

The Earth

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graph TD; Earth[The Earth] --> Geosphere[Geosphere]; Earth --> Hydrosphere[Hydrosphere]; Earth --> Atmosphere[Atmosphere]; Geosphere --> G1[Continents.]; Geosphere --> G2[Bottom of the seas and oceans.]; Hydrosphere --> H1[Liquid water (rivers, lakes, seas, oceans).]; Hydrosphere --> H2[Frozen water (ice caps, glaciers, icebergs).]; Hydrosphere --> H3[Water vapour.]; Hydrosphere --> H4[Underground water.]; Atmosphere --> A1[Layer of air surround the Earth.];
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Geosphere

- Continents.
- Bottom of the seas and oceans.

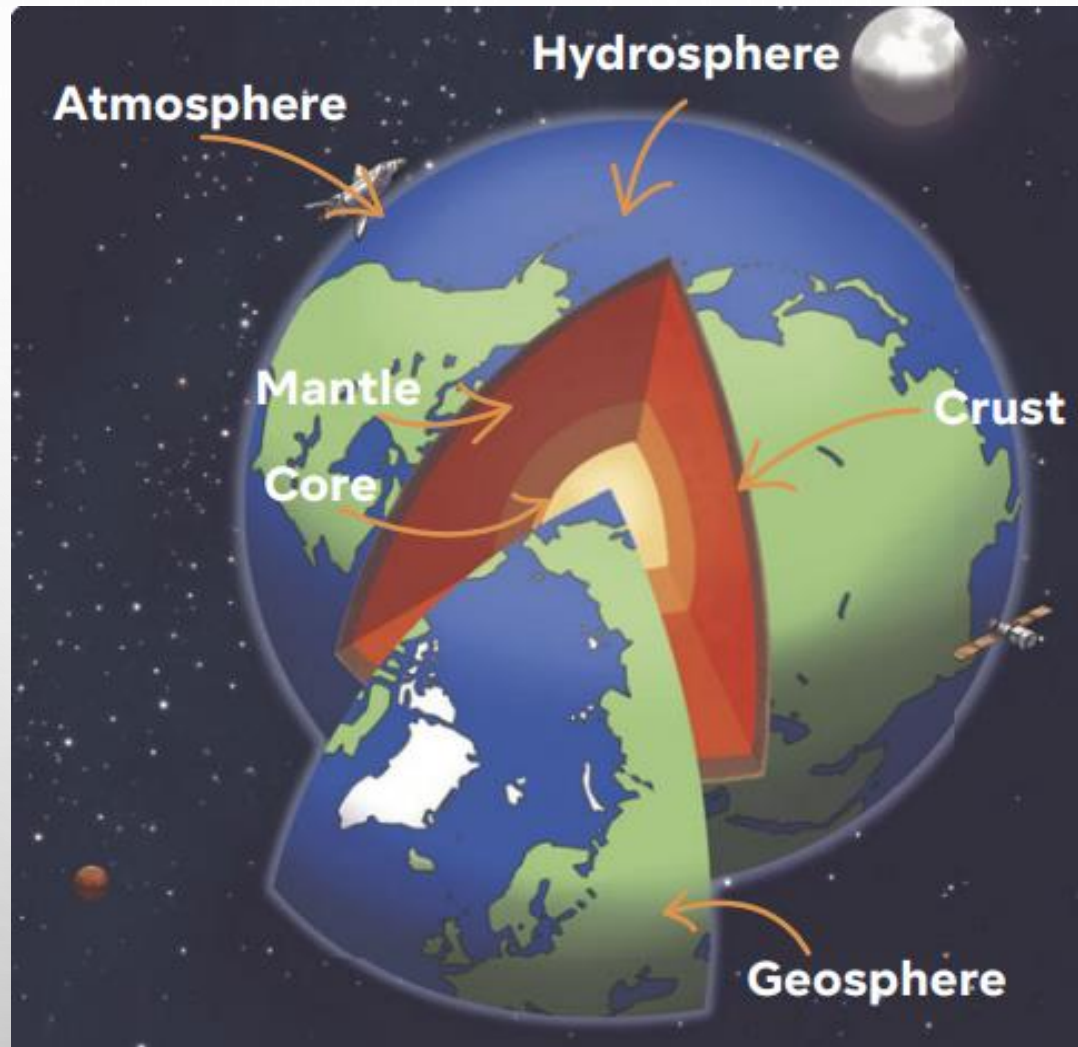
Hydrosphere

- Liquid water (rivers, lakes, seas, oceans).
- Frozen water (ice caps, glaciers, icebergs).
- Water vapour.
- Underground water.

