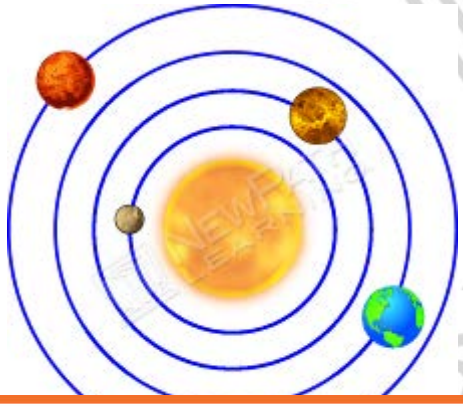
OUR SOLAR SYSTEM AND BEYOND

What Can Be Found in the Solar System?

Planets

A **planet** is a large body that revolves around the Sun. All planets rotate and revolve around the Sun.



Asteroids,

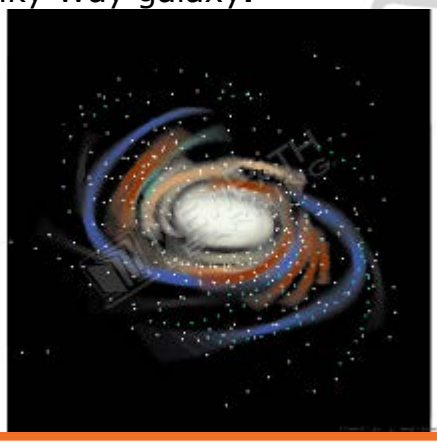
Asteroids, cor ce.
Asteroids ar **Comets** are
made of ice a f a comet is
made of vapo them as they
fly through space…at a VERY fast pace! **Meteors**, also made of rock and ice, are often referred to as shooting stars.

Lesson Checkpoint:
What are asteroids, comets, and meteors made of?

Speaking of Stars…

A star is a **hot ball of gas**. The Sun is a star that provides energy, heat, and light to living organisms on Earth. A group of stars that make a pattern in sky are known as **constellations.**

A **galaxy** is a system of dust, gas, and millions of stars held together by gravity. We live in the Milky Way galaxy**.**



Earth: Hom

The Earth's **r** wly every 24 hours which r

The Earth spins on its own **axis,** which is an imaginary straight line running through the center of the Earth, from the North Pole to the South Pole, on which the Earth rotates.

A **revolution** is the Earth moving in a path around the Sun, which results in one year on Earth.
It takes the Earth about 365 days to complete one **revolution**.

The **path** that the Earth follows as it revolves around the Sun is called its **orbit**.

The Earth revolves around the Sun, which is why we have **day and night** on Earth.

Lesson Checkpoint: What is a revolution of the Earth?

The Moon

Like the Earth

Gravity betw t.

All of the Moon shapes that are visible on Earth are called the **Moon phases**.
As the Moon orbits the Earth, the same side of Moon always faces the Earth.

Moon phases

When the Moon is between the Earth and the Sun, the **Moon looks dark**. This phase is called the **new Moon**, which begins a new set of Moon phases.

After the new Moon, the Moon begins to appear in its **waxing crescent phase**. The Moon looks like a sliver in the sky during this phase.

The **first quarter phase** of the Moon occurs when the side of the Moon visible to us on Earth Moon appears to be half full on its right side.

This is a picture of the Moon in its **waxing gibbous phase**. Waxing means growing, meaning we see more of the Moon's surface as it begins to reach its full Moon phase.

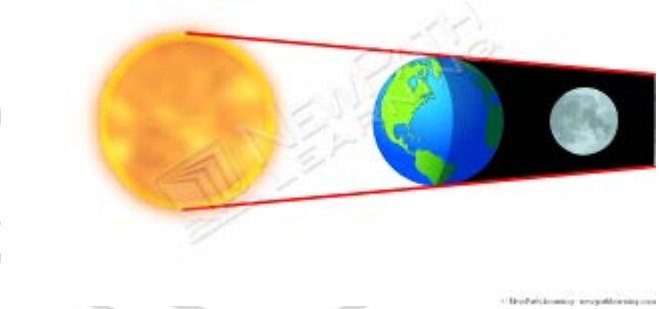
When the Sun and Moon are on opposite sides of the Earth, the Moon appears full, because the Sun is reflecting its light completely on the half of the Moon visible to us on Earth.

This is a picture of the Moon in its **waning gibbous phase**. Waning means to get smaller, meaning we start to see LESS of the Moon's surface as it begins to reach its new Moon phase once again.

What is the difference between a WAXING and a WANING Moon?

More exciting things you can see in the sky:

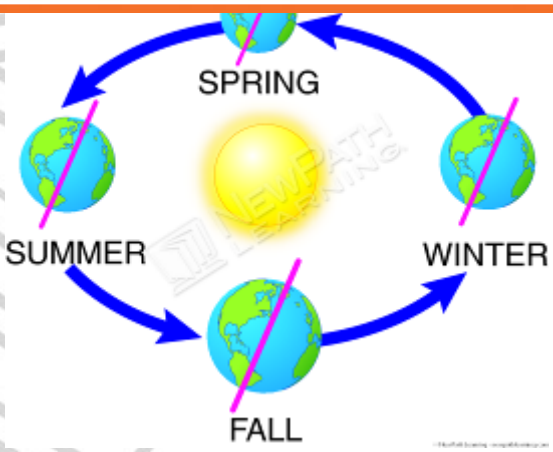
A **lunar eclipse** occurs when the Moon and Sun are on exactly opposite sides of the Earth. The Moon passes through Earth's shadow so there is no Moonlight or reflection of the Sun on the Moon that night.



A **solar eclipse** occurs in the sky when the Moon passes between the Sun and the Earth and casts its shadow on Earth. The daytime sky is dark for a few minutes when the Moon blocks the Sunlight. These don't happen very often. Don't look at a solar eclipse directly or without special glasses or the light can hurt your eyes.

Do events in th… Earth?....YE…

Seasons occu… and where the Earth is ir… orthern Hemisphere, … e Sun on the Earth's axis. … ing the winter, which …



Lesson Checkpoint:
What are two important reasons for the seasons on Earth?