

**Monday**

- Complete pg. 1-2  
“Big Idea 5: Star  
and Galaxies”

**Tuesday**

- Complete pg. 3-4  
“Big Idea 5:  
Objects in our  
Solar System”

**Wednesday**

- Complete pg. 5-7  
“Big Idea 5:  
Earth’s Rotation  
and Revolution”

**Thursday**

- Complete pg. 8  
“Food Chains  
Vocabulary”

**NO HOMEWORK !!  
ENJOY YOUR WEEKEND :)**

**Reminders**

- **Finish any missing IXLs**
- **PPT link pasted for review**
- **End of Year Science Assessment 5/14/25**
- **5th Grade Science Review PPT**

**5th Grade Science Review PPT**

## Big Idea 5: Stars and Galaxies

### Vocabulary

Galaxy      Milky Way      Stars      Sun

### Galaxies

Did you know that our Earth is a part of a much larger system called a **galaxy**? A galaxy is a gigantic collection of gas, dust, and countless stars! Think of it like a big family of stars living together in space. There are three different types of galaxies: Spiral Galaxies, Elliptical Galaxies, Irregular Galaxies. The galaxy we call home is called the **Milky Way** (Spiral). It is so enormous that it would take thousands of years to travel from one end to the other. Our solar system, which includes the Sun and all the planets, orbits within the Milky Way.



### Stars

Stars are incredible celestial objects that come in many shapes and sizes. They can be big or small, and some shine brighter than others. Stars are so far away from Earth that they appear as tiny points of light in the night sky. When we gaze at the stars, we are actually looking at distant suns in our galaxy and beyond! *The Sun, our closest star, looks much larger and brighter because it is relatively close to us compared to other stars.*

### Sun

Have you ever wondered what makes the Sun so special? Well, it is indeed a **star**! The **Sun** is a massive ball of hot gases that emits tremendous amounts of energy. This energy includes heat, light, and other types of radiation. That's why we feel warmth from the Sun and see its brilliant light during the day. It's amazing to think that we are lucky enough to have our own star, providing us with the energy we need for life on Earth. Have you ever noticed how the Sun seems so big and bright compared to other stars? That's because it's the closest star to our planet. The Sun is millions of miles away from Earth, but it is still the closest star in terms of distance. Since it is relatively near to us, it looks larger and shines brighter than other stars we see in the night sky.

## Learning Check

1. What is a galaxy, and what does it consist of? \_\_\_\_\_

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2. Can you identify our home galaxy? What is it called? \_\_\_\_\_

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3. Why do stars appear as points of light in the night sky? \_\_\_\_\_

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4. Why does the Sun appear larger and brighter than other stars? \_\_\_\_\_

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5. A star named Sirius appears as the brightest star in the nighttime sky, even though a star named Pollux actually gives off more light. Which of the following best explains why Sirius appears brighter than Pollux in our nighttime sky?

- A. Sirius is made of different gases than Pollux is.
- B. Sirius is a different color than Pollux is.
- C. Sirius is closer to Earth than Pollux is.
- D. Sirius is larger than Pollux is.

## Big Idea 5: Objects in our Solar System

### Vocabulary

Comets   Asteroids   Inner Planets   Outer Planets   Orbit

Understanding the Solar System and its objects is crucial to comprehend Earth's place in the cosmos. In this text, we will explore the Sun, planets, moons, asteroids, and comets. We identify Earth's position from the Sun and discussed the major common characteristics of all planets.

### The Solar System

The Solar System is a vast collection of celestial bodies that **orbit** (revolve around) the Sun, our nearest star. It consists of the Sun, planets, moons, asteroids, and comets. Remember that the the Sun is a massive ball of hot, glowing gas at the center of the Solar System. It provides heat, light, and energy to all the planets.

### Planets

Planets are large celestial bodies that orbit the Sun. There are eight recognized planets in our Solar System: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune. These planets vary in size, composition, and distance from the Sun. You can remember the order of the planets by remembering the phrase "My Very Educated Mother Just Served Us Nachos!"

### Moons

Moons are natural satellites that orbit planets. Each planet has its own set of moons. For example, Earth has one moon called the Moon, while Jupiter has more than 70 moons.

