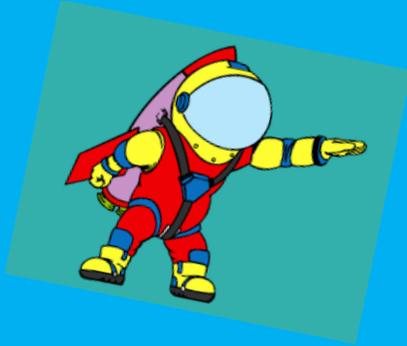


# UNIT 0. THE SOLAR SYSTEM AND EARTH



**PRIMARY 4 / Social Science**

**Pedro Antonio López Hernández**



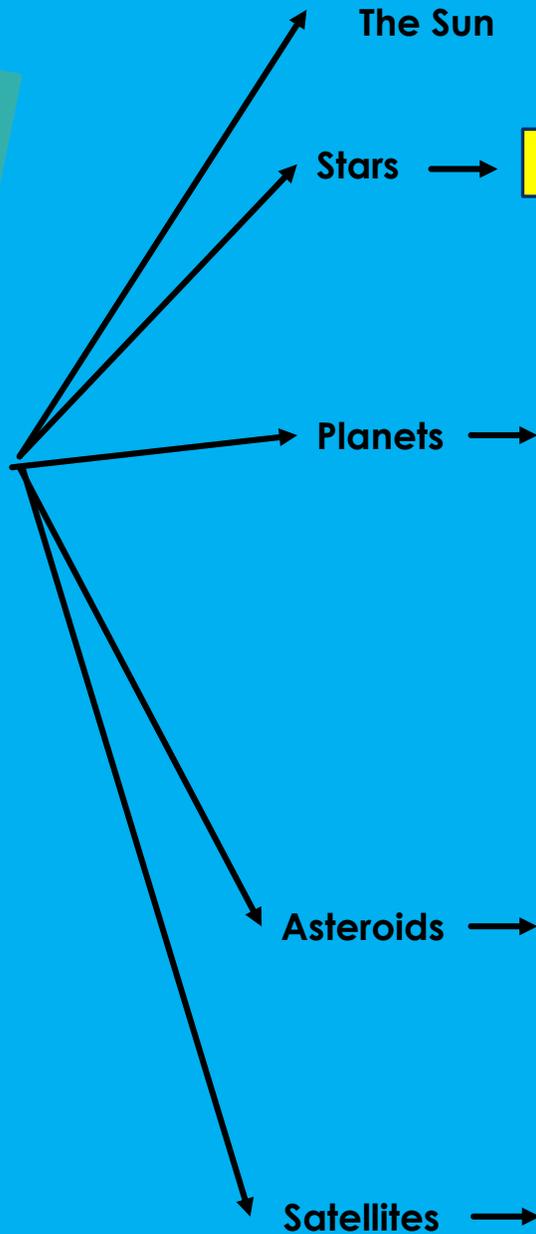
# THE SOLAR SYSTEM



The solar system and a lot of planetary systems originate **GALAXIES**.

Our galaxy is called **THE MILKY WAY** and it is only one of the many galaxies that make up the universe.

The solar system is formed by:



The Sun

- It is the **centre of the solar system**.
- It is **the biggest star in our solar system**.

Stars

- They are celestial bodies that **give out light and heat**.

Planets

- They are celestial bodies that **do not give out light and heat**.
- They are **big spherical bodies**.
- They **rotate on their own axis**.
- They **orbit around the Sun**.

