

REVIEW OF PRIMARY 4

NATURAL AND SOCIAL SCIENCE



Pedro Antonio López Hernández

INVERTEBRATES

Characteristics of invertebrates

- They eat other living things.
- Nearly all of them can move from one place to another.
- They are oviparous because they lay eggs.



Classifying of invertebrates

Invertebrates don't have **INTERNAL SKELETON**.

Types of invertebrates

- **Sponges**



- **Jellyfish**



- **Worms**



- **Arthropods**



- **Molluscs**



- **Echinoderms**



ANIMALS EVOLUTION

Some scientists found remains of dinosaurs that had wings and feathers. Nowadays, they know that the first animals on Earths were fish and the rest of animals we can see today descend from the evolution of those fish.

Classification of animals

Carnivores

Animals that **eat other animals**



Herbivores

Animals that **only eat plants**



Omnivores

Animals that **eat both animals and plants**



PLANTS



Roots

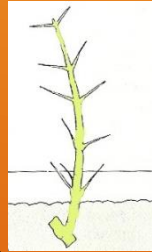


They help to keep it in place.

They **take in the water and minerals** a plant needs to make its food.

Stem

*(In a tree it is called **trunk**)



They **support the leaves**.

It helps the plant to stay upright.

It **transports the nutrients to other parts of the plant**.

Inside the stem, **there are two types of ducts**.

Leaf (S) Leaves (P)



They make food from the plant. They turn water and minerals into nutrients.

- They can make **their own food**.
- They live **attached to the ground**.
- Most plants have **roots, a stem and leaves**.

THE CIRCULATORY SYSTEM

It distributes nutrients and oxygen to different parts of the body and gets rid of unwanted substances

Parts of the circulatory system

Blood

It is a red liquid that contains the nutrients and oxygen that our body needs.

It also carries the unwanted waste substances that our bodies need to remove.

Blood vessels

They transport the blood around the body.

There are three types:

Capillaries

They are very thin vessels that connect the arteries with veins.

Veins

They carry blood from the rest of the body to the heart.

Arteries

They carry blood from the heart to the rest of the body.

Heart

- **It pumps blood around the body** through the blood vessels.
- It is the fist and sits between the lungs.
- It continuously contract and relaxing automatically. This process is called **HEARTBEAT.**

THE PROCESS OF RESPIRATION

Through this process, we take in oxygen from the air outside and we transport it to different parts of our body.

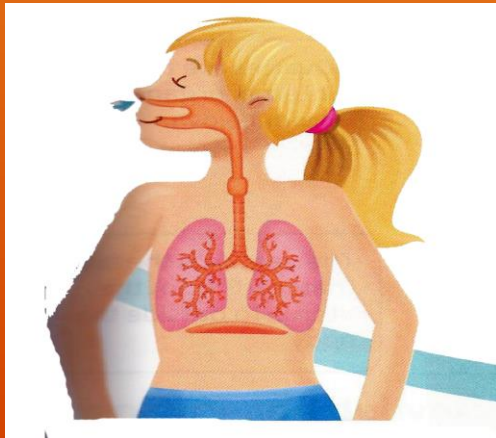
There are three states of respiration

Inhalation

Gas exchange

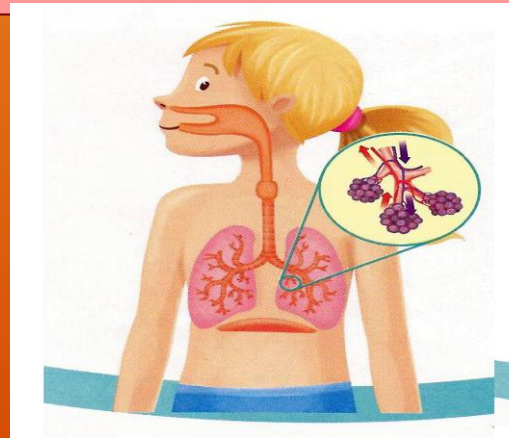
Exhalation

The diaphragm contracts, allowing the lungs to get bigger and fill up with air from the mouth and nose.