Atmosphere

- Layer of air surround the Earth.

LAYERS OF THE EARTH



GEOSPHERE

made up of different **minerals and rocks**

- **Minerals** are made of a single component and can have different shapes, hardness, shine and colour.

Rocks and Minerals

Igneous Rocks



Sedimentary Rocks



Metamorphic Rocks

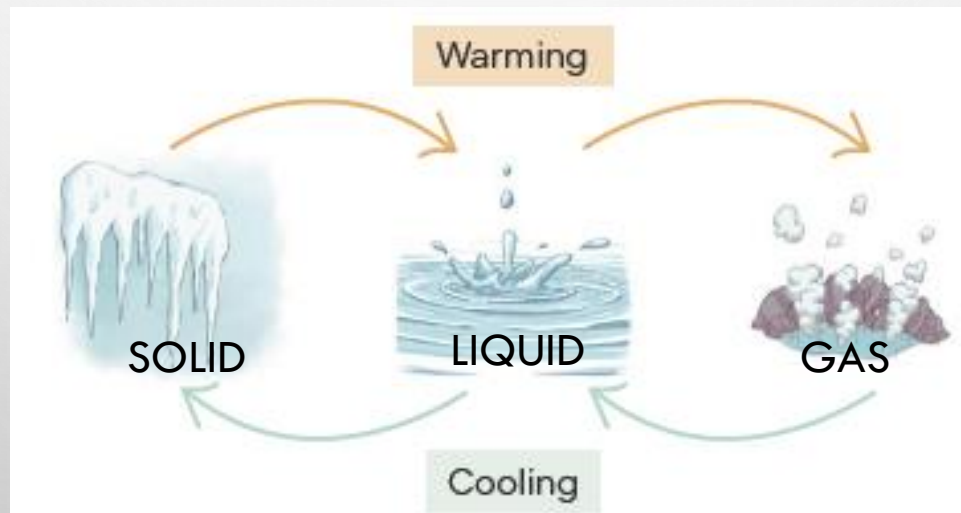
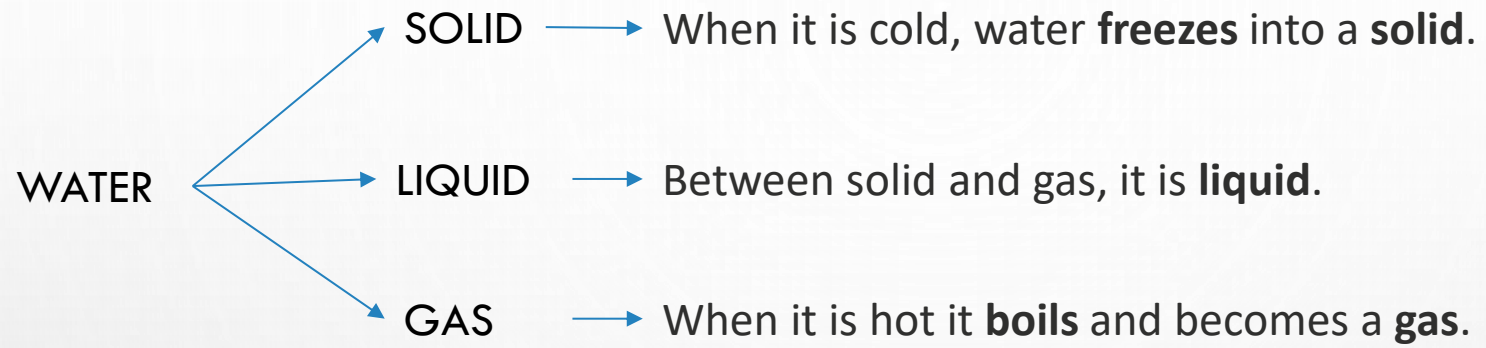


Minerals



Minerals are made of one component and can mix to make different types of **rock**.

- We need **minerals** to make things like electronics and they have lots of value.
- We use **rocks** for many things including building.