*\*The four planets closest to the Sun are made mostly of rocks and metals.*

*\*The four planets furthest from the Sun are made mostly of gas.*

Earth is our planet

Asteroids

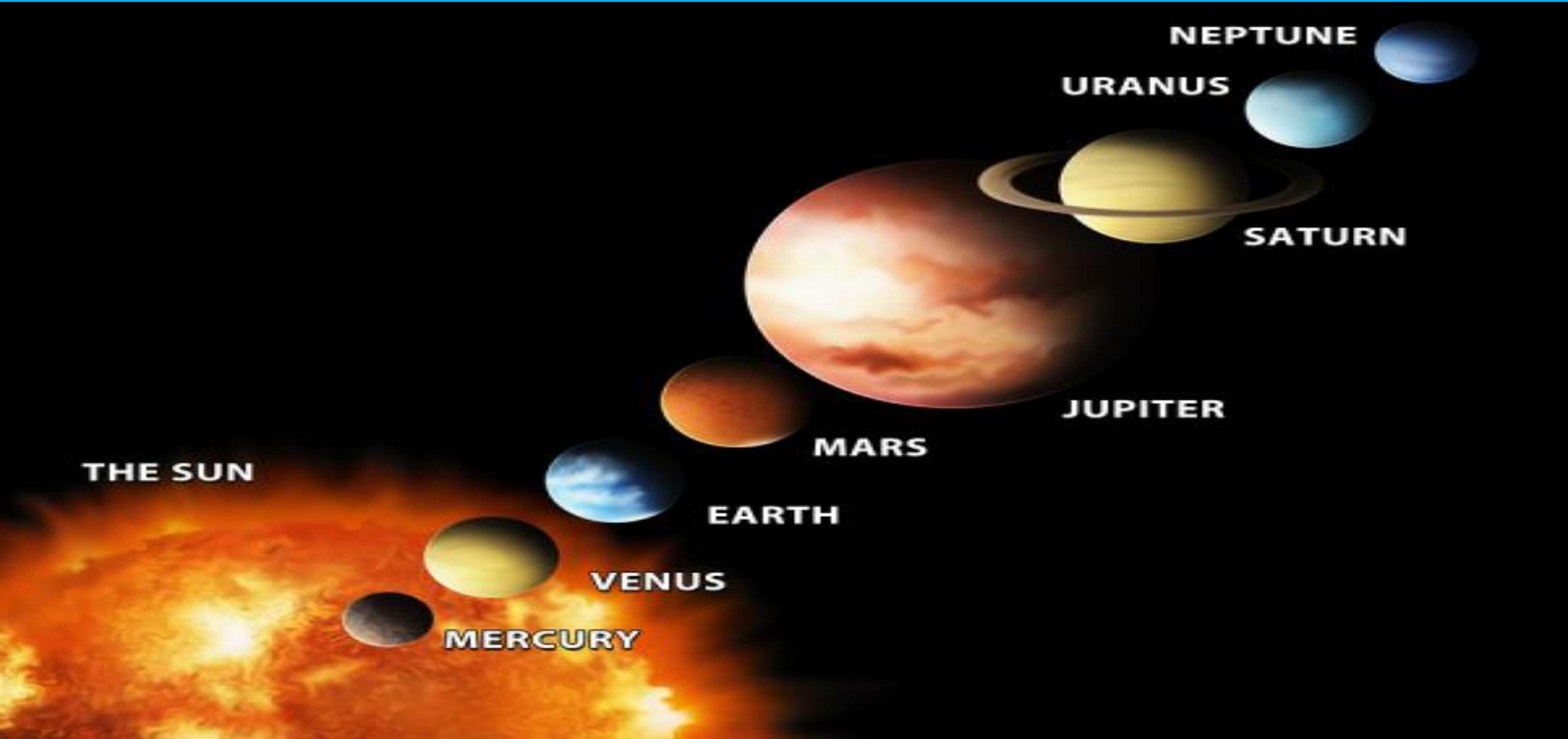
- They are **small fragments of rock that orbit around a star**.
- \* In the solar system, there is a big asteroid belt between Mars and Jupiter.*

Satellites

- They are **spherical bodies that don't give out light**.
- They **orbit around planets**.
- **The Moon is the natural satellite that orbits Earth**.

# SOLAR SYSTEM

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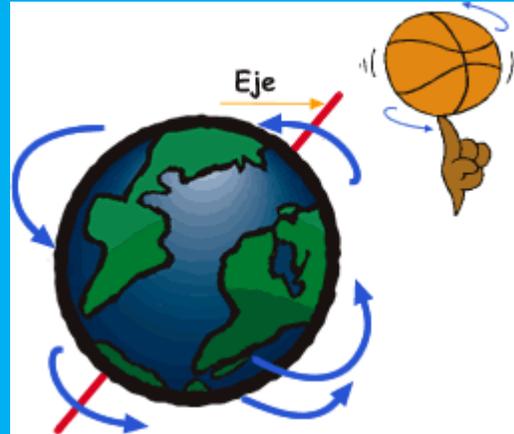
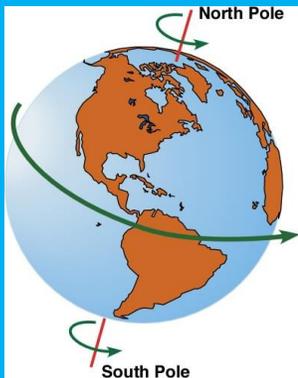


