distance to subject** and **focal length** of lens. The closer you are, the shorter the DOF. DOF extends about 1/3 in front of your focus point and 2/3 behind. Long lenses (200mm+) have shallow DOF. Short lenses (35-50mm) have greater DOF.

Aperture/Shutter Combination

It takes a given amount of light to correctly expose the film. This light can be generated by various combinations of shutter speed and aperture opening. A small aperture/long shutter time or a large aperture/short shutter time can allow the same light with very different effects on motion and DOF.

- Reduce shutter speed to blur motion.
- Increase shutter speed to freeze motion.
- Increase shutter speed to steady camera.
- Reduce aperture (large f-stop) for greater DOF.

This amount of light needed also depends on the film speed. See separate discussion.

Tv (Time priority for motion control) allows you to dial a desired shutter speed, and the camera will automatically adjust the aperture to allow the needed light. If the aperture number is blinking, there is not enough light. You can ignore this in manual mode to achieve your desired result. Notice that when you increase the increase the shutter time, the f-stop number will also increase, indicting a smaller opening.

Av (Aperture priority for DOF control) allows you to dial a desired aperture, and the camera will automatically adjust the shutter speed to allow the needed light.

Film

Speed (Fast vs. Slow)

ISO – International Standards Association

ASA – American Standards Association

Ratings of how sensitive film is to light.

Speed	ISO	Sensitivity	Clarity	Use In
Fast	400+	More	Low	Low Light
Slow	<200	Less	High	Bright Light

Most Common Choice

100 for SLR, 400 for Point-and-Shoot

Print vs. Slide – Slide film is also called transparency or positive. The film names always end in “**chrome**.” Slides give better clarity/resolution and much better color saturation. They are the standard for magazines and quality print.

Type	Negative	Image	Colors
Slide	Transparency	Best	Richer
Print	Negative	OK	OK

Print Films

Kodak 100 Gold
Kodak Max

Fuji 200
Fuji Reala 100

Slide Films

Kodachrome 64
Kodak Elite Chrome 100
Fujichrom Astia 100
Fujichrome Sensia 100
Fujichrome Provia 100F