THE WATER CYCLE

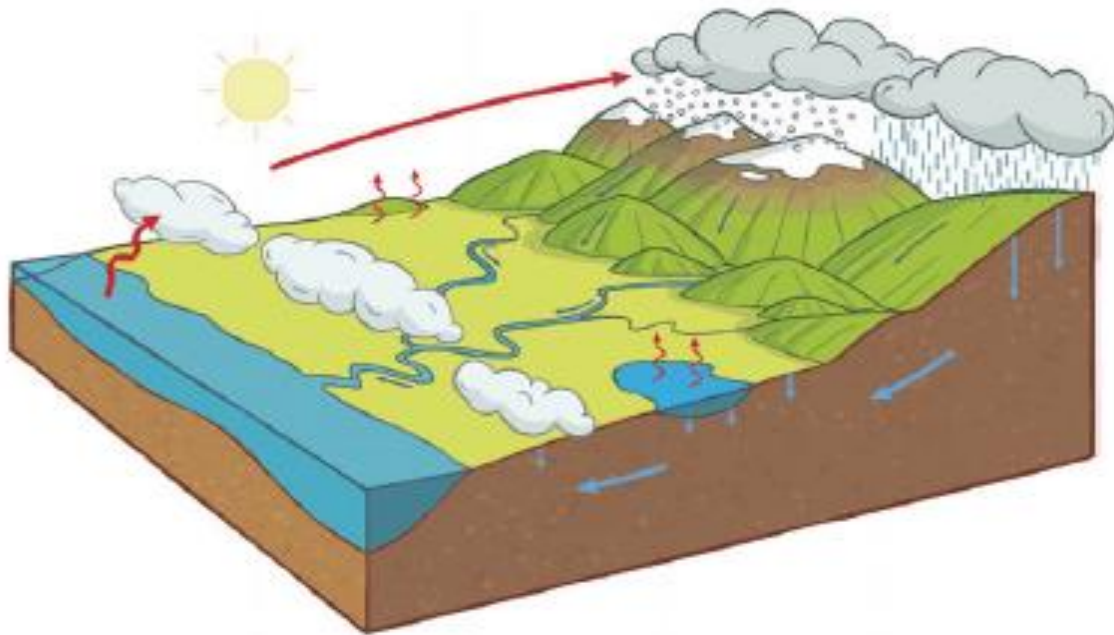
Water moves through the **water cycle**.

The sun **evaporates** water from the land and hydrosphere.

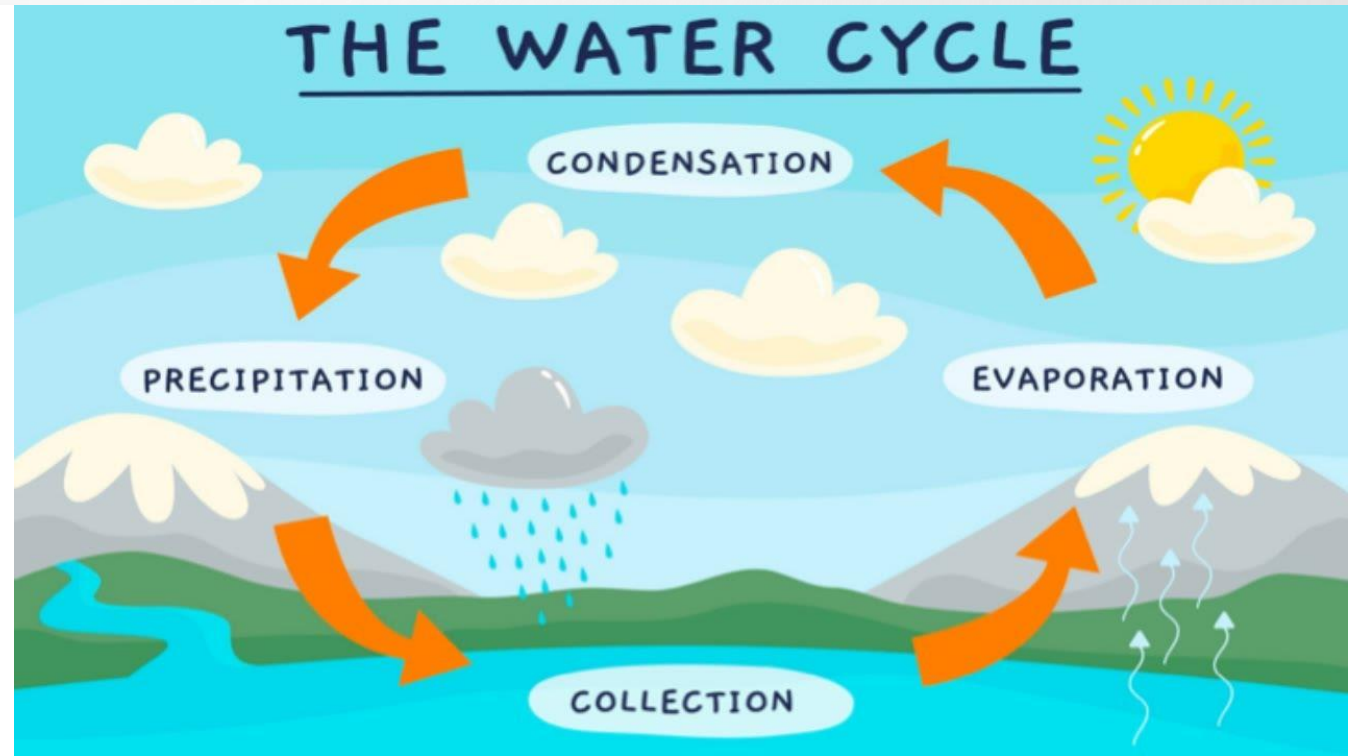
The water vapour turns into clouds in the atmosphere.