### Asteroids and Comets

Asteroids are rocky objects that orbit the Sun. They are smaller than planets and can be found primarily in the asteroid belt, located between the orbits of Mars and Jupiter. Comets are icy bodies that orbit the Sun. They are composed of rock, dust, ice, and gas. When a comet gets closer to the Sun, it heats up, and a glowing coma and tail form. Comets have tails, asteroids do not!

### Characteristics of Planets

All planets share common characteristics. They orbit (revolve around) the Sun, are nearly spherical in shape due to their gravitational pull, and have cleared their orbit of other debris. They all have mass and rotate on an Axis. However, inner and outer planets differ in several ways.



### Inner Planets (Terrestrial)

The inner planets, including Mercury, Venus, Earth, and Mars, are closer to the Sun. They are generally smaller, have rocky surfaces, and thinner atmospheres compared to outer planets.

Earth is the third planet from the Sun in our Solar System. Earth is unique as it supports life and has an atmosphere, water, and diverse ecosystems.

### Outer Planets (Gas Giants)

The outer planets, namely Jupiter, Saturn, Uranus, and Neptune, are further from the Sun. They are larger, primarily composed of gases like hydrogen and helium, and have thick atmospheres. These planets are also known as gas giants or ice giants.

### Learning Check

1. What are asteroids and where are they primarily found? \_\_\_\_\_

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2. Describe comets and how they change when they approach the Sun. \_\_\_\_\_

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3. What is the main difference between an asteroid and a comet? \_\_\_\_\_

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4. Where does Earth stand in relation to the Sun within the Solar System? \_\_\_\_\_

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5. How do inner planets differ from outer planets? \_\_\_\_\_

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## Big Idea 5: Earth's Rotation and Revolution

### Vocabulary

Rotation      Moon Cycle      Revolution      Axis

### Introduction

In the study of Earth in Space and Time, we will explore fascinating concepts related to the rotation of Earth, the apparent movements of the Sun, Moon, and stars, and the changes observed in the shape of the Moon. Understanding these celestial phenomena will help us grasp how Earth interacts with its cosmic surroundings.

### Day and Night

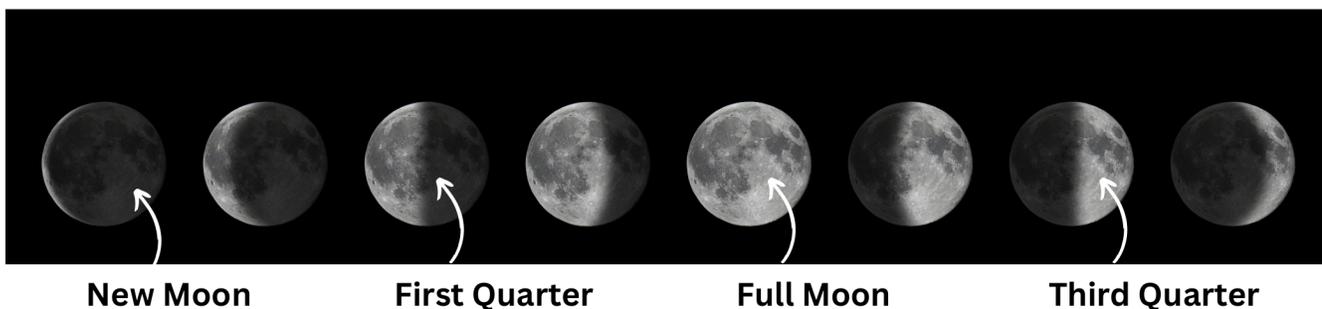
The **rotation** of Earth plays a crucial role in the alternation between *day and night*. As our planet spins on its **axis** (an imaginary line through the center of a planet), different parts of Earth are exposed to the Sun's light, creating day in some regions and night in others. This rotation takes approximately 24 hours, resulting in our 24-hour day.

### Apparent Movements of the Sun, Moon, and Stars

While Earth rotates, we perceive the Sun, Moon, and stars as moving across the sky. However, it's important to note that these celestial objects actually remain in fixed positions. The apparent movement is due to Earth's rotation. Observing the night sky, we can witness the shifting patterns of stars, which seem to move nightly. Additionally, *different stars* become visible in different seasons due to Earth's **revolution** around the Sun.

