

The Phases of the Moon

SC.8.E.5.9: Explain the impact of objects in space on each other, including: 2. The Moon on Earth, including phases

Game Plan Phases of the Moon

▶ **Today I will** look for key details about the phases of the moon.

So that I can (1) provide evidence for each phase of the moon and causes

(2) Recognize and be able to draw each phase of a lunar eclipse.

▶ **I know I have it** when I completed my 8 tab foldable with details and drawing of each lunar eclipse.

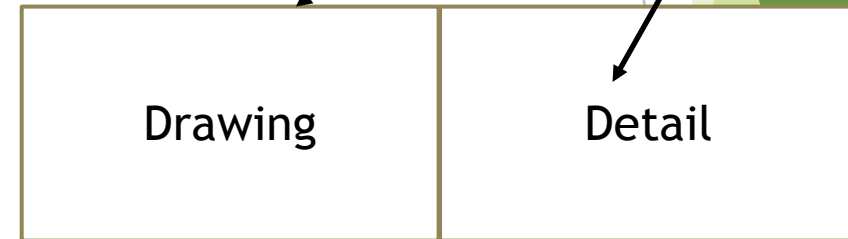
▶ (2) Label each lunar phase correctly.

▶ When I can answer my post question with 100 percent accuracy.

8 Door Foldable Page 212 and 213

½ way through the cycle the full light is on the moon. Earth in the middle	More than ½ lit but not fully lit, growing
More than ½ lit but not fully lit, light decreases	1 Quarter of the cycle has occurred
3 rd quarter in the cycle	Thin crescent shape, it waxes or grow
Going into a thin crescent shape During the full week	Earth, moon and sun line up which the near side can't be seen

Inside the tabs place the drawing of the phase and details



Videos for Phases of the Moon

- ▶ Rapping Song of the Moon <https://www.youtube.com/watch?v=79M2lSVZiY4>
- ▶ Pop Up Phases <https://www.youtube.com/watch?v=KV-BPLKjQB4&list=PL5hz5YGdWwi1cbb4vIZ0U32w3k1jJCYKt&index=5>
- ▶ Cycle of the Moon <https://www.youtube.com/watch?v=KV-BPLKjQB4&list=PL5hz5YGdWwi1cbb4vIZ0U32w3k1jJCYKt&index=5>

Phases of the moon

Follow the link in the description of this listing to determine the desired Birth Moon phase!

