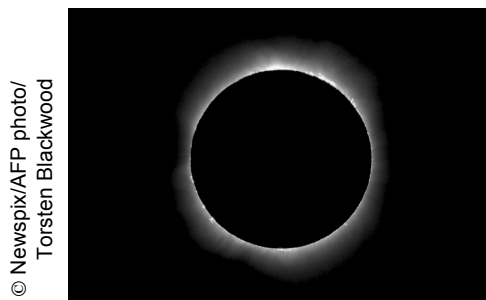


# Eclipses

Student: ..... Class: .....

## Solar eclipse

1. The following photograph shows a total solar eclipse.



**Total solar eclipse**

**Partial solar eclipse**

- (a) Explain how such an eclipse can occur.

.....

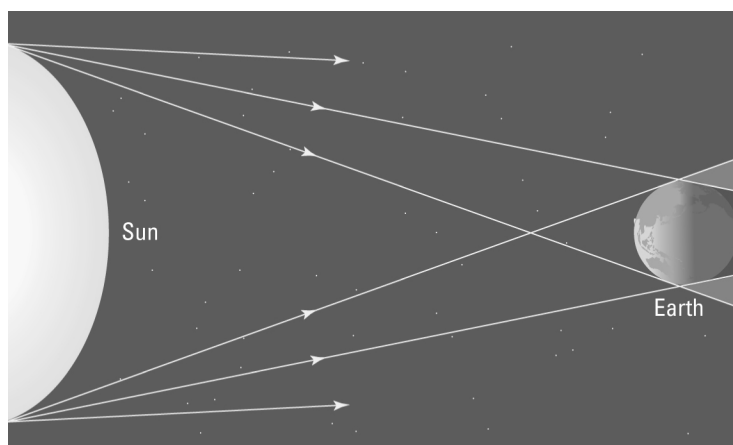
.....

.....

- (b) What part of the sun can now be seen? .....
- (c) Draw the image of the sun in a partial solar eclipse.
- (d) Explain why total solar eclipses can occur only when there is a new moon. Use a labelled diagram as part of your answer.

## Lunar eclipse

2. The following ray diagram is incomplete.



- (a) Using a ruler and pencil, extend the rays of light from the sun past the Earth to create the shadow zones.
- (b) Draw in the position of the moon when a total lunar eclipse occurs.
- (c) Shade and label the shadow zones called the umbra and penumbra.