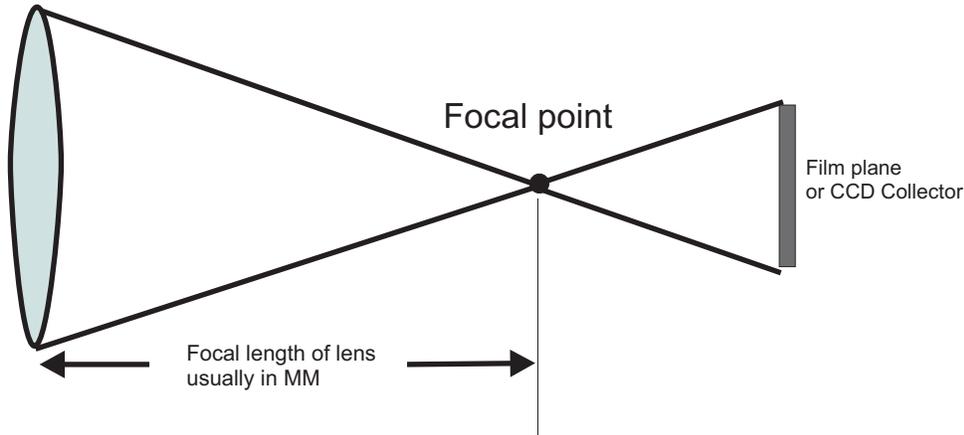
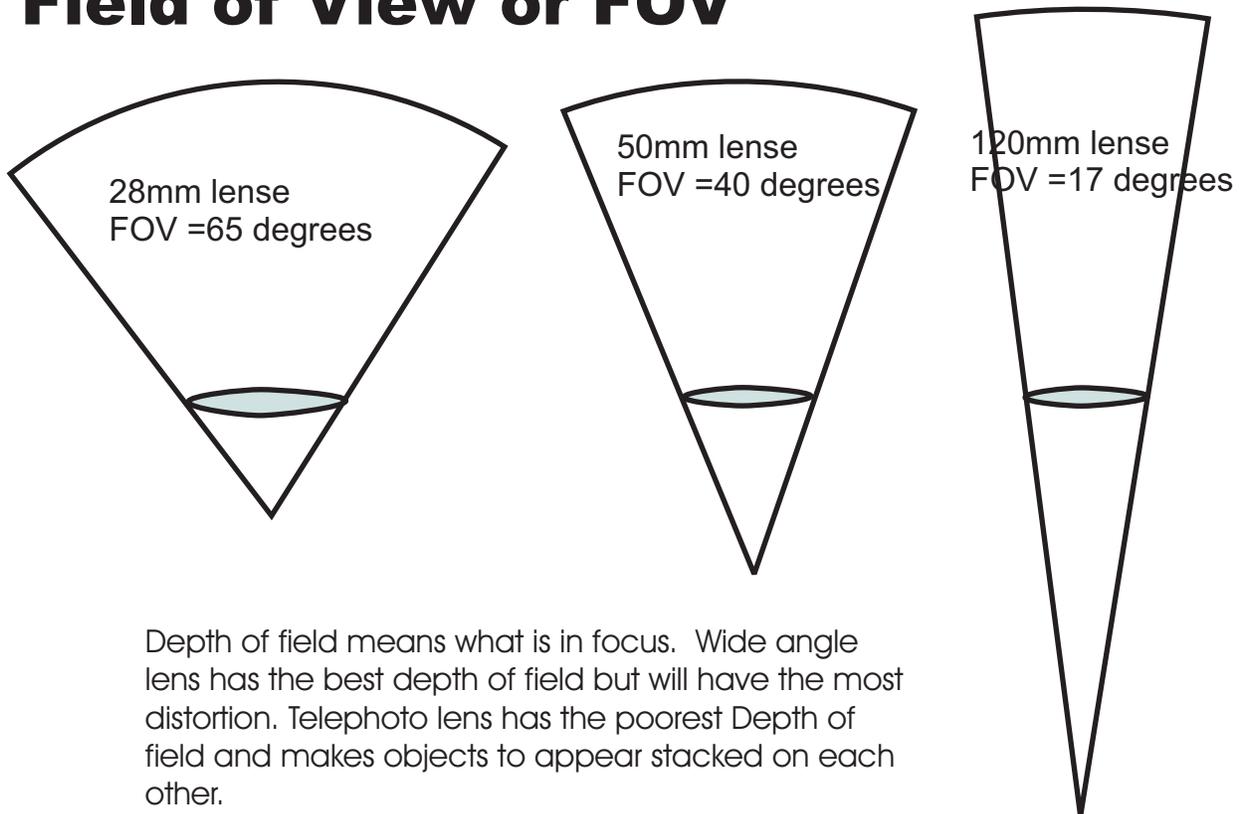


Focal length of Lens



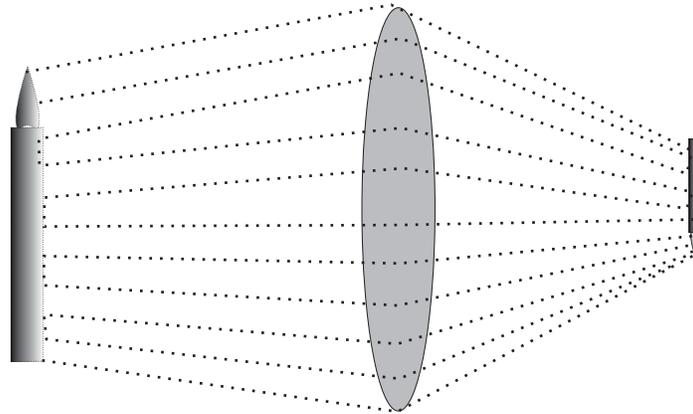
The film plane or collector plate size determines what is the normal lens, ie 35mm film the normal lens is 50mm, wide angle lens 40mm and smaller and the telephoto is 60mm and larger.

Field of View or FOV



Depth of field means what is in focus. Wide angle lens has the best depth of field but will have the most distortion. Telephoto lens has the poorest Depth of field and makes objects to appear stacked on each other.

Lens:



A Camera is made of three parts: A recording device either film or digital back, A light tight box to hold the recording device, and a optical port called a lens.

The lens is most important in that it directs the light onto the recording device. Photography images are nothing more than light that has been bent back to the recording device. The candle above emits light in all directions, the lens collects these wave and bends them back toward the collector. How the lens does this is that light travels faster though air than glass. When the light enters the glass it slows down and the curve of the glass bends the light back toward the collector. The light that has the farthest to go and hits the glass at the sharpest angle is bent the most. Another function of the lens is to focus the light. Light hitting a sharp angle will come out of the glass slightly more spread out. So by moving the lens forward or backwards (adjusting the

focus) you control the conversion of the waves to brings the image into focus.

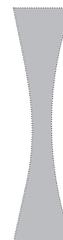
The curve of the lens will determine how much of the focal plane is captured. A wide angle lens has more of a curve to it. The surface of the lens faces more of the focal plane, causing it to gather light from a broader area. A Telephoto lens is a lot flatter and it captures less of the focal plane.

The lens above is a simple convex lens, but a modern camera has as many as 25 lens fitted together to direct the light. The number of lens are called the elements of the lens. If you point a camera at the sun and take a picture some times you will get flares of light that you can count how many elements the lens has. Remember the start of TV series Kung Fu. The camera was pointed at the light and there was about 25 lens flares.

Reference: [Http:// www.cameras.about.com](http://www.cameras.about.com)



Convex lens



Concave Lens