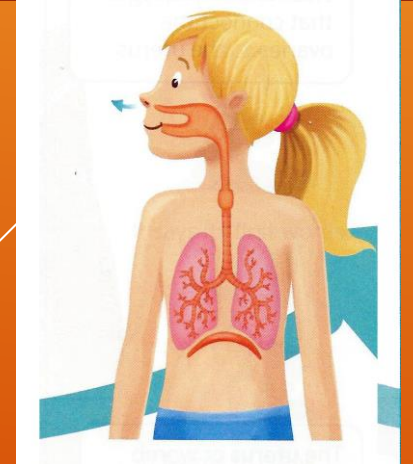


Oxygen that we breathe passes through the alveoli and into the blood.

At the same time, carbon dioxide passes from the blood into the lungs.



The diaphragm relaxes, causing the lungs to get smaller and push carbon dioxide out of the body.



REPRODUCTION



Human beings are able to make other human beings thanks to the reproductive system. Men and women have different reproductive systems.

The female reproductive system

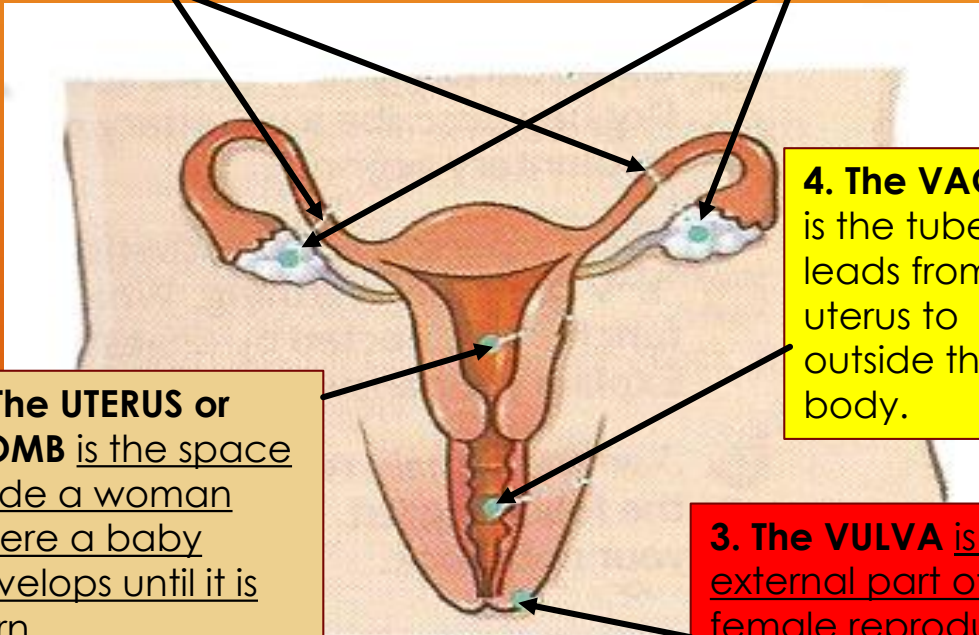
1. FALLOPIAN TUBES are two internal passages that connect the ovaries to the uterus.

