

Name _____

Moon Marvels: Our Closest Celestial Companion

Short Answer Key

1. Synchronous rotation is when a moon always shows the same face to its parent planet due to the time it takes to complete one orbit matching the time for one rotation. An example is Earth's moon.
2. One astronomical phenomenon associated with moon phases is solar eclipses. Solar eclipses occur when the moon, in its new moon phase, passes between Earth and the sun, blocking out the sun's light from certain regions on Earth.
3. Earth's moon influences tides through gravitational forces. Its gravitational pull causes the ocean's waters to bulge, resulting in high and low tides.
4. The sizes of moons in our solar system vary widely, from small irregularly shaped bodies to large moons larger than some planets. This variation is significant as it reflects the diversity of objects in our solar system.
5. One example is Saturn's moon Titan. It has been explored by both human missions like the Cassini-Huygens mission and robotic missions. Its significance lies in its unique atmosphere and potential for hosting prebiotic chemistry.

