

Eclipses

Student: Class:

Solar eclipse

1. The following photograph shows a total solar eclipse.

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Torsten Blackwood



Total solar eclipse

Partial solar eclipse

(a) Explain how such an eclipse can occur.

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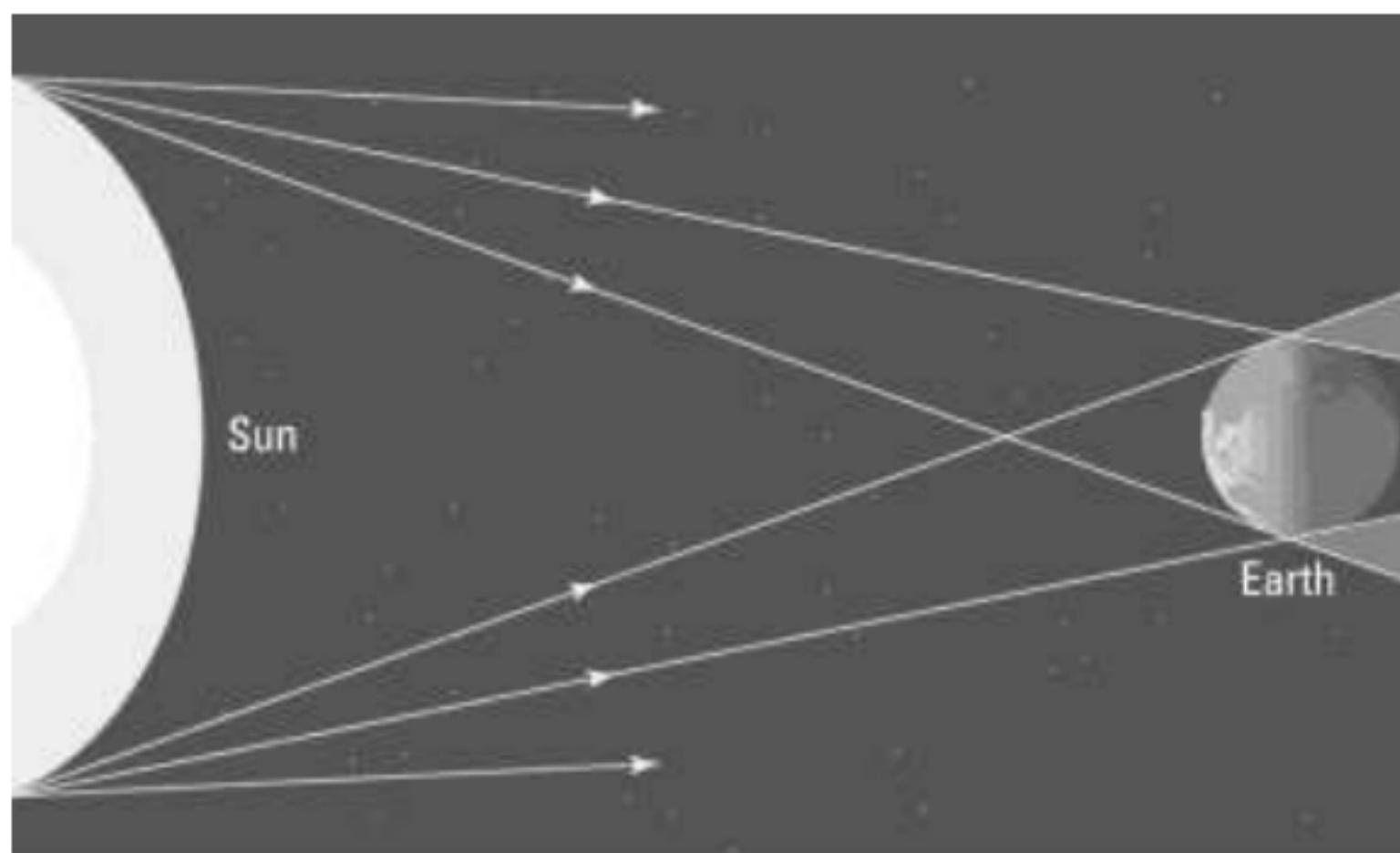
(b) What part of the sun can now be seen?

(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.