5. OVARIES are two internal organs that produce OVULES.

4. The VAGINA is the tube that leads from the uterus to outside the body.

2. The UTERUS or WOMB is the space inside a woman where a baby develops until it is born.

3. The VULVA is the external part of the female reproductive system.

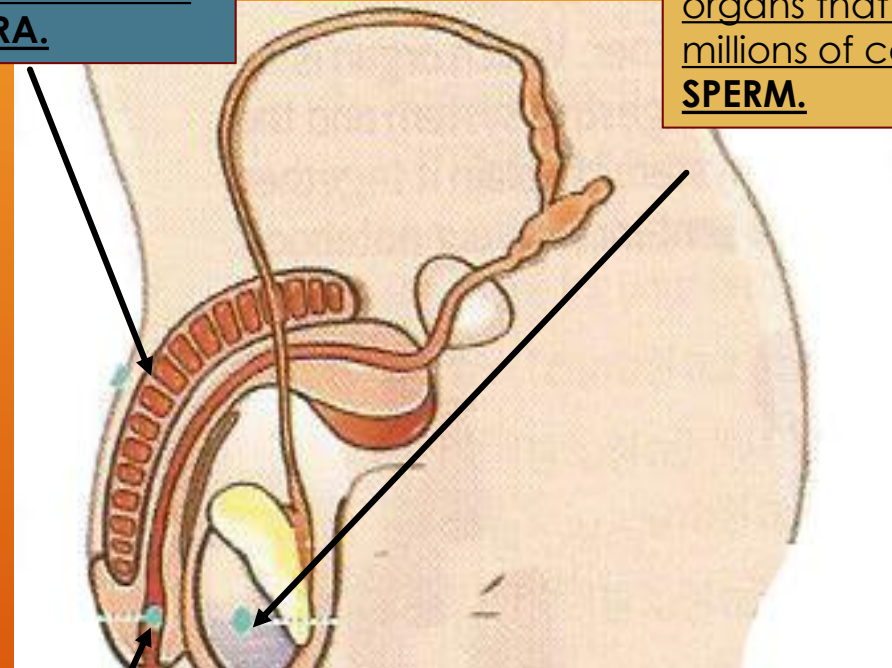


The male reproductive system

1. The PENIS is an external organ that contains the URETHRA.

2. TESTICLES are two oval shaped external organs that produce millions of cells called SPERM.

3. The URETHRA carries urine from the bladder. It also carries semen, which is a mixture of fluids and sperm.



INTERACTION



It is a vital function of living things. Human beings have **five senses**: sight, hearing, smell, taste and touch.

We use our senses to detect stimulus around us and send messages to the brain.



1

Our sense organs receive information from our **SURROUNDINGS**. This is called **STIMULUS**.

For example:
It is raining



2

The **NERVOUS SYSTEM** interprets this information and decides how to respond.

For example:
The decision in to open an umbrella.



3

The **MUSCULOSKELETAL SYSTEM** allows us to carry out those responses.

For example:
Open the umbrella



SOURCES OF ENERGY

↓
WIND and PETROL supply energy and are known as **ENERGY SOURCES**. There are two types:

Renewable energy sources

THE **SUN, WIND AND WATER** supply renewable energy because they are constantly being renewed.

Wind

Wind turbines transform wind energy into electricity.



Moving water

Hydroelectric power stations transform falling water into electricity



The Sun's rays

Solar panels transform solar energy into heat or electricity



Non-Renewable energy sources

We may run out with **FOSSIL FUELS** because we are using them faster than we can produce them.

Coal

It is mined from the ground.
We burn it to produce heat and electrical energy.



Gas

It is extracted by drilling into the ground.
We use it primarily for heating.



Petrol

It is extracted by digging wells in the ground.
We use it to produce fuel and plastics.



MATTER

It is everything around you. **Matter** is anything that has mass and takes up space.

Properties of matter

Volume

Mass



Specific properties of matter

These properties make each type of matter good for some uses but not for others.

1

Flexibility

- Cloth is **flexible** because it can bend without breaking.
- Wood is **rigid** because it cannot bend.

2

Resistance

- Brick is **resistant** because it is difficult to break.
- Glass is **fragile** because it is easy to break.

3

Hardness

- Steel is **strong** because it is difficult to be scratched.
- Plastic is **soft** because it can be scratched.

4

Conductivity

- Wood is **insulating** because it does not conduct heat.
- Metal is heat **conductive** because it transmits heat.



It is amount of space a body occupies.

