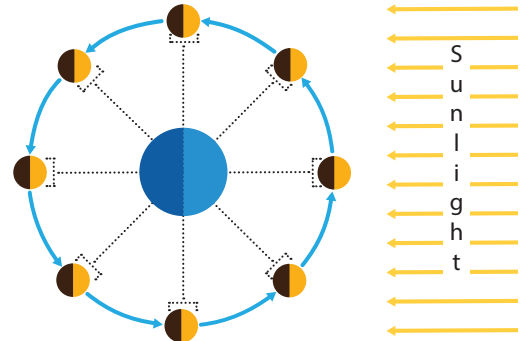


EARTH-SUN-MOON SYSTEM: PHASES OF THE MOON

Read the text below, and then answer the questions that follow.

Have you ever looked up at the night sky and admired the glowing moon? Have you ever wondered why its shape changes? The moon does not produce its own light, despite its shiny appearance in the sky. Instead, the moon is lit up by the sun. The part of the moon that is both sunlit and facing Earth is called the moon's **phase**. The moon's phase changes as it orbits the Earth.

The model to the right shows where sunlight hits the moon at eight different positions in its orbit. To use the model, pick one of the eight positions. Pretend you are standing on Earth and looking up at the moon from the base of the dotted line. From this perspective, what would you see in the sky?



It's worth noting that this model is created from the perspective of the Northern Hemisphere. If you are in the Southern Hemisphere, the moon will appear flipped, left to right.

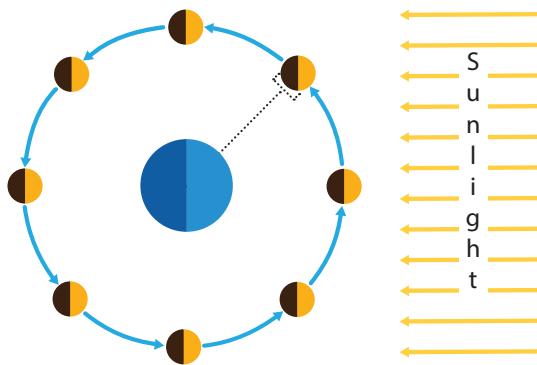
Each position in the model above corresponds to one of the moon phases pictured below. Each phase has a unique name.

MOON PHASES



Answer the questions below to learn more about the phases of the moon. The first one is done for you as an example.

1. Look at the diagram below.



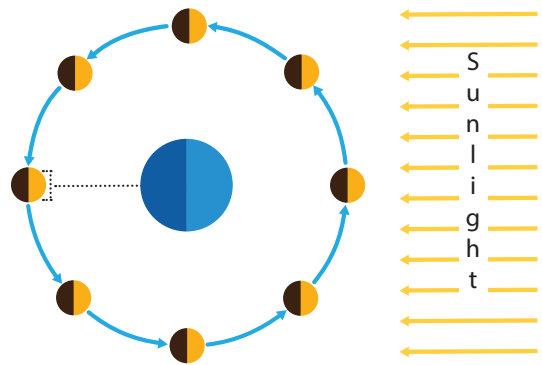
Which phase of the moon is shown?

Waxing Crescent

Draw a picture of this phase of the moon as seen from Earth.



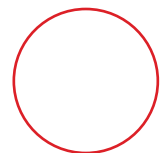
2. Look at the diagram below.



Which phase of the moon is shown?

Full Moon

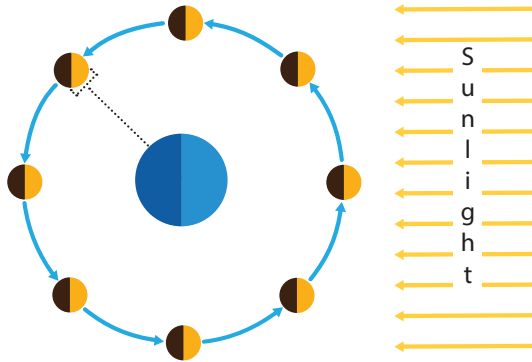
Draw a picture of this phase of the moon as seen from Earth.



EARTH-SUN-MOON SYSTEM: PHASES OF THE MOON

Keep going! Answer the questions below.

3. Look at the diagram below.



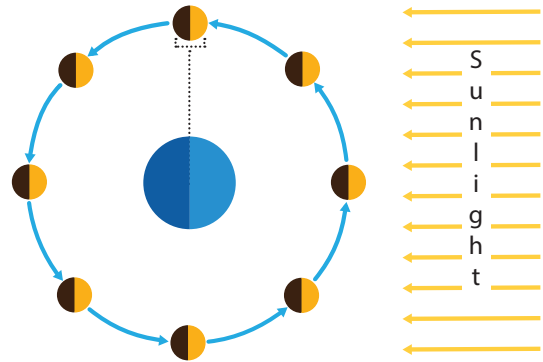
Which phase of the moon is shown?

Waxing Gibbous

Draw a picture of this phase of the moon as seen from Earth.



4. Look at the diagram below.



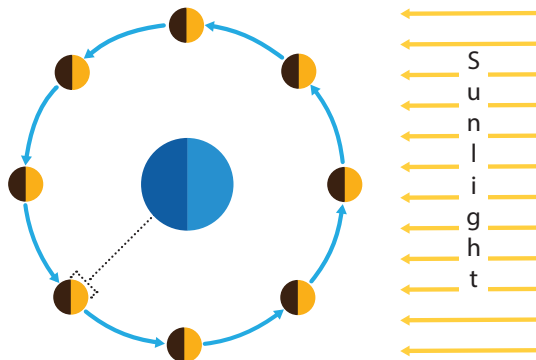
Which phase of the moon is shown?

First Quarter

Draw a picture of this phase of the moon as seen from Earth.



5. Look at the diagram below.



Which phase of the moon is shown?

Waning Gibbous

Draw a picture of this phase of the moon as seen from Earth.



6. A solar eclipse occurs when the orbit of the Earth around the sun and the orbit of the moon around the Earth are perfectly aligned so that the Earth, sun, and moon end up in a straight line. The moon blocks the light from the sun and casts a shadow on Earth.

Draw a diagram below showing the relative positions of the Earth, sun, and moon during a solar eclipse.



Note that this diagram is not to scale — students should understand generally that the sun is larger than the Earth, and that the Earth is larger than the moon.