Waning Crescent

Third Quarter

Waning Gibbous

New Moon

Full moon

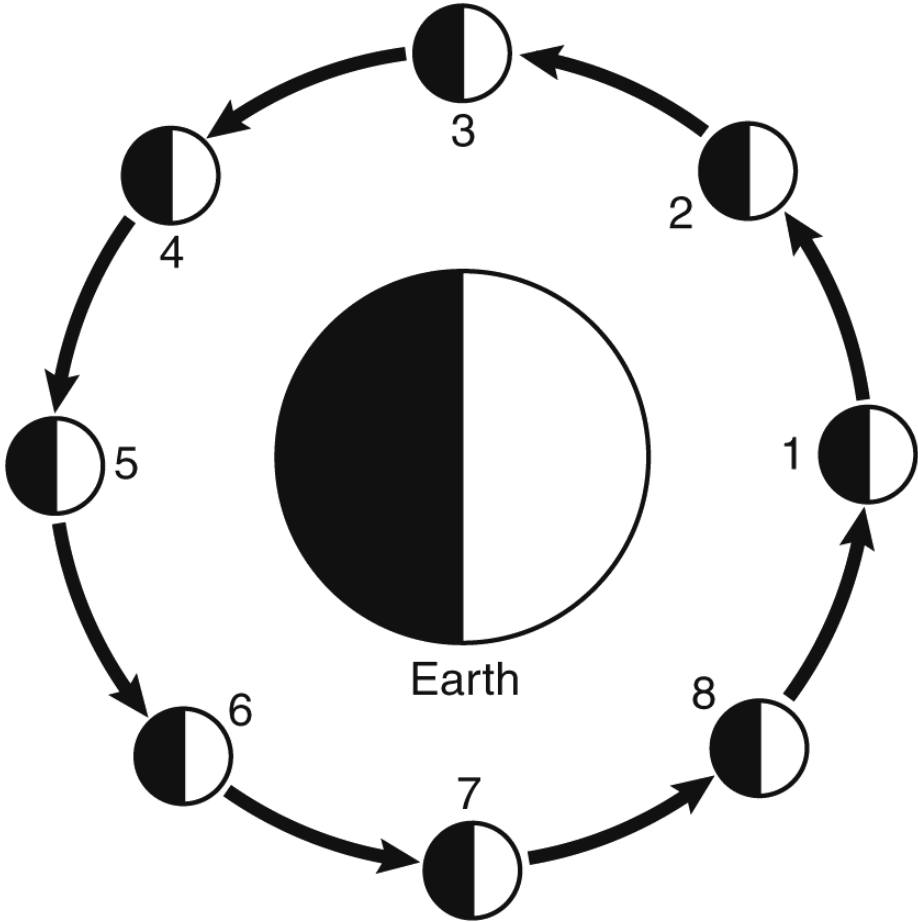
Waxing Crescent

1st Quarter

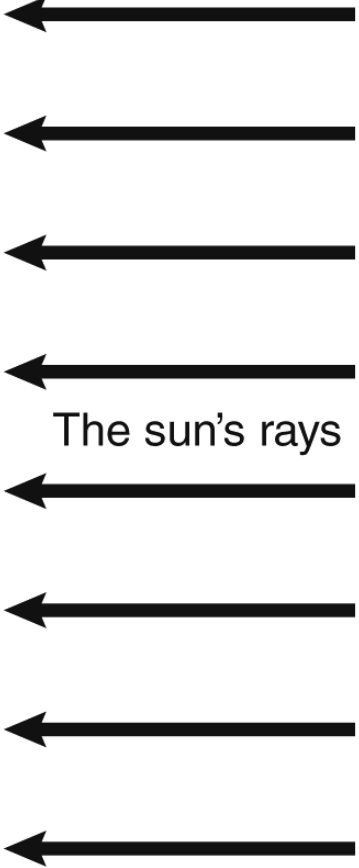
Waxing Gibbous



Phases of the Moon




not-to-scale



Which phases occur at points 1 and 5, and what is causing the phases?

- ▶ A. The new moon at point 1 and the full moon at point 5 are phases caused because the Moon changes its shape from night to night.
- ▶ B. The new moon at point 1 and the full moon at point 5 are phases when the Moon looks like it is changing shape as Earth goes around the Moon.
- ▶ C. The full moon at point 1 and the new moon at point 5 are phases caused because half of the Moon is always lit by the Sun, but only part of the Moon's lit surface can be seen as the Moon orbits Earth and Earth orbits the Sun.
- ▶ D. The new moon at point 1 and the full moon at point 5 are phases caused because half of the Moon is always lit by the Sun, but only part of the Moon's lit surface can be seen as the Moon orbits Earth and Earth orbits the Sun.

- ▶ The cycle of the moon's phases repeats in a predictable way. About how long does it take to cycle from one new moon to the next new moon?
- ▶ A. about one day
- ▶ B. about one week
- ▶ C. about one month
- ▶ D. about one year

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- ▶ The phases of the moon are the changing appearances of the moon, as seen from Earth. Which phase happens immediately after a third quarter moon?
 - ▶ A. new moon
 - ▶ B. waxing gibbous
 - ▶ C. waning gibbous
 - ▶ D. waning crescent

- ▶ The phases of the moon are caused by the relative positions of Earth, the sun, and the moon. Lunar phases refer to the appearance of the illuminated portion of the moon as seen by an observer on Earth. When the moon is aligned with and between Earth and the sun, which phase is happening?
- ▶ A. full moon
- ▶ B. new moon
- ▶ C. first quarter moon
- ▶ D. third quarter moon