We measure volume with **LITRES**, using instruments like **MEASURING JUGS** and **CYLINDERS**. We use different containers depending on the amount of volume we want to measure.

It is the amount of matter in a body.

We measure mass in **GRAMS** or **KILOGRAMS** using **SCALES** and **BALANCES**.

When the two pans are level, the two objects have the same mass.

MACHINES

They are devices made of different materials. They help us complete tasks with less effort and make our lives easier. Machines have been modernised over time.

We can classify machines in two groups

Simple machines

They have one or very few parts, as wheel or scissors.



Complex machines

They are made up of many parts. Some of these parts may be simple machines.

For example: A bicycle and a television.



Depending of the type of energy they use, the can be classified in three groups

Manual machines

They use our energy to work.

For example:

- Scissors
- Shovel
- Hammer



Electrical machines

They use electrical energy.

For example:

- Laptop
- Mixer
- Lamp



Thermal machines

They use energy obtained by burning fuel.

For example:

- Aeroplane
- Ship
- Car





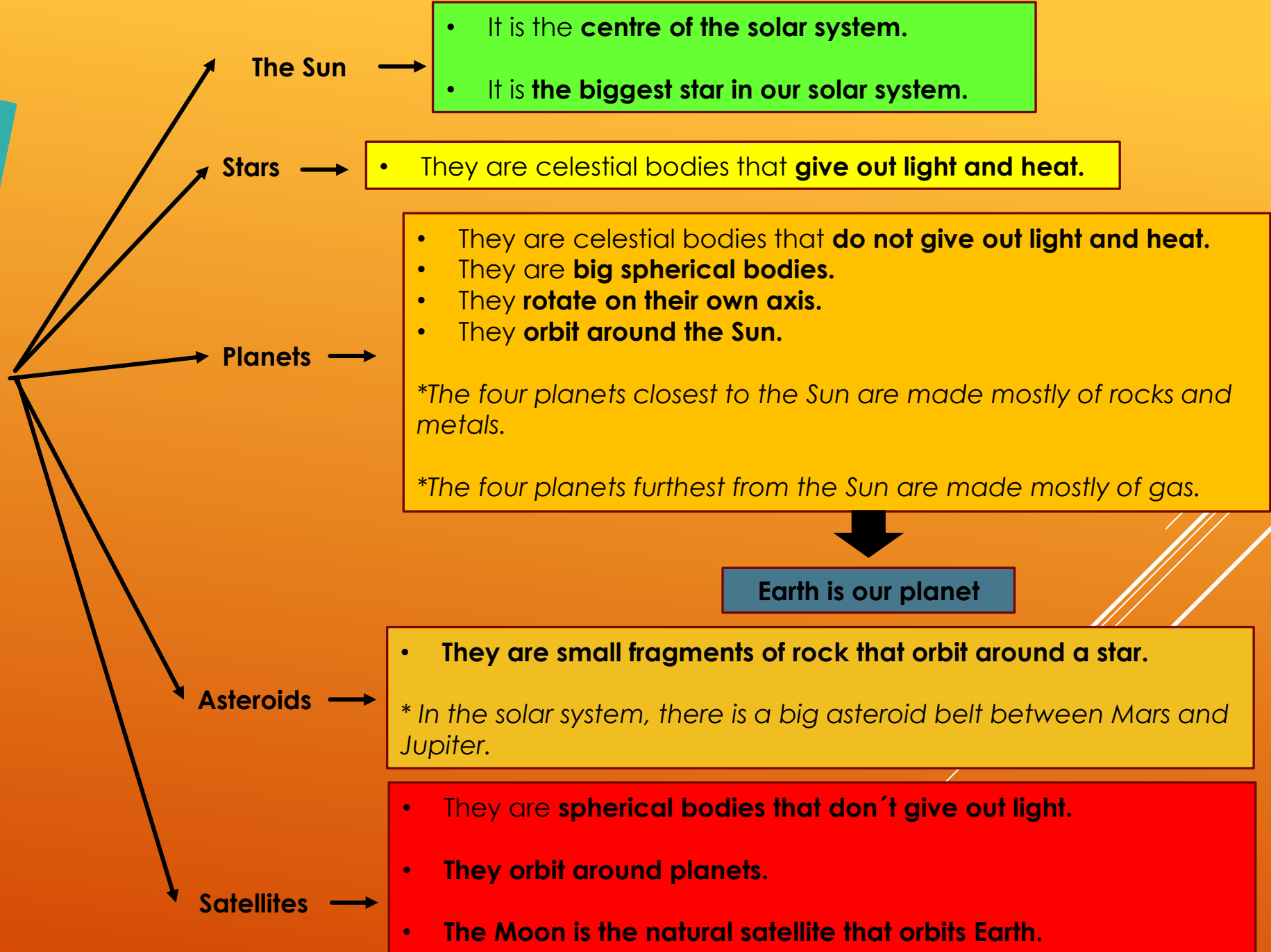
THE SOLAR SYSTEM



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.

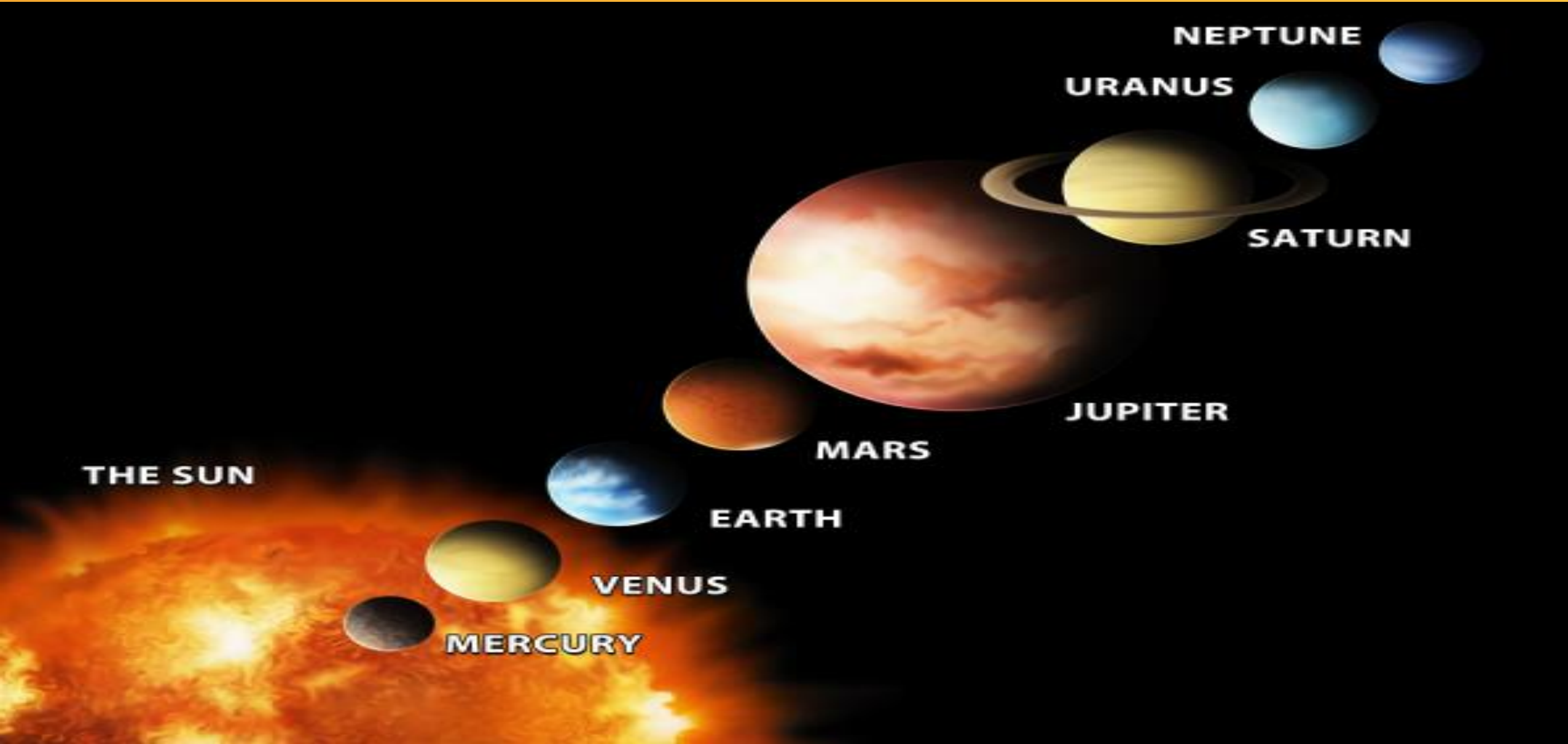
The solar system is formed by:



