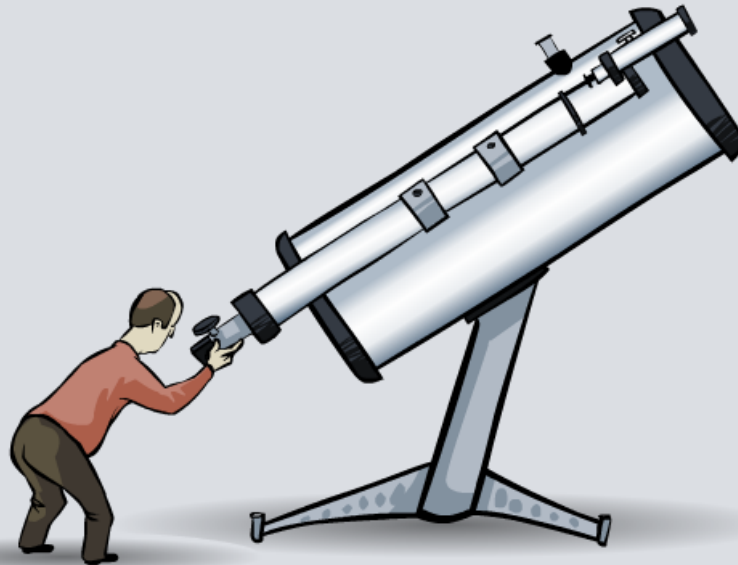
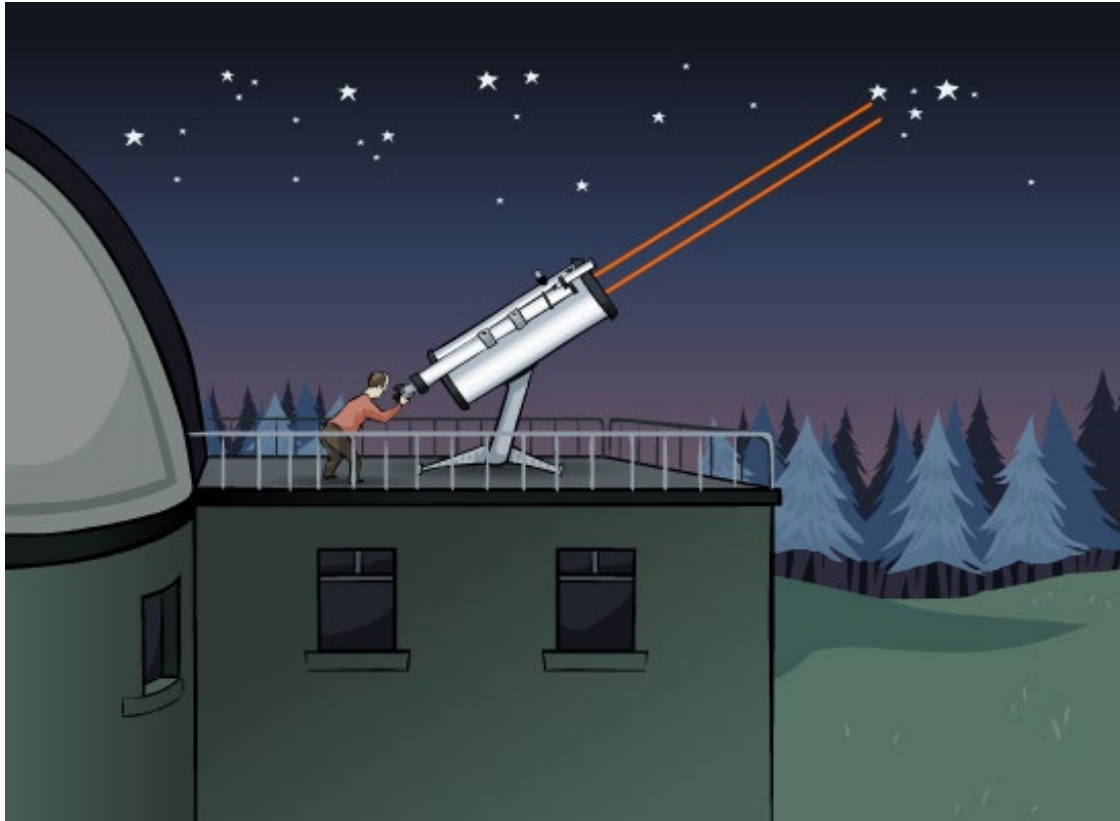


Telescopes



Stars emit light in all directions. Only a tiny fraction will travel through space towards Earth. The more distant the star, the smaller the fraction of light that reaches us.