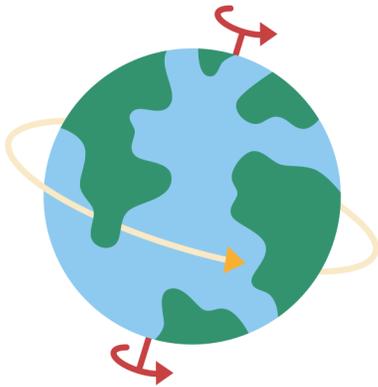
### Moon Phases

The Moon, Earth's natural satellite, displays different shapes in the sky throughout a lunar cycle, which takes about a month to complete. These changes are known as Moon phases. There are 8 full moon phases. Starting with the New Moon, when the Moon is not visible, it gradually moves through Waxing Crescent, First Quarter, Waxing Gibbous, Full Moon, Waning Gibbous, Third Quarter, and Waning Crescent before returning to the New Moon phase. These variations occur due to the Moon's orbit around Earth and the changing positions of sunlight and shadows. We will focus on learning the order of these 4 phases "New Moon, First Quarter, Full Moon, Third Quarter"

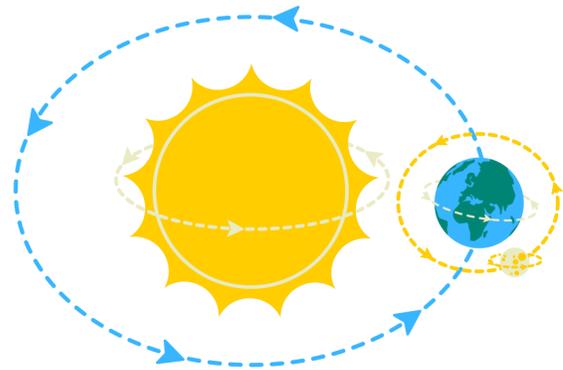


## Earth's Revolution and Rotation

In addition to its daily rotation, Earth also revolves around the Sun, completing one orbit in approximately a year. This revolution is responsible for the changing seasons we experience. As Earth orbits the Sun, its tilted axis results in different amounts of sunlight reaching various parts of the planet, leading to the distinct seasons of spring, summer, autumn, and winter.



**Earth Rotates on its Axis**



**Earth Revolves (Orbits) the Sun**

## Conclusion

Understanding Earth's movements and its relationship with celestial bodies is essential to comprehend day and night, observe shifting star patterns, recognize Moon phases, and grasp the concept of Earth's revolution and rotation. By exploring these fascinating aspects of Earth in Space and Time, we gain a deeper appreciation for our place in the universe and the wonders that surround us.

## Learning Check

1. What causes day and night on Earth? \_\_\_\_\_

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2. How long does it take for Earth to complete one rotation on its axis? \_\_\_\_\_

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3. What causes the stars to appear to move through the night sky? \_\_\_\_\_

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4. Why do we see different stars in the sky during different seasons? \_\_\_\_\_

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5. What are the different phases of the Moon (List the 4 you are responsible to know in 5th grade), and how do they change over the course of about a month? \_\_\_\_\_

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6. How long does it take for Earth to complete one revolution around the Sun? \_\_\_\_\_

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7. What causes the changing seasons on Earth? \_\_\_\_\_

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8. Why do the Sun, Moon, and stars appear to move across the sky even though they are actually in fixed positions? \_\_\_\_\_

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9. Keisha wants to show Amy what happens during one Earth day. Keisha holds a small globe representing Earth, and Amy holds a large ball representing the Sun. What should Keisha do to show Amy what happens during one Earth day?

- A. Keisha should move the globe in one complete circle around Amy.
- B. Keisha should move the globe toward Amy and then away from her.
- C. Keisha should slowly lift the globe above her head and then lower it.
- D. Keisha should slowly spin the globe one complete time about its axis

## Food Chains Vocabulary - Student Sheet

Vocabulary	Definition
	A place in nature that plants, animals, and other living things call home
	An organism that uses energy from the Sun to make its own food
	An organism that must eat another organism to gain the energy it needs to live
	An animal that naturally hunts and eats other animals
	Consumers that only eat producers
	Consumers that eat producers and other consumers.
	Consumers that only eat other consumers.
	All living things need this to live, grow and reproduce
	A diagram that shows the flow of energy in a habitat or ecosystem
	This object is the main source of all energy in a food chain
	An animal that is hunted or killed by another animal for food