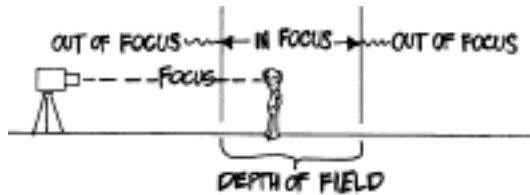


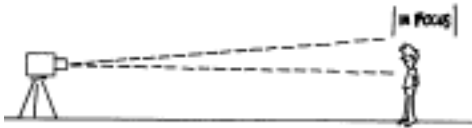
# DEPTH OF FIELD

Depth of field is simply the area in front of your camera where everything looks sharp and in focus. For example, if you're focused on somebody standing 10 feet in front of the camera, your depth of field might be from 8 feet to 14 feet. That means objects falling within that area will be acceptably-sharp and in focus; objects falling outside the area will be soft and out of focus.

## DEPTH OF FIELD

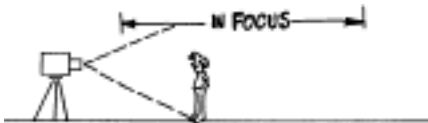


There are several important things to know about depth of field. First is this: Your depth of field decreases as you increase your focal Length. In other words, with a telephoto lens you have a much shallower area in focus than with a normal lens. That's why with a zoom lens, you zoom in to telephoto for focusing--it makes it easier to see the exact point where your subject is sharpest.



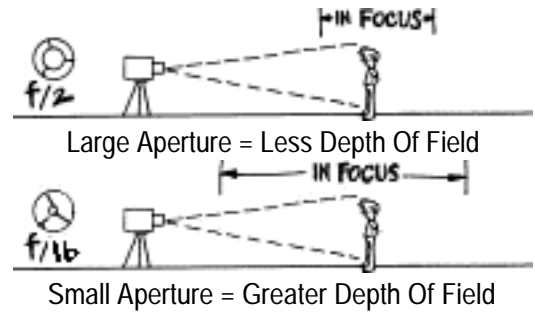
Telephoto = Less depth of field

The next thing to know is: Your depth of field increases as you decrease your focal length. With a wide angle lens, you have a much deeper area in focus than with a normal lens. This is why, when you're shooting in uncontrolled, situations with a zoom lens and don't have time to zoom in and check focus, you're better off setting an approximate focus and staying at wide angle. This will give you your best chance of keeping everything in acceptable focus.



Wide Angle = Greater depth of field

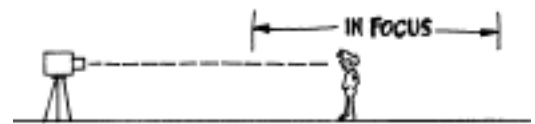
Another thing about depth of field: Your depth of field increases as you close down your aperture. At f/16 you have more depth of field than at f/2. When you make your aperture smaller, it's essentially the same as squinting your eyes to see something sharper in the distance. This is why on film cameras we open the lens to it's widest aperture to focus: it makes it easier to see the exact focus point.



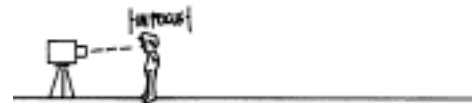
Large Aperture = Less Depth Of Field

Small Aperture = Greater Depth Of Field

Next: Your depth of field increases as your subject gets farther from the camera. The farther away the subject, the more depth of field; the closer the subject, the less depth of field.

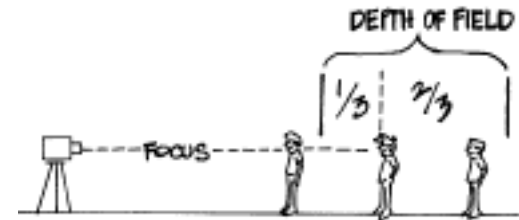


Disatant Subject = Greater Depth of Field

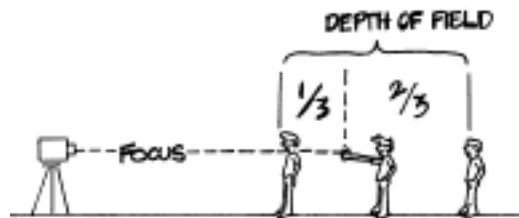


Close Subject = Less Depth of Field

Finally: You always have less depth of field in front of your point of focus than behind it. This is especially noticeable at distances of 25 feet or less. At these near distances, you can usually figure on your depth of field extending approximately 1/3 in front and 2/3 behind your point of focus. So, if you're working with a shallow depth of field and you want to take maximum advantage of it, focus on a point 1/3 of the way into the area you want in focus.



Focusing in the middle leasves the front man out of focus.



