

The same side of the moon always faces Earth.

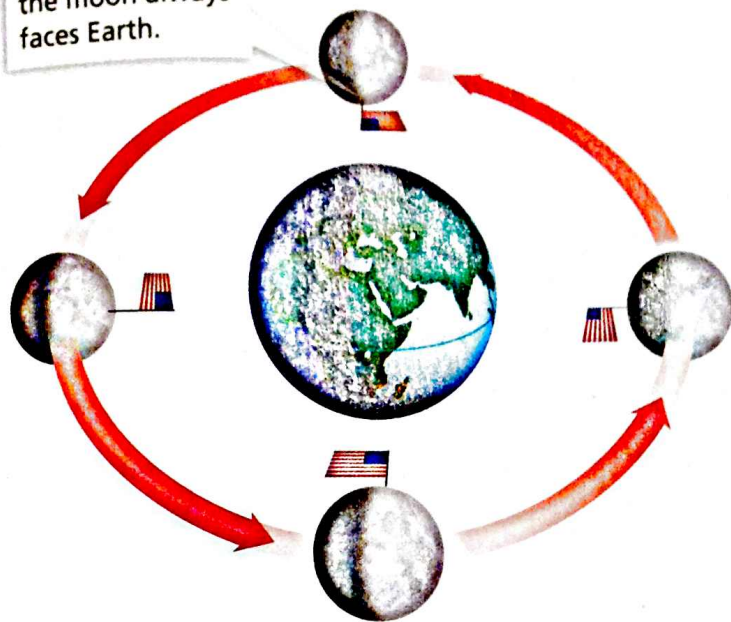


FIGURE 10

The Moon in Motion

The moon rotates on its axis and revolves around Earth in the same amount of time. As a result, the near side of the moon (shown with a flag) always faces Earth.

Interpreting Diagrams Would Earth ever appear to set below the horizon for someone standing next to the flag on the moon? Explain

Phases of the Moon

On a clear night when the moon is full, the bright moonlight can keep you awake. But the moon does not produce the light you see. Instead, it reflects light from the sun. Imagine taking a flashlight into a dark room. If you were to shine the flashlight on a chair, you would see the chair because the light from your flashlight would bounce, or reflect, off the chair. In the same way that the chair wouldn't shine by itself, the moon doesn't give off light by itself. You can see the moon because it reflects the light of the sun.

When you see the moon in the sky, sometimes it appears round. Other times you see only a thin sliver, or crescent. The different shapes of the moon you see from Earth are called **phases**. The moon goes through its whole set of phases each time it makes a complete revolution around Earth.

Phases are caused by changes in the relative positions of the moon, Earth, and the sun. Because the sun lights the moon, half the moon is almost always in sunlight. However, since the moon revolves around Earth, you see the moon from different angles. The half of the moon that faces Earth is not always the half that is sunlit. **The phase of the moon you see depends on how much of the sunlit side of the moon faces Earth.**