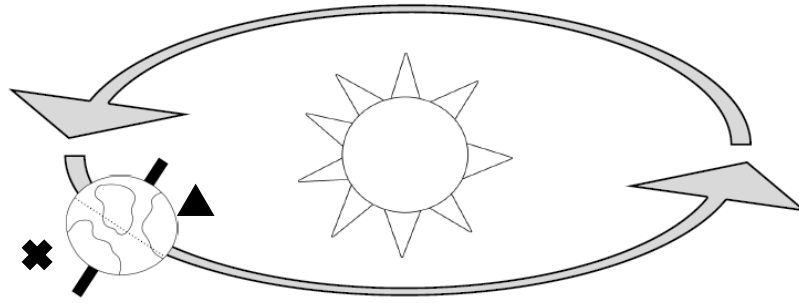


Space Study Guide

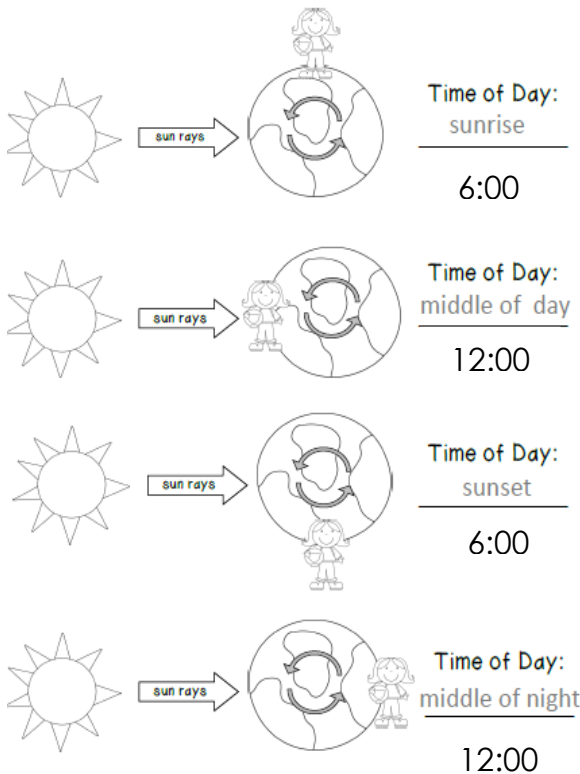
- Axis- the imaginary line that goes through the north and south poles that the earth spins on
- Waning- when the lit part of the moon decreases
- Waxing- when the lit part of the moon increases
- Rotation- the spinning of the earth on its axis
- Revolution- the orbiting of the earth around the sun causing the seasons to change
- Orbit- the pathway the earth takes around the sun
- Solar system- all of the planets, moon, and other space objects going around the sun
- Solar energy- energy that the sun creates
- The sun, moon, and earth are three space objects.
- The sun is the center of the solar system. It provides light and heat for the earth.
- Without the sun, there would be no life on earth.
- At night, when the earth is facing away from the sun, we see the moon.
- The moon gets its light from the reflection of the sun.
- The moon goes through its phases as it orbits around the earth. It takes about a month for the moon to complete all of its phases.

Rotation	Revolution
<ul style="list-style-type: none"> • When one side of the world is having daytime, the other side is having nighttime. • The sun appears to rise in the east and set in the west. • The earth spins on its axis. • The earth spins at a constant speed, always in the same direction. • completed in 24 hours • Sunset happens as we begin to turn away from the sun. • We don't feel the earth spin because it spins smoothly, never changing pace. • Sunrise happens as we begin to turn toward the sun. 	<ul style="list-style-type: none"> • The earth orbits around the sun. • The seasons change as the earth orbits around the sun. • completed in a year • The sun appears higher in the sky during summer because we are tilted closer to the sun. • As the earth orbits, the part of the earth tilted toward the sun is having spring and summer. • Each season lasts about 3 months. • As the earth orbits, the part of the earth tilted away from the sun is having fall and winter. • Places near the equator (the center of the earth) don't have much change in season because those places are always close to the sun.

- The Earth is always in motion. It is in orbit around the Sun. This is called the Earth's revolution. The time it takes Earth to go around the Sun once is 365 days, or one year.
- The Earth also spins around as it orbits the Sun. This is called Earth's rotation. One rotation of the Earth takes 24 hours, or one day.
- The Earth rotates on its axis. The axis is the imaginary line that goes through the center of Earth.
- As the Earth rotates, our part of the Earth goes towards or away from the Sun's light. That gives us day and night.
- The Earth's axis is tilted. This tilting is why we have seasons. Sometimes our part of the Earth is tilted toward the Sun. This is summer. Sometimes we are tilted away from the Sun, this is winter. When the Sun faces right at the center of the Earth, we have spring and fall.



- The X represents the southern hemisphere. Because of the earth's tilt, the southern hemisphere is facing away from the sun. This hemisphere is in the season of winter.
- The Δ represents the northern hemisphere. Because of the earth's tilt, the northern hemisphere is facing towards the sun. This hemisphere is in the season of summer.
- The northern and southern hemisphere are always having opposite seasons because of the tilt of the earth.



Benefits of the Sun	Descriptions of the Sun
<ul style="list-style-type: none"> • Keeps earth warm • Helps plants grow with its heat and light • Gives solar energy • Solar wind sometimes hits earth 	<ul style="list-style-type: none"> • 10,000 degrees Fahrenheit • Almost a million miles wide • Closest star to earth • 93 million miles from earth • Made of plasma (hot gases)