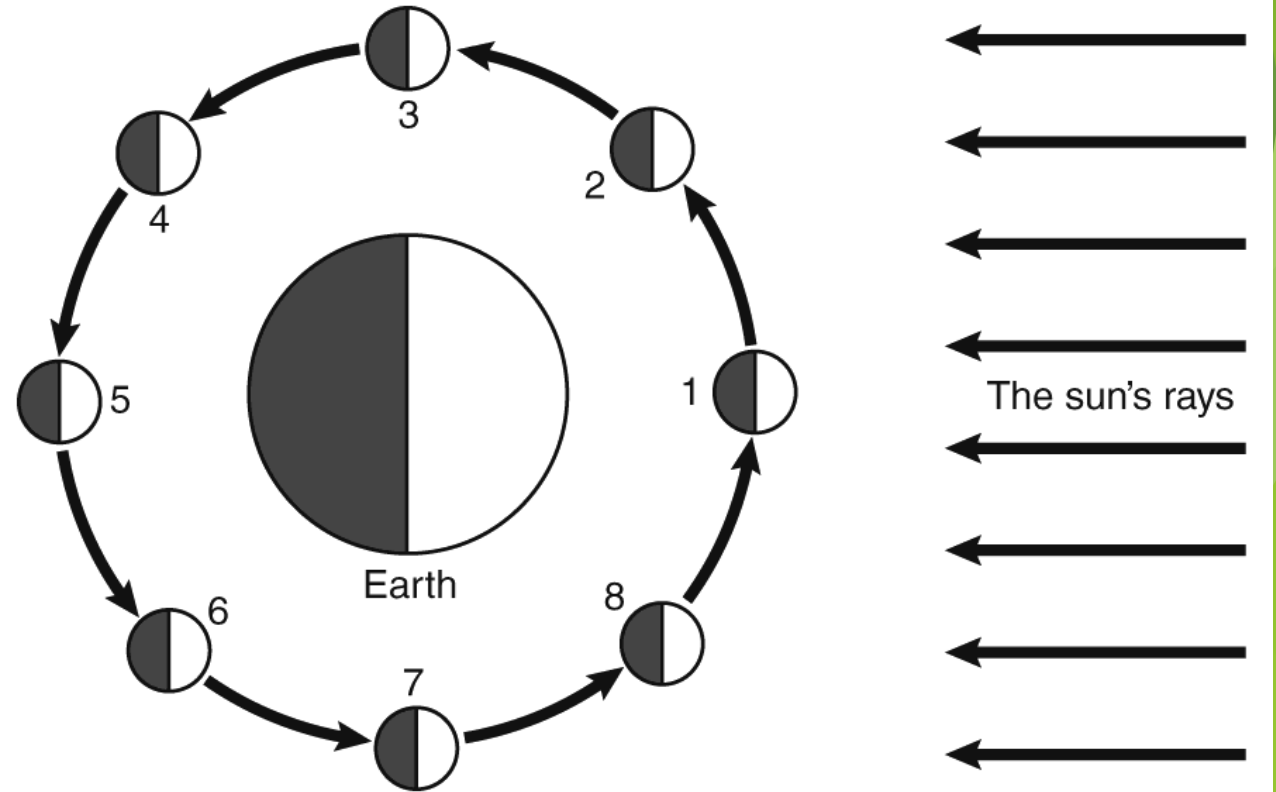
- ▶ Sometimes the moon looks like a crescent. At other times, the moon looks like a half circle. What makes it possible for you to see the surface of the moon from Earth?
- ▶ A. The moon gives off its own light.
- ▶ B. Light from the sun is reflected by the moon's surface.
- ▶ C. Light from Earth is reflected by the moon's surface.
- ▶ D. The moon absorbs sunlight during the day and glows at night.

- ▶ Just as Earth moves around the sun, the moon revolves around Earth. About how many Earth days does it take for the moon to travel around Earth?
- ▶ A. about 7 days
- ▶ B. about 28 days
- ▶ C. about 180 days
- ▶ D. about 365 days

▶ Although half of the moon is always illuminated, usually only a portion of the illuminated side is visible from Earth. The diagram below presents the relative positions of Earth, the sun, and the moon. The positions of the moon are labeled 1-8.

▶ Which of the moons in the figure are in a crescent phase?

- ▶ A. 2 and 4
- ▶ B. 2 and 8
- ▶ C. 4 and 6
- ▶ D. 6 and 8



Oreo Lab



Eclipses

SC.8.E.5.9: Explain the impact of eclipses

Game Plan Eclipses

- ▶ **Today I will** cite specific evidence from a video about lunar eclipses and solar eclipses.

So that I can (1) Explain each type of eclipse. (2) Explain the different types of shadows.

(3) Draw lunar and solar eclipses.

- ▶ **I know I have it** when I have completed my Cornell notes by answering all 7 questions correctly.
- ▶ I have illustrated the eclipses.
- ▶ When I can answer my exit question with 100 percent accuracy.

Cornell Notes Eclipses

Name
Date
Period
Page 5

What causes an eclipse?

Questions

Notes

1. What's an eclipse?

Either the moon or the sun is going to be blocked for a period of time.