# THE MOVEMENTS OF EARTH

## Earth's rotation

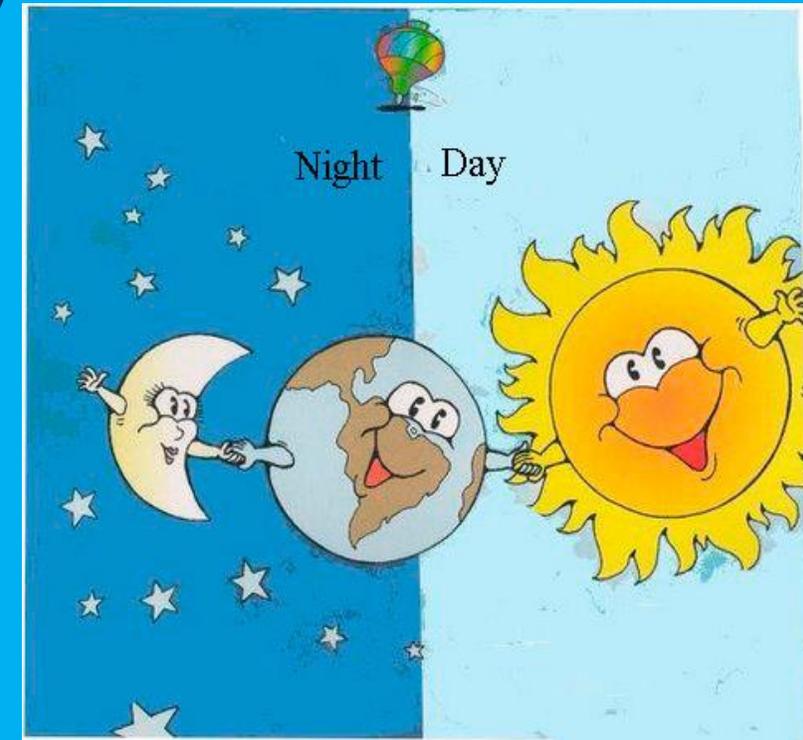
Earth spins on its axis which is an imaginary line that unites the poles.

The Sun's rays reach different parts of Earth at different times. For this reason, it is a day in some places and a night in others.



Earth takes **24 hours** to completely spin around its axis.

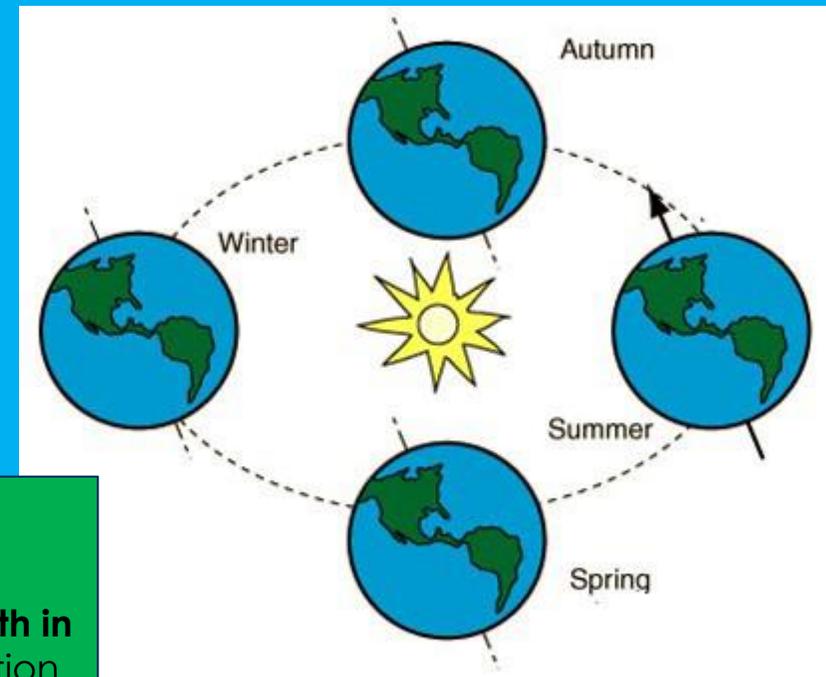
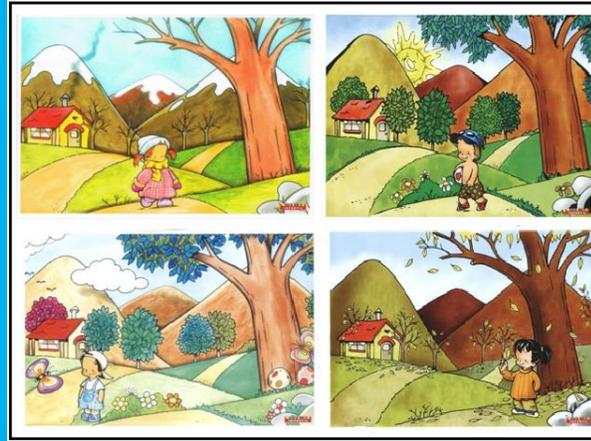
**A day:** when the Sun's rays reach the planet.



**A night:** when Sun's rays don't reach the planet.

\* Axis: It is an imaginary line that runs from the North Pole to the South Pole.

# THE MOVEMENTS OF EARTH



## Earth's revolution / Translation

REVOLUTION is Earth's movement around the Sun.

It takes 365 days (one year) to orbit around the Sun.