Focusing on ta point 1/3 of the way in puts everybody in focus.

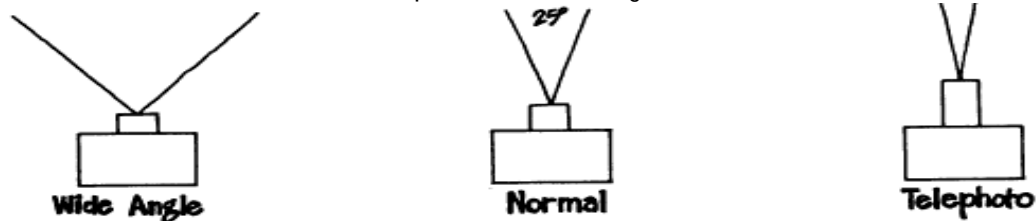
# LENSES

The human eye is a wonder. With a single lens, it can concentrate on a tiny detail of a scene, excluding all else; and in the next instant take in a whole panorama. Unfortunately, the camera is not so versatile. It requires many different lenses to even approximate the performance of the eye.

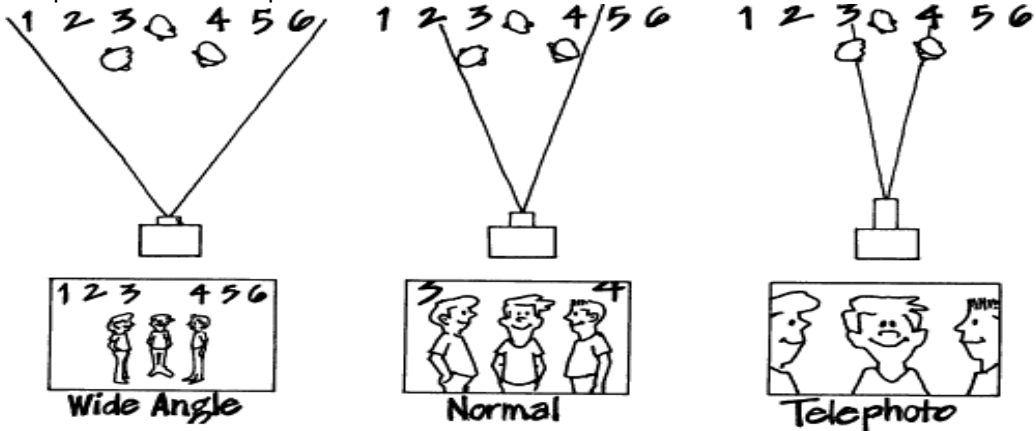
Every camera has one lens which is considered the "normal" lens. This is the lens which comes closest to reproducing objects with the same perspective as the human eye; that is, objects appear to be the same size, proportion and distance as if we weren't looking through the camera at all, but seeing them with the naked eye. The normal lens usually includes a horizontal area of about 25°.

The other lenses on the camera are classified "wide angle" if they include a larger area than the normal lens's 25 degrees, and "telephoto" if they include a smaller area.

Wide angle lenses are shorter than normal lenses; telephoto lenses are longer.



Wide angle and telephoto lenses have special characteristics which can be summarized as follows:



\* Includes a larger area than the normal lens at the same distance--good for cramped quarters where you can't move the camera back any farther.

\* Subject is smaller in the frame than with the normal lens at the same distance.

\* Exaggerates depth--makes elements appear farther apart than normal.

\* Because of exaggerated distances, movements toward and away from the camera seem faster than normal. Move 6 inches toward the camera and it looks like you're moving 18 inches.

\* Because of smaller image size, camera jiggles are less noticeable. Good for handholding the camera.

\* Includes a smaller area than the normal lens at the same distance--good for distant subjects where you can't move the camera closer.

\* Subject is larger in the frame than with the normal lens at the same distance.

\* Compresses depth--makes elements appear closer together than normal.

\* Because of compressed distances, movements toward and away from the camera seem slower than normal. Move 18 inches toward the camera and it looks like you're moving 6 inches.

\* Because of larger image size, camera jiggles are more noticeable. Bad for handholding the camera.

## ZOOM LENSES

Most cameras use a zoom lens, which combines a wide range of focal lengths in a single lens. By moving a single control, you can switch from wide angle to normal to telephoto, or anywhere in between, without changing lenses. This makes it a lot easier and quicker to compose your shots. If you want a little wider frame, zoom back to wide angle; for a closer shot, zoom in to telephoto.

There's a special way to focus a zoom lens. First, zoom all the way in on your subject, with the lens in maximum telephoto position. Focus the lens, even if all you see is an eyeball. Then zoom out wide and find your final framing. Your subject will remain sharp and in focus at any zoom setting, as long as neither the camera or the subject changes position.