2. Solar eclipse-

When the moon is in the middle and blocks our view from the sun

3. Lunar eclipse-

Earth is between the sun and moon and blocks the moon

4. Why can't we see many lunar and solar eclipse in a year?

The tilt of the orbit isn't aligned to receive the shadow on it.

5. What lunar phase is the moon in to receive an eclipse?


Full moon is the phase to have a lunar eclipse)

6. What are different types of lunar eclipses

Penumbral = moon is dim/ Parital = umbra and penumbra (looks like a bite happened/ total eclipse

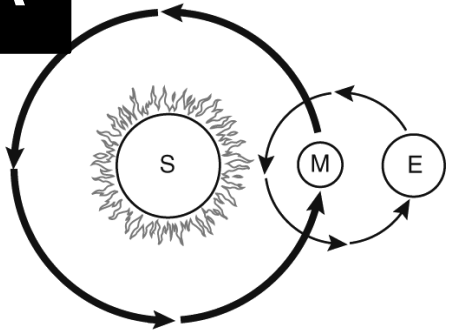
7. What does path of totality mean?

The umbra covers small strip of land at the shadow passes

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- ▶ Occasionally, one space object travels through the shadow of another space object. When the moon moves between the sun and Earth casting a shadow on Earth, which solar system event is taking place?
 - ▶ A. a full moon
 - ▶ B. a crescent moon
 - ▶ C. a solar eclipse
 - ▶ D. a lunar eclipse

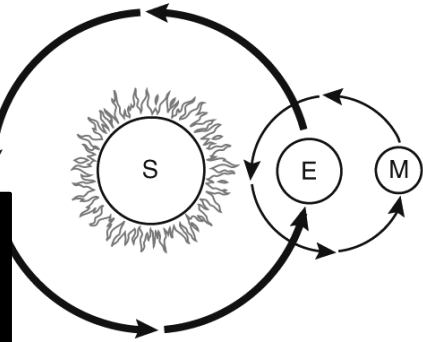
- ▶ Space bodies, such as Earth and its moon, are not stationary. Rather, they are moving at a rapid speed. The diagrams below show the relative movements of the sun (S), Earth (E), and the moon (M). Which diagram best represents the motion of Earth and the moon, relative to

A

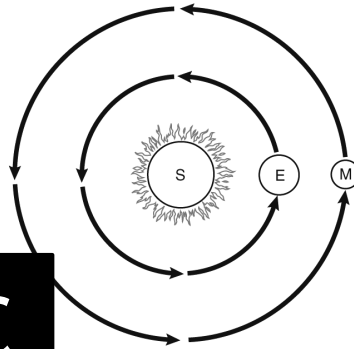


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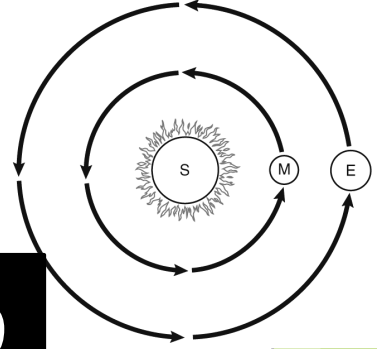
B



C



D

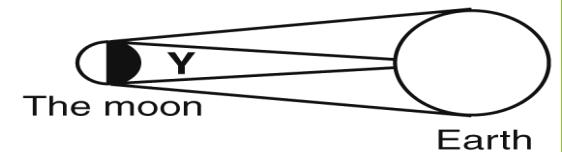
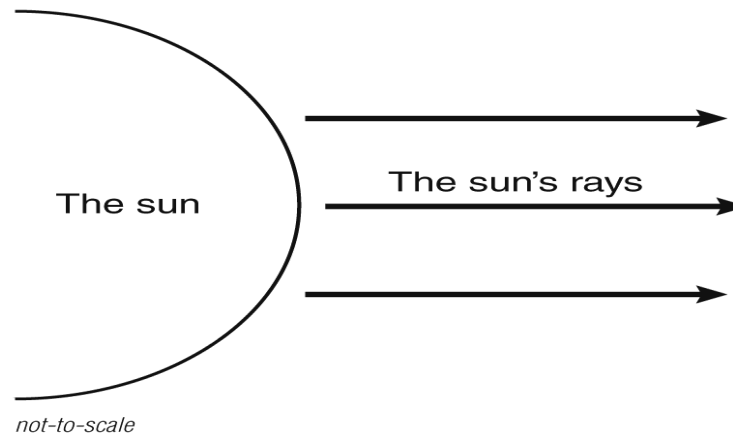


Which statement **best** explains the motions and positions of the Sun, Moon, and Earth?