## THE SEASONS

The Sun's rays don't reach all parts of Earth in the same way because of Earth's revolution and because it rotates on a tilted axis.

This produces "THE SEASONS".

### Spring

It is warmer and the days get longer.

### Summer

There are strong Sun's rays because they reach you directly. It is very hot.

### Autumn

The days are shorter. It begins to get colder.

### Winter

It is very cold because the Sun's rays reach you less directly. The days are short.

### GLOSSARY

\*Hemisphere: One half of a sphere.

\*Tilted: Inclined.

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**GLOSSARY**

\*Phase: Period, stage.

\*Spherical: Like a ball.

# THE MOON

## The phases of the Moon "The lunar month"

### The Moon orbits

- It is the **natural satellite** that orbits Earth.
- It **takes 28 days** to orbit around Earth.
- It **takes around 29 days** to rotate on its axis. So, we always see the same side.

Depending on the Moon's position in relation to Earth and the Sun, we can see...:

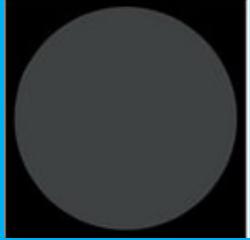
**Full Moon**  
When the Sun light up all of the Moon.



**Waning Moon**  
The Sun light up the left side.  
(It is getting smaller and smaller).



**New Moon**  
When the Sun doesn't light up any part of the Moon.



**Waxing Moon**  
The Sun light up the right side.  
(It is getting bigger and bigger).



### The Moon and Earth's tides

They attract each other like magnets.

**High tide**



HIGH TIDE

**Low tide**



LOW TIDE

\*When the Moon is not right above you, there is low tide.

\*when the Moon is right above you, there is a high tide.

\* Satellite: It is a spherical celestial body that orbits around a planet. It is non-luminous.

# REPRESENTING EARTH

A **GLOBE** is the most accurate way to depict it.

A **MAP** that represents Earth as a flat surface

**1. Northern hemisphere**

**4. Equator**

It is an imaginary line that divides Earth into two equal halves called **hemispheres**.

It includes

**2. Earth's poles**

They are furthest point from the **EQUATOR**.

**Compass rose**

With the cardinal points

**Illustrations**

**3. Parallels**

They divide the Earth from East to West. They are parallel to the equator.

**5. Meridians**

They are a imaginary lines of longitude that divide Earth from North to South. They always pass through the poles.

West

North

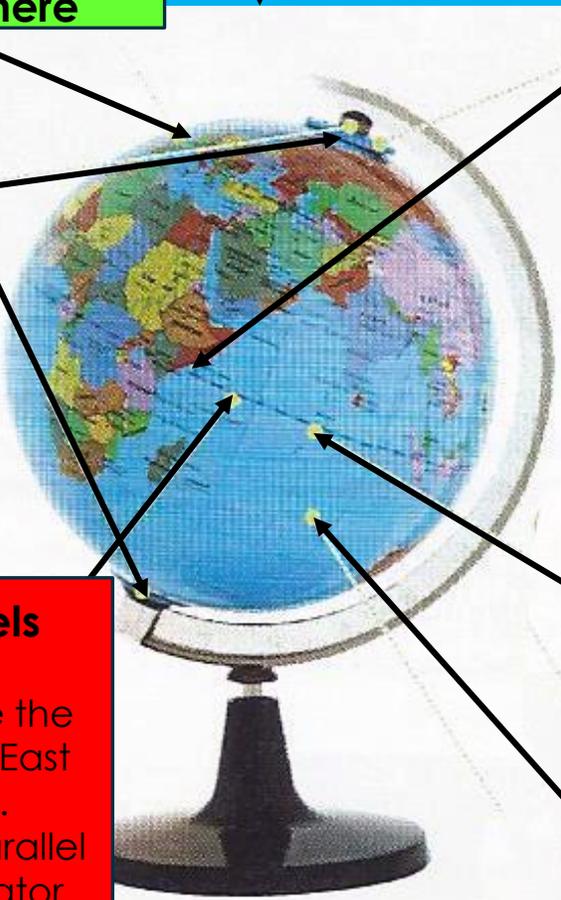
East

South

**6. Southern hemisphere**



**Legend:** It explain what the symbols on the map mean.



# THE LAYERS OF EARTH

Earth is made up of three layers that can be clearly seen from space.

## 1. THE ATMOSPHERE

It is the layer of air that surround Earth.

**It protects living things from the heat of the Sun.**

## 2. THE GEOSPHERE

It is the layer of rock from the centre to the Surface of Earth.

It is divided into three parts:  
**The core, the mantle and the crust.**

## 3. THE HYDROSPHERE

It is a discontinuous layer of water at Earth's crust.

**It can be found in three states:  
liquid, solid or gas.**

