

Seasons and the Moon Vocabulary

Student and family reference guide



Use these nine words to describe what you observe and explain your thinking. Practice explaining a word in your own words and using it in a complete science sentence.

Our unit vocabulary

Rotation or rotate The spinning of an object on its axis.

Revolution or revolve One complete trip of an object around another object in space.

Orbit The path an object follows as it travels around another object in space.

Seasons The four parts of the year: spring, summer, fall, and winter. Earth's tilt as it travels around the Sun causes seasonal changes in daylight and temperature.

Axis An imaginary line through an object around which it spins.

Lunar cycle The repeating sequence of Moon phases, lasting about $29\frac{1}{2}$ days from one new moon to the next.

Atmosphere The layer of gases surrounding Earth or another object in space.

Sun The star closest to Earth. It is at the center of our solar system and provides Earth with light and heat.

Model A picture, idea, or object used to represent and explain an object or process.

Use the words in a sentence

Earth completes a rotation on its axis about once every 24 hours.

Try saying: "A globe is a model of Earth because ____."

The eight Moon phases

The Moon reflects sunlight. As it travels around Earth, we see different amounts of its sunlit half. These appearances are called Moon phases. The Moon itself stays round.

Read the phases in order. After waning crescent, the cycle returns to new moon.

- 1 New moon** The sunlit half faces away from Earth, so the Moon is usually not visible.
- 2 Waxing crescent** A thin curved part looks sunlit. The visible sunlit part is growing.
- 3 First quarter** Half of the Moon's disk looks sunlit. The visible sunlit part is growing.
- 4 Waxing gibbous** More than half, but less than all, looks sunlit. The visible sunlit part is growing.
- 5 Full moon** The whole Moon's disk looks sunlit from Earth.
- 6 Waning gibbous** More than half, but less than all, looks sunlit. The visible sunlit part is shrinking.
- 7 Third quarter or last quarter** Half of the Moon's disk looks sunlit. The visible sunlit part is shrinking.
- 8 Waning crescent** A thin curved part looks sunlit. The visible sunlit part is shrinking.

Helpful reminders

Waxing means the visible sunlit part appears to grow. Waning means it appears to shrink. A quarter moon looks half lit; "quarter" tells where it is in the cycle.

Moon phases are not caused by Earth's shadow. One complete phase cycle takes about 29½ days.

Try saying: "After first quarter, I predict _____ because _____."

Science reference: NASA Moon Phases
<https://science.nasa.gov/moon/moon-phases/>