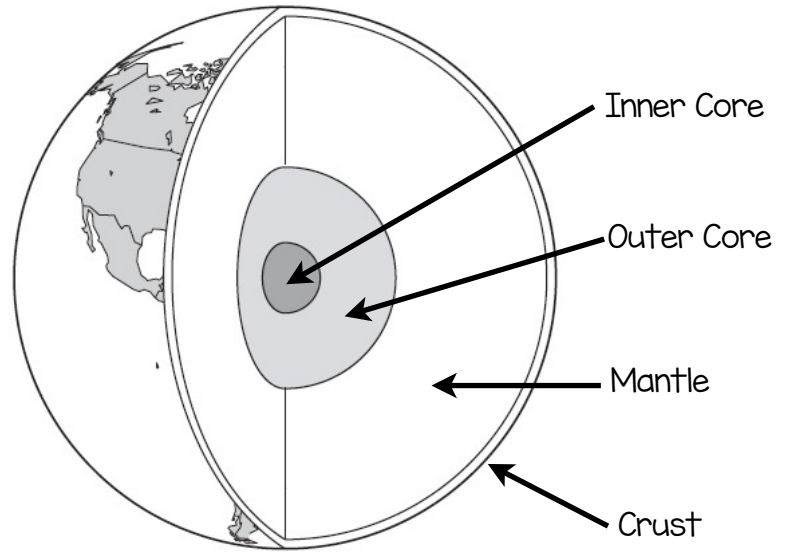


# Sun, Moon, and Earth Study Guide

## Earth Characteristics:

- ▶ The Earth is a planet
- ▶ The four seasons of Earth in order: summer, fall, winter, spring
- ▶ The four layers of Earth in order: inner core, outer core, mantle, and crust
- ▶ Earth's air is made of these 3 main gases: 78% nitrogen, 21% oxygen, and 1 percent carbon dioxide.
- ▶ Earth's gravity keeps us and our atmosphere from floating away.
- ▶ Earth's atmosphere has 3 main jobs: block the sun's UV rays, trap heat, and trap air.
- ▶ Over 70% of Earth's surface is covered in water.
- ▶ The Earth has many landforms: plains, mountains, rivers, valleys, and oceans.



**The 4 Layers of Earth**

## Moon Characteristics:

- ▶ The moon is a satellite. Satellites are any object that orbits a larger space object like a planet.
- ▶ The moon is made of rock and dust.
- ▶ The moon orbits the Earth.
- ▶ The moon does not make its own light. It reflects light from the sun.
- ▶ The moon has gravity, but it is much weaker than Earth's.
- ▶ The moon's gravity controls the ocean tides on Earth.
- ▶ The moon has plains and mountains, just like Earth.
- ▶ Thousands of craters cover the surface of the moon.

## Sun Characteristics:

- ▶ The sun is a star.
- ▶ The sun is made of hot, burning gas (mostly hydrogen and helium).
- ▶ One million Earth's can fit inside the sun.
- ▶ It takes 8 minutes for the sun's light to reach the Earth.
- ▶ The sun gives Earth light, heat and makes it possible for plant life to grow on Earth.

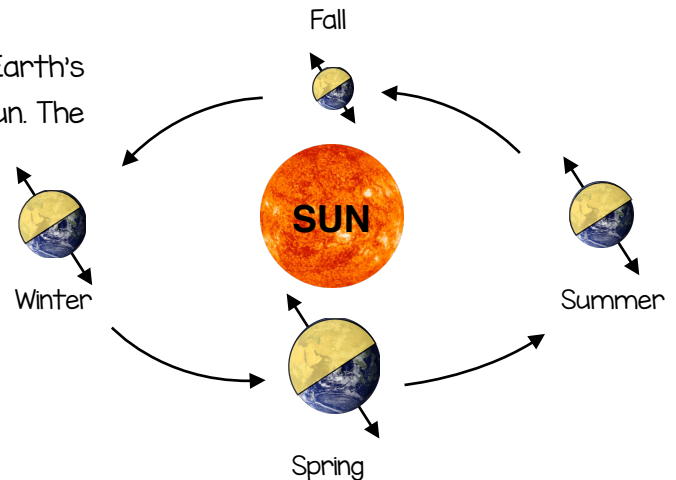
# Sun, Moon, and Earth Study Guide

## Day and Night

- ▶ Day and night are caused by Earth's rotation (spinning motion). As the Earth rotates, different parts of it receive sunlight (daytime), while other parts receive little or no sunlight (nighttime).
- ▶ It takes Earth 24 hours to make one rotation.

## Earth's Seasons

- ▶ Earth's seasons are caused by the tilt of Earth, and Earth's revolution (to move around something) around the sun. The tilt causes different parts of Earth to receive different amounts of the sun's energy. The revolution of Earth makes it possible for us to move from one season to the next.
- ▶ It takes Earth 365 days (1 year) to make one revolution (orbit) around the sun.



## Moon Phases

- ▶ The moon appears to change shape each night. These changes in appearance are called phases.
- ▶ The moon is either growing or fading in light. These words describe those changes:
  - ▶ Waning: The moon appears to be fading away.
  - ▶ Waxing: The moon appears to be growing in light.
- ▶ When naming the moon, there are two steps.
  1. Look at the right side of the moon. If it is lit up, it is waxing. If it is dark, it is waning.
  2. Name the shape of the lit up part of the moon.
    - ▶ Full: The entire moon is lit up.
    - ▶ New: The entire moon is dark.
    - ▶ Crescent: The moon is less than half full (like a banana).
    - ▶ Quarter: The moon is exactly half full.
    - ▶ Gibbous: The moon is more than half full.