- ▶ **A.** The force of the Sun's gravity holds Earth and the Moon in close but separate orbits as they both revolve around the Sun together.
- ▶ **B.** The force of the Moon's gravity pulling on the Sun holds it in orbit around the Sun, and the force of Earth's gravity pulling on the Moon holds the planet in orbit around the Sun.
- ▶ **C.** The force of Earth's gravity holds the Moon in orbit around Earth, and the force of the Sun's gravity holds Earth in orbit around the Sun, so that Earth with its orbiting Moon go around the Sun together.
- ▶ **D.** The force of the Sun's gravity holds the Moon in orbit around Earth, and the force of the Sun's gravity also holds Earth in orbit around the Sun, so that Earth with its orbiting Moon appear to go around the Sun together.

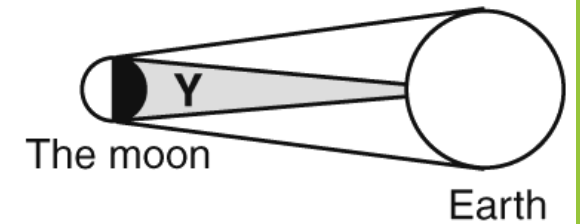
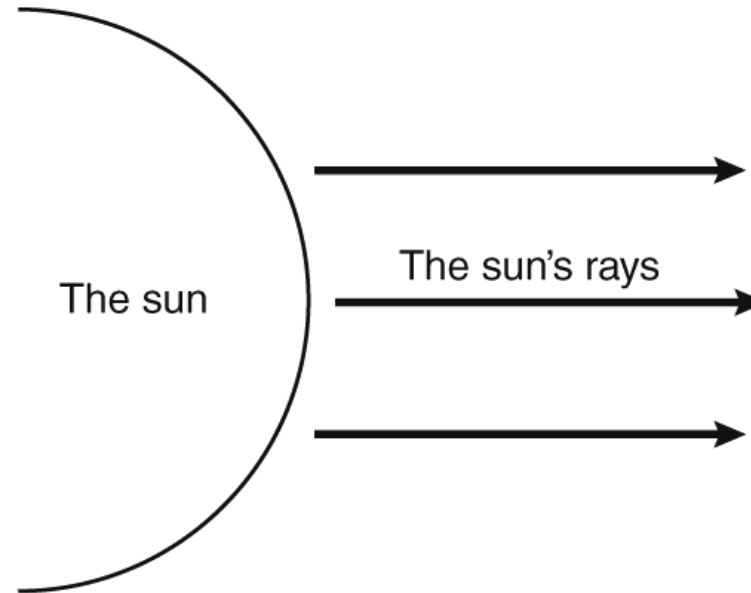
Which statement **best** describes the event caused by the way in which the three bodies are lined up?

- ▶ A. A total lunar eclipse that occurs only in the place where the Moon's shadow (Y) falls on Earth.
- ▶ B. A total solar eclipse that occurs only in the place where the Moon's shadow (Y) falls on Earth.
- ▶ C. A phase called a new moon that occurs because the Moon is directly between Earth and the Sun.
- ▶ D. A total solar eclipse that occurs all over the world because the Moon's shadow (Y) falls on Earth.