Earth is our planet

SOLAR SYSTEM

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LAYERS OF THE ATMOSPHERE

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The atmosphere is a mixture of gases that surround Earth and separate it from the rest of the universe. There are five different layers of the atmosphere.

1. TROPOSPHERE

It contains the most oxygen and water vapour. Most of the atmospheric phenomena that characterise the weather happen in this layer.

3. MESOSPHERE

It is the coldest layer. Here we can see shooting stars.

4. THERMOSPHERE

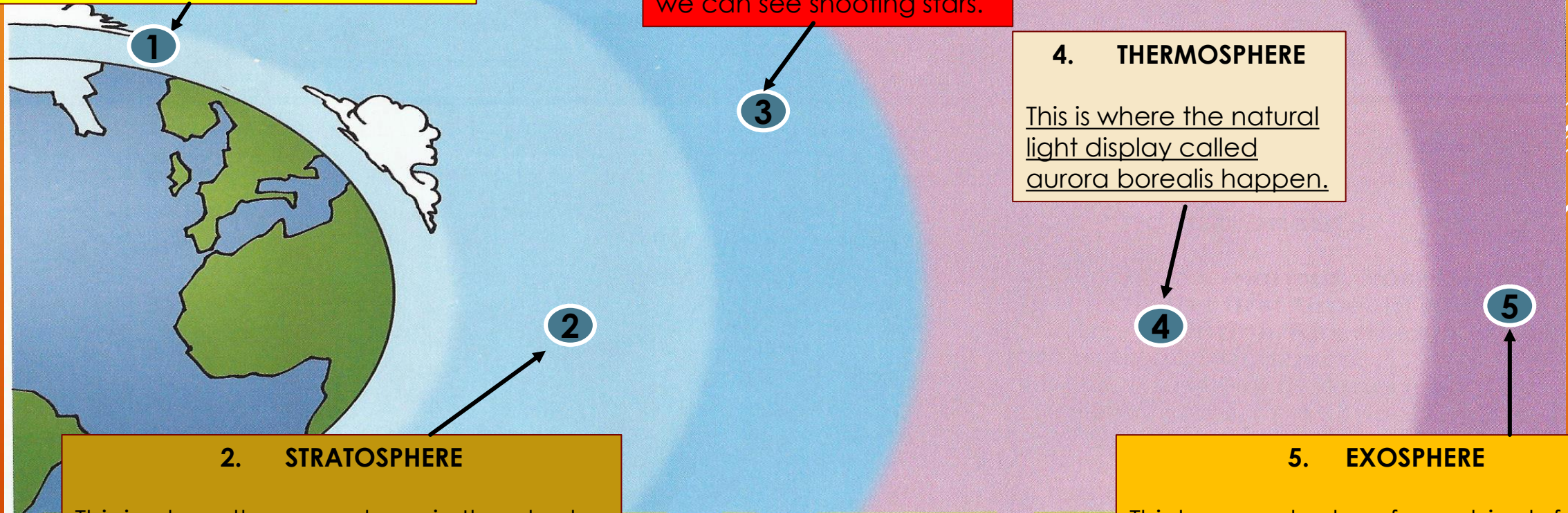
This is where the natural light display called aurora borealis happen.

