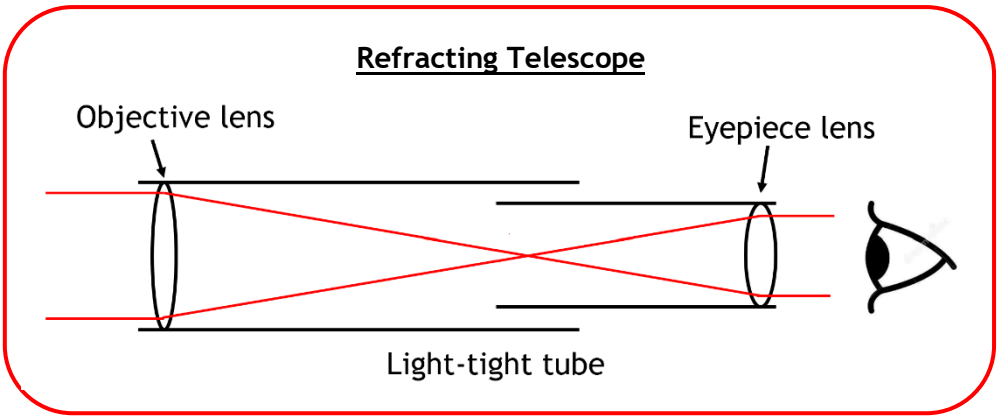
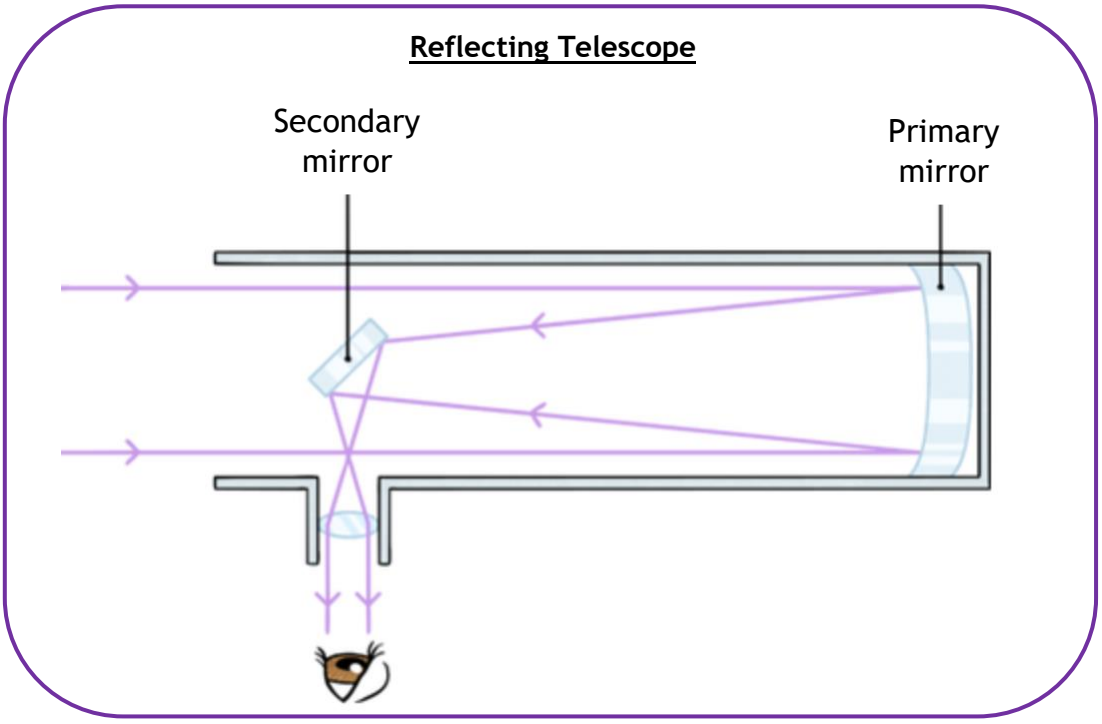
Optical Telescopes

Use both of the diagrams and the passage below to answer the six questions on optical telescopes.





Optical telescopes detect visible light emitted distant objects. Refracting telescopes use lenses to collect and focus light but are very expensive and heavy. They provide a sharp, detailed image. Reflecting telescopes use mirrors to focus light and are cheaper to make but usually much larger. The larger the objective mirror, the more light collected and a sharper image is produced. Both these telescopes are limited to visible light, and so can only be used at night-time. The major issue with these telescopes is that the images are affected by the atmosphere.

1. State the main differences between a refracting and a reflecting telescope.
2. State two disadvantages of a using a reflecting telescope.
3. State two disadvantages of a using a refracting telescope.
4. Identify the factor that both telescopes are limited by.
5. Describe the advantages of using a refracting telescope over a reflective telescope.
6. Describe the advantages of using a reflecting telescope over a refracting telescope.