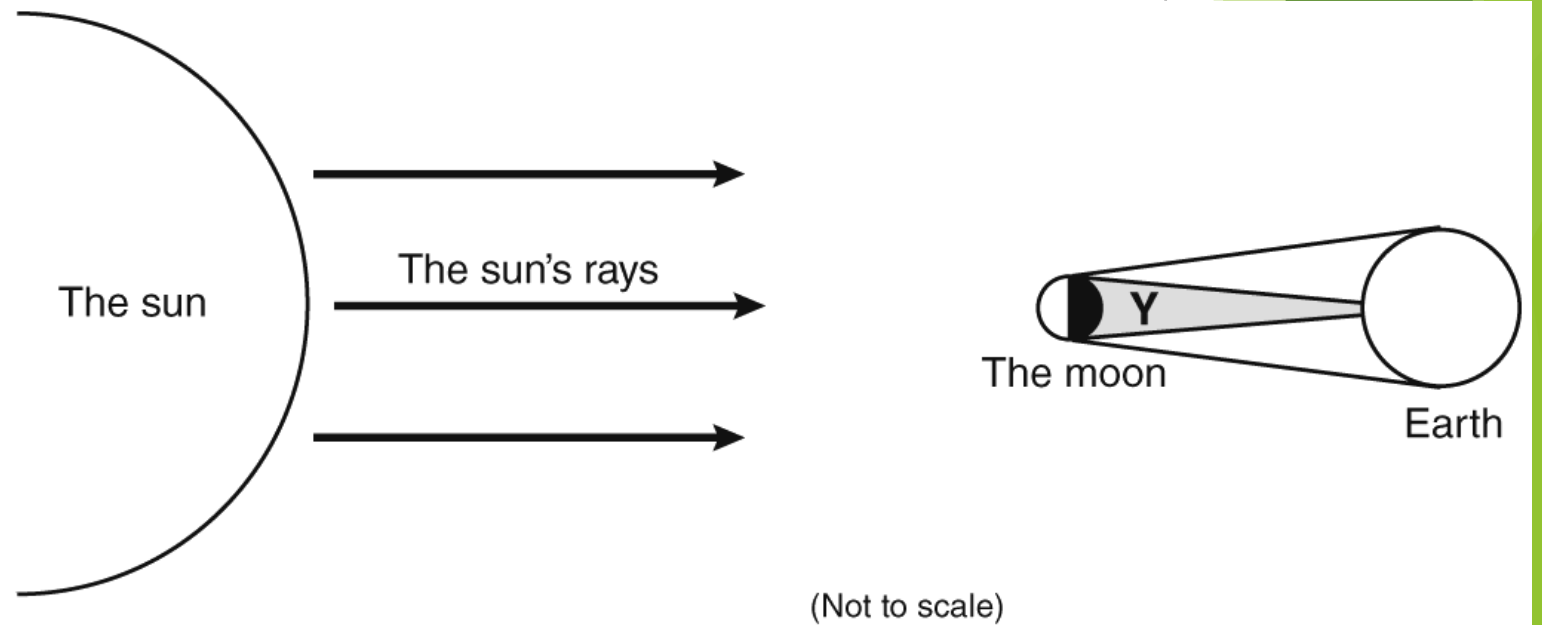
► Which part of the diagram is labeled Y?

- A. the umbra
- B. the eclipse
- C. the satellite
- D. the penumbra

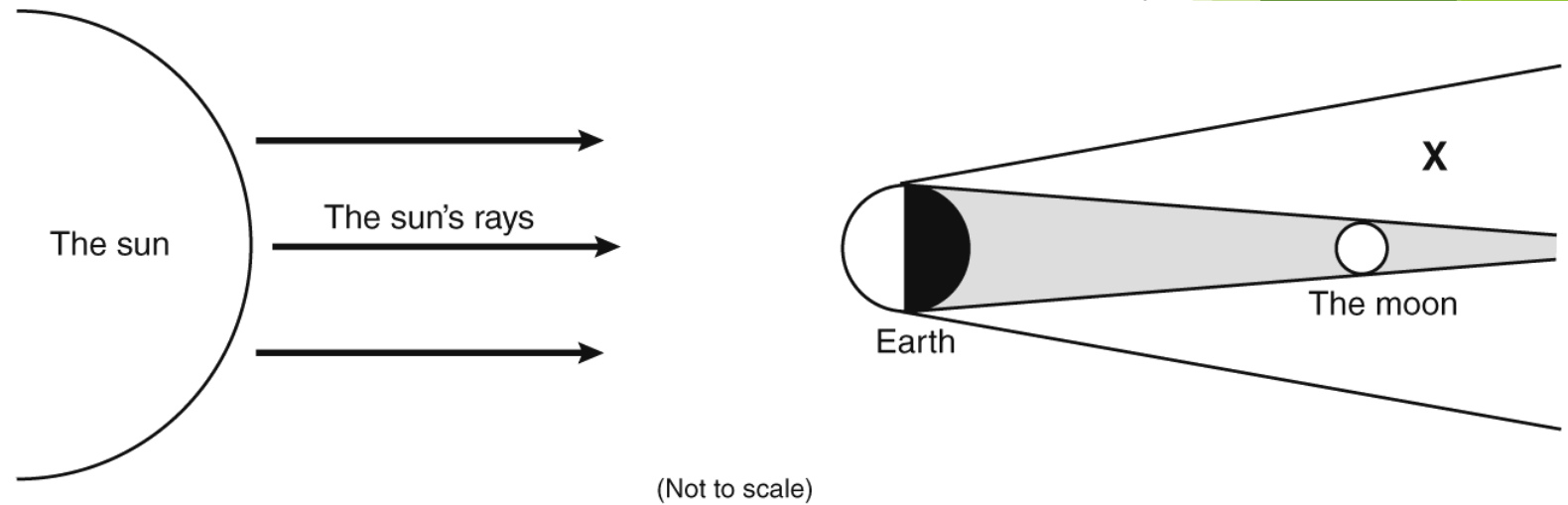


(Not to scale)