2. STRATOSPHERE

This is where the ozone layer is. It protects Earth from the Sun's harmful rays.

5. EXOSPHERE

This layer protects us from objects found in outer space like meteorites



THE WEATHER

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It is mainly characterised by **THREE ATMOSPHERIC PHENOMENA:**

Air temperature

It causes hot or cold weather in a particular place.

- If the temperature of air is low, it is cold.
- When the temperature of air is high, it is hot.



Water vapour

It causes precipitation, which is the water that falls from the atmosphere.

Precipitation can be

Rain



Snow



Hail



Wind

It is the movement of air.

Depending on its force, it can be

A soft breeze



A gale



A hurricane



THE HYDROSPHERE

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It is a discontinuous layer of water covering approximately three quarter of Earth's surface.

States of water

Water cycle

It is the process by which water is constantly in circulation from one place to another and changes state many times.

Solid state



Most of the fresh water on Earth is found in this state.

Snow and ice show water in a solid state. It is found at the poles and highest mountains.

Liquid state



Fresh water is found in river, lakes and aquifers.

Gas state



It is present in the air all around us but it is not visible to the eye.
The amount of water vapour in the air is called **HUMIDITY**.

2. Condensation

It passes into a liquid state in the clouds.

1. Evaporation

It passes into a gas state

3. Precipitation

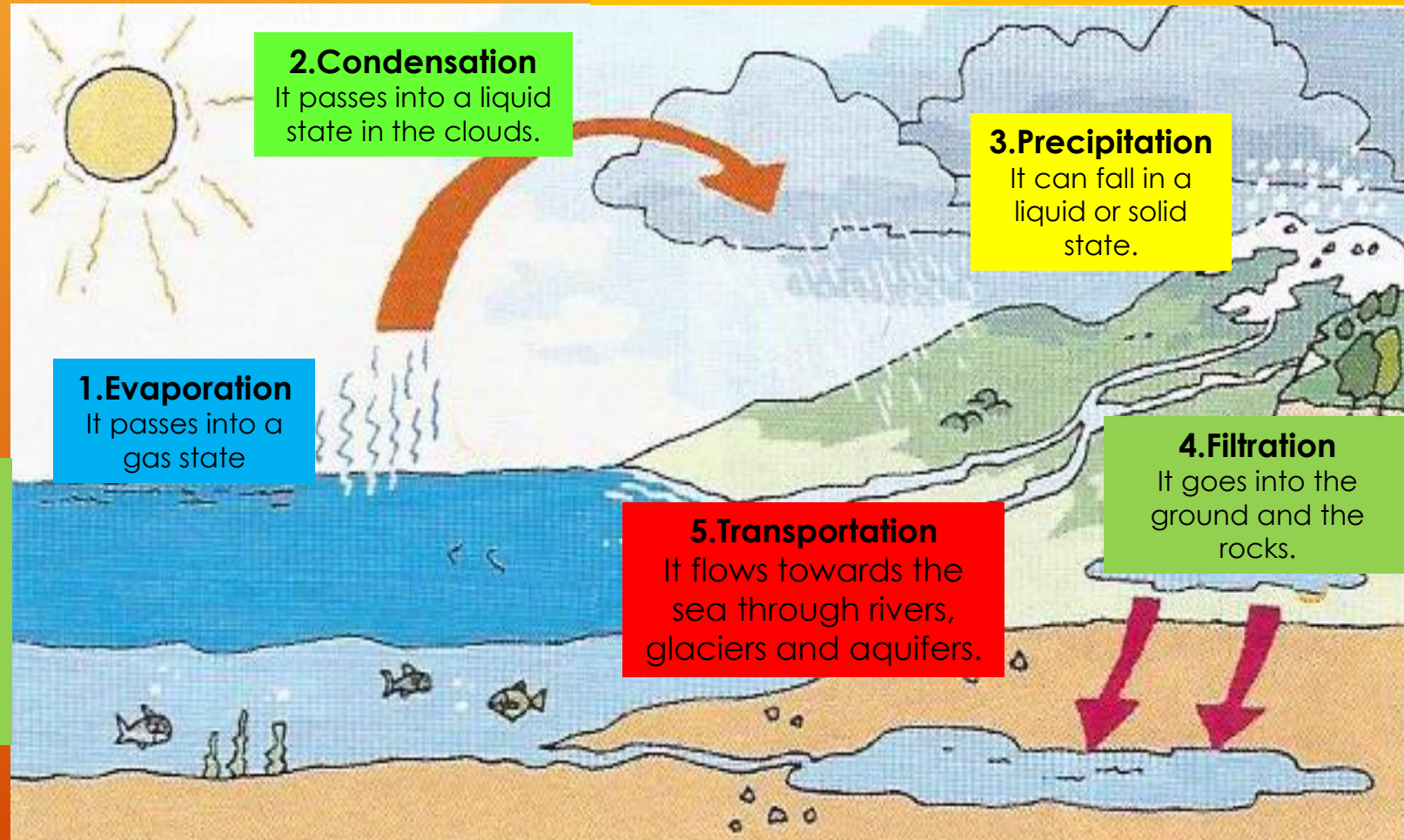
It can fall in a liquid or solid state.

