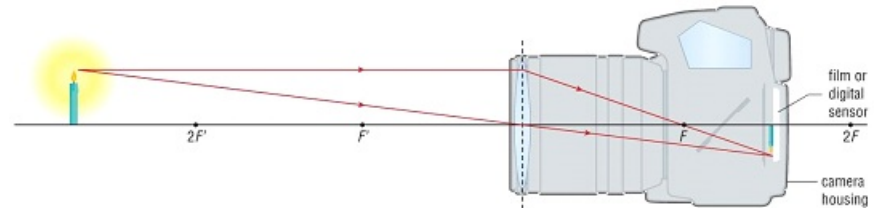


INSTRUCTIONS:

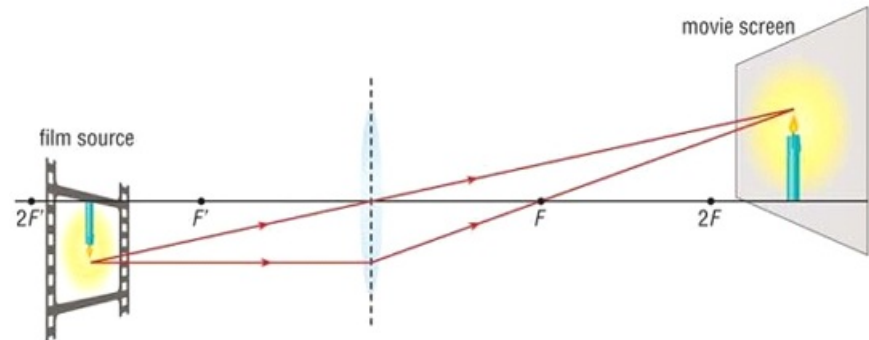
Complete the following statements using the words given below.

- | | | | |
|------------|-------------------|------------------------|----------------|
| • $2F'$ | • focusing | • Moon | • smaller |
| • camera | • image | • movie projector | • splinter |
| • converge | • inside | • object | • two |
| • eyepiece | • inverted | • objective | • unaided |
| • F' | • larger | • read | • upright |
| • film | • magnifying lens | • real (X2) | • upside down |
| • focus | • microscope | • refracting telescope | • virtual (X2) |

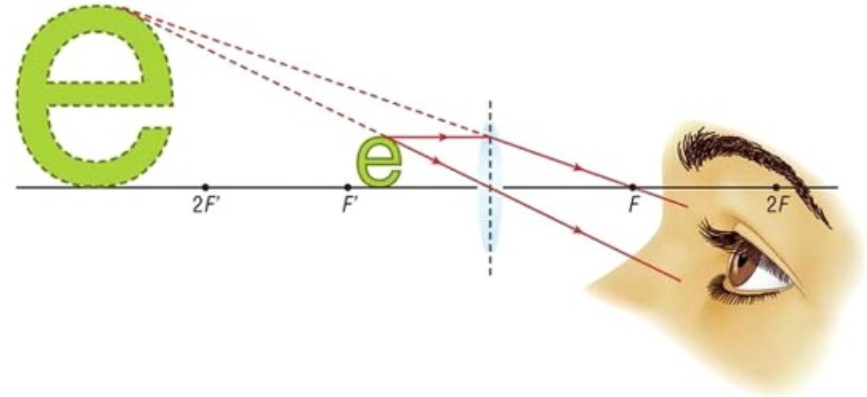
A _____ uses a converging lens. When the object being photographed is farther from the lens than _____, the camera produces a real image that is _____ than the object and _____ (i.e. inverted). This image is then recorded on film or a digital sensor (see diagram). " _____ " is when the lens moves in or out until the refracted light rays _____ to form a sharp image.



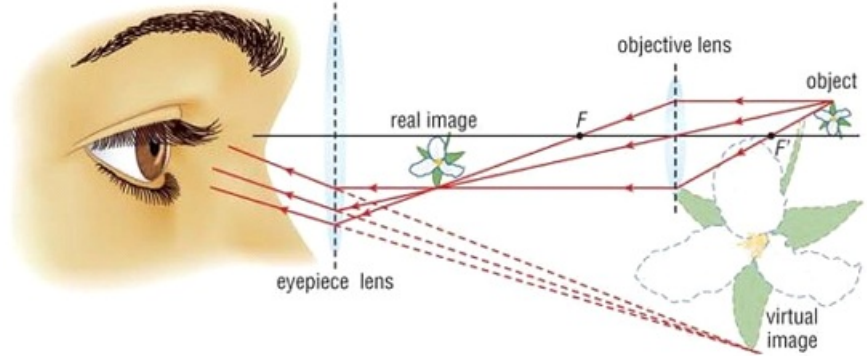
A _____ is, in a sense, the opposite of a camera. A projector takes a small object (i.e. the _____) and projects a large, _____, real image on a screen. Because the image is larger than the object, the film must be located between _____ and $2F'$. Also, because the _____ is upside down, the film must be loaded into the projector upside down so what we see is _____.



A _____ is a converging lens. To produce a clear image an object is placed between the _____ and the lens. This produces a _____, upright, virtual image. A magnifying lens allows us to see objects in more detail than with _____ eyes. For example, you might use a magnifying lens to _____ small print in a book, or to help remove a tiny _____ from your skin.



A _____ is an arrangement of _____ converging lenses. The lens closest to the object (i.e. the _____ lens) produces a _____ image of the object. We do not see this image because it is formed _____ the body tube of the microscope. The lens we look in (i.e. the _____ lens) then produces a larger, inverted _____ image of this real image. It is this virtual image that we see when we look into the eyepiece of a microscope.



A _____ helps us to see objects that are very far away such as the _____. It operates on the same principle as a microscope – except the _____ is much farther away. Like a microscope, though, two converging lenses produce a _____ image inside the body of the telescope (see diagram) that we do not see and a larger, _____ image that we do see.

