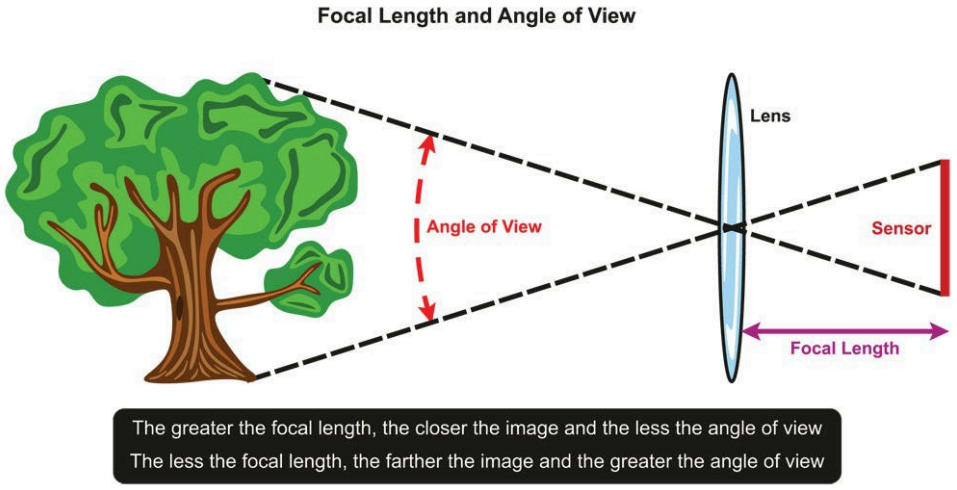
5 Basic Types of Camera Lenses

There are two basic categories of camera lenses:

A. Prime lenses. Primes have a fixed focal length, making them faster and sharper. While prime lenses are less flexible due to the fixed focal length, they are also fast and lightweight, making them easy to travel with

B. Zoom lenses. Zooms use a series of lenses to allow different focal lengths from a single lens, making them more flexible but not as fast. They contain more glass, which aids in their flexibility, but they also tend to be bigger and heavier than prime lenses.

What does Focal Length mean?



Focal length is the distance *(measured in millimeters)* between the point of convergence of your lens and the sensor or film recording the image.

Lens focal length tells us the *angle of view* (how much of the scene will be captured) and the magnification (how large individual elements will be).

The longer the focal length, the narrower the angle of view and the higher the magnification.

Within both prime and zoom types of lenses, there are a variety of lenses, all with different focal lengths. Here are the 5 basic types of lenses:

1. Macro Lenses
   This type of camera lens is used to create very close-up, macro photographs. They have a unique design that allows them to produce sharp images at extremely close range. These lenses are great for nature photography, enabling you to capture an enormous amount of detail in one image.

2. Telephoto Lenses
   Telephoto lenses are a large type of zoom lens with multiple focal points. These types of lenses are great for isolating a subject that is far away. However, such great magnification comes at the price of a narrower field of view. Many sports photographers use telephoto lenses to provide a sense of intimacy with the subjects on the field (the players) while standing on the sidelines or in the bleachers.

3. Wide Angle Lenses
   Wide angle lenses are ideal for fitting a large area into your frame. This is especially useful for landscape photography or street photography. With wide angle lenses, almost everything is in focus, unless your subject is very close to the lens.

4. Standard Lenses
   Standard lenses can be used for a variety of different types of photography. Their focal lengths fall somewhere in the middle, usually between 35mm and 85mm. A zoom lens within this range will have a small enough focal length at the bottom end to take a wider angle, full-frame photo, and a large enough focal length at the top end to zoom in on subjects.

5. Specialty Lenses
   Finally, there are some more specialized camera lenses that can impart a unique look and feel to your photographs. There are several types of specialty camera lenses, but a few of the most prominent examples are:

   a. Fisheye lens. A fisheye lens is an ultra-wide-angle lens that can take in a full 180 degree radius around it. Fisheye lenses are so named because they distort an image's field of view, making even a room in a house look like a bubble.
   b. Tilt shift lens. A tilt shift lens distorts perspective, making things look smaller than they really are—almost as if they are toys.
   c. Infrared lens. These lenses play with light rather than perspective, filtering out all light waves except infrared for a unique visual effect.