

Be REFLECTIVE: Review your learning



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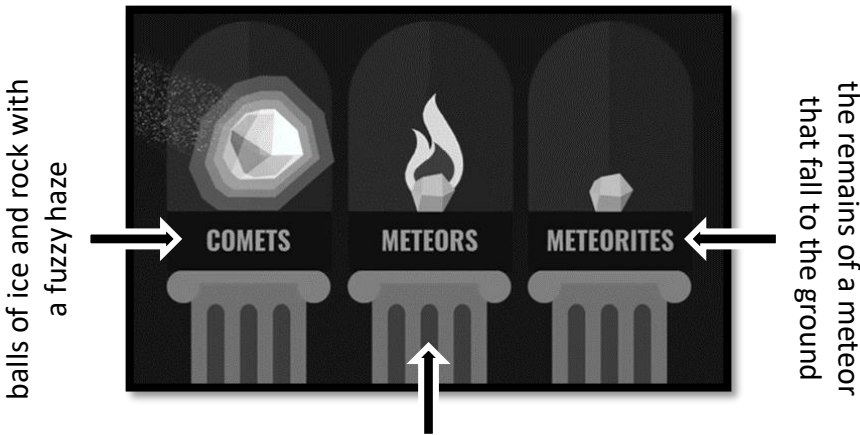
PHYSICS: SPACE

Name: _____

Objects in the Night Sky

Satellites are anything that orbit the Earth, they can be **natural** or **artificial**.

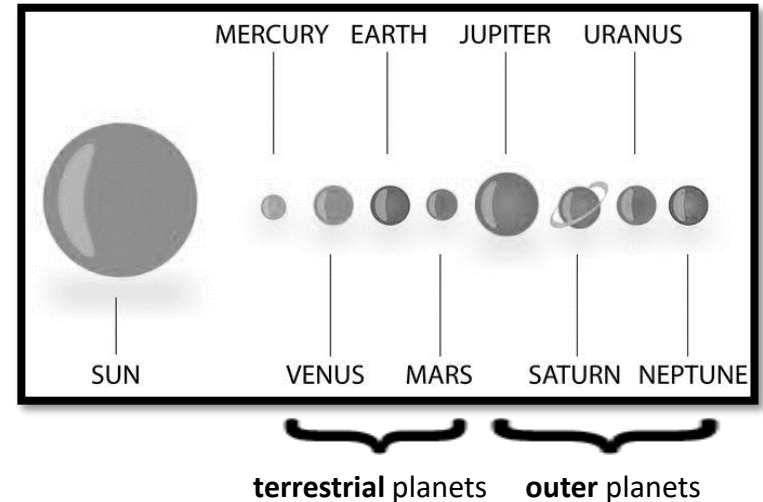
There are five **planets** that we can see from Earth with the naked eye: Mercury, Venus, Mars, Jupiter and Saturn.



small balls of dust or rock that burn up in the Earth's atmosphere producing streaks of light

Most of the lights in the sky are **stars** in our **galaxy**, the **Milky Way**. We can talk about their distances from Earth in terms of **light years**: the distance light travels in a year.

There are billions of stars in each galaxy. The Milky Way is just one of billions of galaxies in the **universe**.



The Solar System

There are eight planets in our solar system, which orbit the Sun in an **ellipse** shape.

The **asteroid belt** is between Mars and Jupiter. It contains thousands of pieces of rock.

The terrestrial planets are made from **rock**, whereas the outer planets are **gas giants**.

The solar system was formed when **gravity** pulled gas and dust together to first form our Sun about 5 billion years ago. Planets formed in a similar way afterwards.

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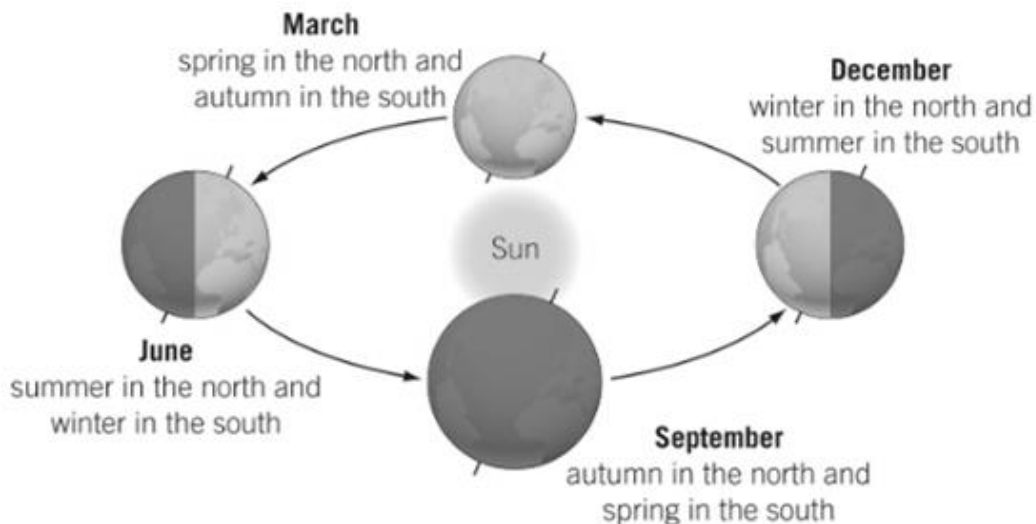


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The Earth and Seasons



The Earth spins on its **axis**, tilted at 23.4° . It takes 24 hours (one day) to fully rotate.

This spin gives us **day** and **night**: day when you face the Sun, night when you face away.

The Earth orbits around the Sun approximately once every 365 days (one **year**).

The tilt gives us **seasons**: it's summer when a hemisphere tilts towards the Sun and winter when it tilts away. It's hotter in the summer as the days are longer and the Sun warms the Earth for longer. The rays from the Sun are more concentrated than they are in winter.

The Moon

The same half of the Moon is always lit up by the Sun, but how much we see from Earth depends on where it is in its orbit (see diagram to the right).

The light from the Sun can be blocked when the Earth comes between the Sun and the Moon. This is called a **lunar eclipse**.

When the Moon comes between the Sun and the Earth, sunlight cannot reach parts of the Earth's surface. At these points there is a **solar eclipse**.