- ▶ Which solar system event is happening?
- ▶ A. a third quarter moon
- ▶ B. a lunar eclipse
- ▶ C. a first quarter moon
- ▶ D. a solar eclipse



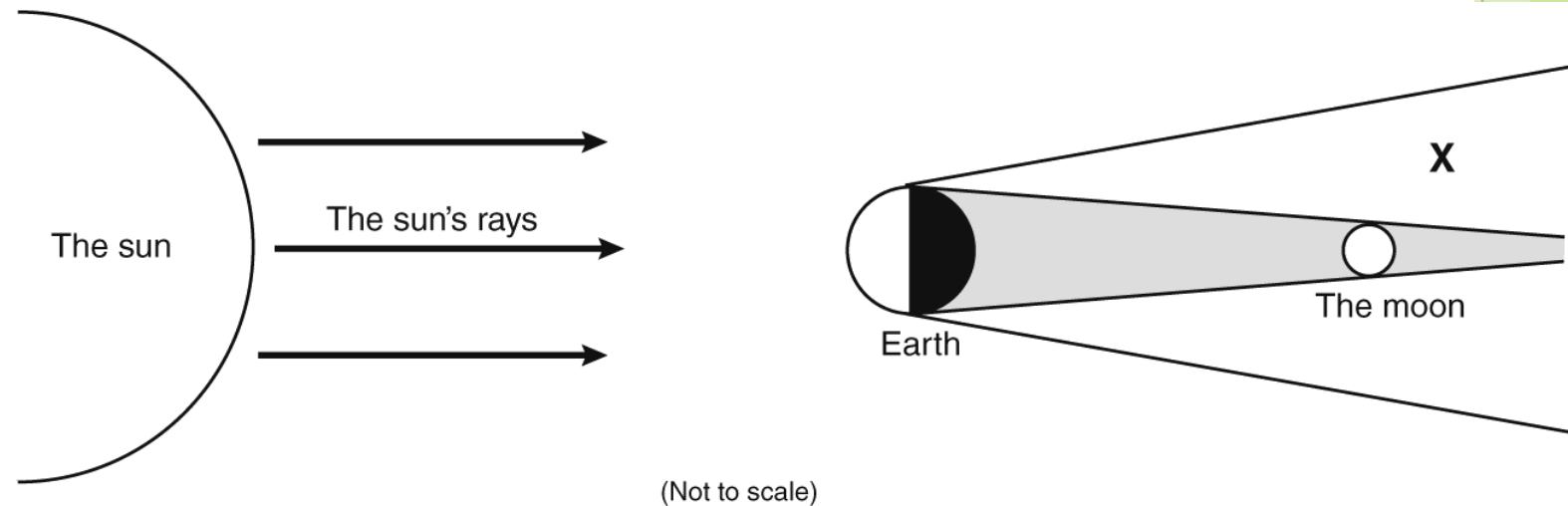
- ▶ The diagram below shows the relative positions of Earth, the sun, and the moon.
- ▶ Which part of the diagram is labeled X?
- ▶ A. the umbra
- ▶ B. the eclipse
- ▶ C. the satellite
- ▶ D. the penumbra



- ▶ The diagram below shows the relative positions of the sun, the moon, and Earth.

Which solar system event does the diagram show?

- ▶ A. a solar eclipse
- ▶ B. a lunar eclipse
- ▶ C. a first quarter moon
- ▶ D. a third quarter moon



- ▶ Each lunar cycle has one full moon, in which the relative positions of Earth, the sun, and the moon form in a straight line. Which list represents the position of Earth, the sun, and the moon during a full moon?
- ▶ A. Earth, sun, moon
- ▶ B. sun, moon, Earth
- ▶ C. moon, sun, Earth
- ▶ D. sun, Earth, moon