4. Filtration

It goes into the ground and the rocks.

5. Transportation

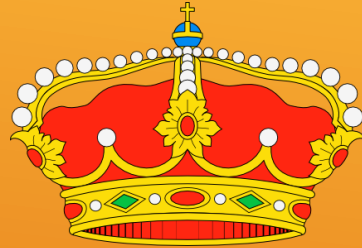
It flows towards the sea through rivers, glaciers and aquifers.



PARLIAMENTARY MONARCHY

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1. HEAD OF STATE



The **KING** doesn't have power. His job is to represent Spanish citizens abroad and defend the Constitution.

3. GENERAL COURTS OR PARLIAMENT



It is made up of two assemblies: the **CONGRESS OF DEPUTIES** and the **SENATE**.
Representatives meet there to discuss and pass laws.

2. GOVERNMENT



It is chosen by the courts. It is made up of the **PRESIDENT OF THE GOVERNMENT** and **MINISTERS**.

They write and enforce the laws.

4. COURTS OF JUSTICE



JUDGES and **other experts** work in the courts of law. They interpret the laws and decide if laws are obeyed and respected.

PERIODS OF HISTORY

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Historical sources

Historians use **objects, images, documents** and **eyewitness accounts** to help them understand the past.

In Prehistory writing hadn't been invented. So to understand it we only have material remains or objects.

Historical time

To help us understand historical time we have created ways to measure it: **YEARS (365 days)**, **CENTURIES (100 years)**, or **MILLENNIUMS (1.000 years)**.

Historians study the past by ordering historical events in time. They have divided history into stages called **PERIODS** to make this order easier to understand.



1. PALAEOLITHIC PERIOD

The first hominids appear

2.000.000 years ago



2. NEOLITHIC PERIOD

Development of agriculture and livestock

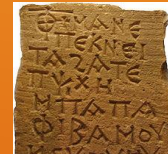
80.00 B.C.



3. THE METAL AGE

Objects are made of metal

5.000 B.C.



4. ANCIENT TIMES

The first writing appears.

3.500 B.C.



5. THE MIDDLE AGES

Fall of the Western Roman Empire

476 A.D.



6. THE MODERN AGE

Discovery of America.

1.492 A.D.



7. THE CONTEMPORARY TIMES

The French Revolution

1789 A.D.