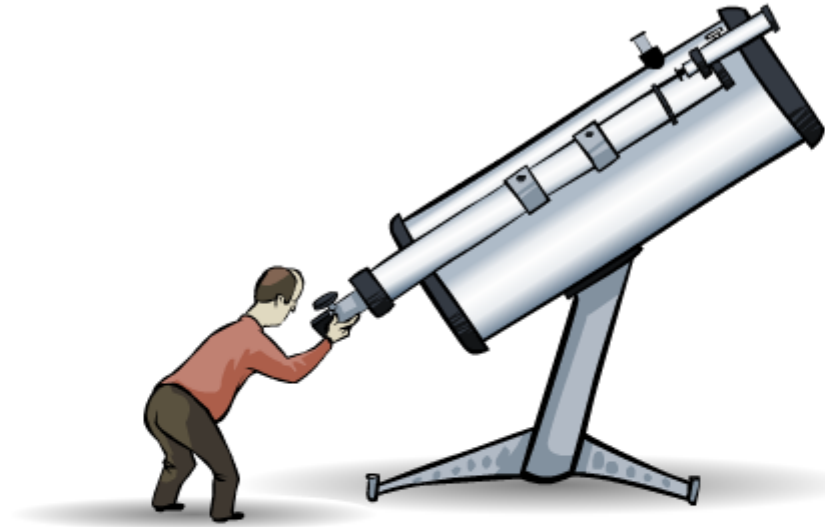


Any light that reaches Earth from distant stars is effectively composed of parallel rays.

These are very weak, so large telescopes are needed to gather enough rays to observe their source.



How does a telescope work?



How does a refracting telescope form an enlarged image?

Click "**play**" to find out.



How does a telescope work?

Are these statements about telescopes true or false?

1.	A telescope has both a converging lens and a diverging lens.	
2.	The objective lens is weak to produce a large image.	
3.	The image produced by the objective lens is virtual and inverted.	
4.	The distance between the two lenses is the sum of their focal lengths.	
5.	The eyepiece forms an enlarged image at infinity.	
6.	The eyepiece is less powerful than the objective.	

true

false

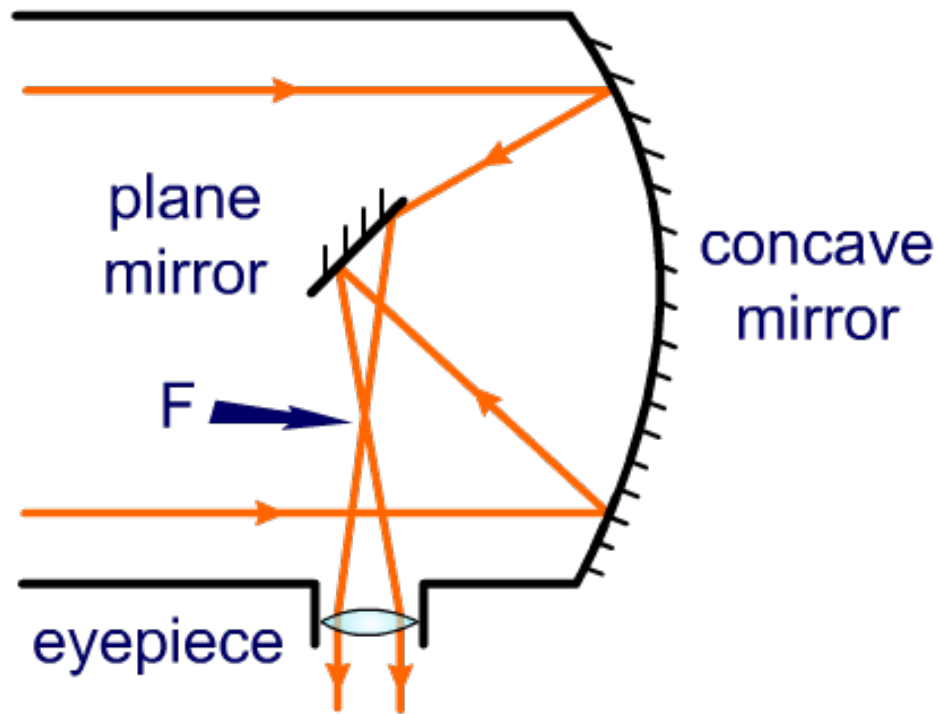
solve



Reflecting telescopes

Light arriving from distant objects may be very weak.

In order to collect as much light as possible, the objective lens needs a large diameter.



Large lenses are very difficult to make and so are very expensive.

Reflecting telescopes overcome this by using relatively cheap mirrors as their objective. These can be made extremely large.