The water rains down as **precipitation**.

The water runs back into the land and the hydrosphere.



The water cycle



The water we use



- We can only drink clean water that does not contain microorganisms like viruses or bacteria.
- This is called **drinking water** or **potable water**.

Not everyone has easy **access** to **safe** drinking water.



Water is **purified** at water treatment plants. It is **filtered** to remove any garbage, dirt, branches or waste. Then, chemicals are added to remove microorganisms.



We use water for things like cooking, cleaning, drinking, and growing food or plants.

We should use water **responsibly** and should not waste it.



Atmosphere

is made up of gases

Nitrogen

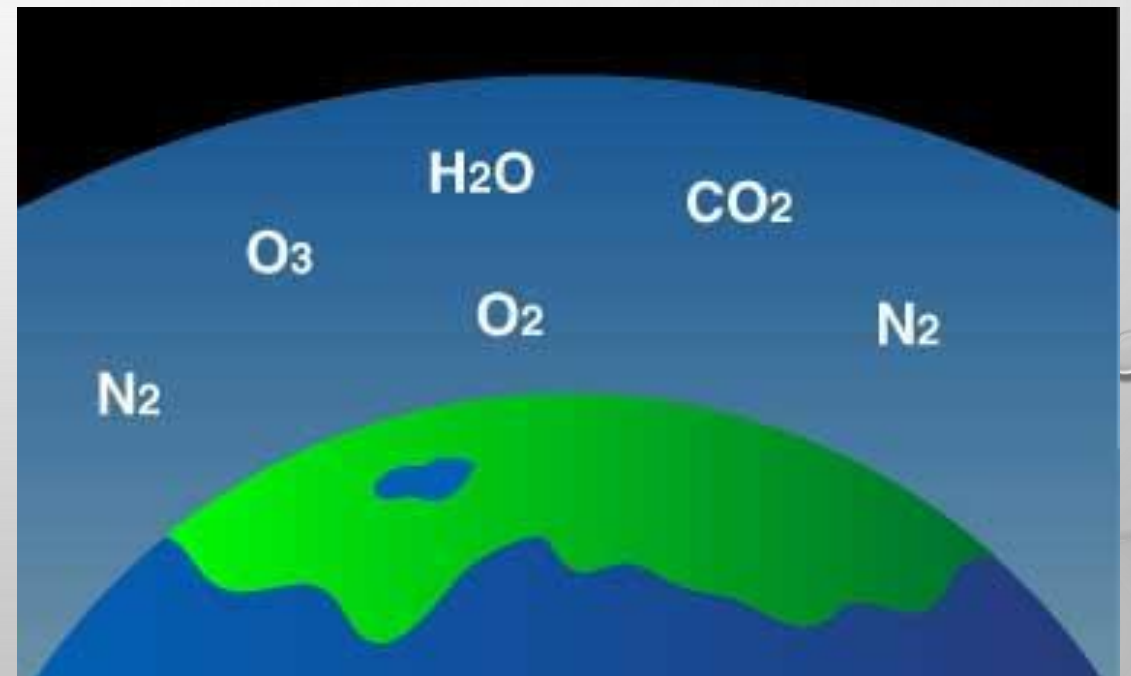
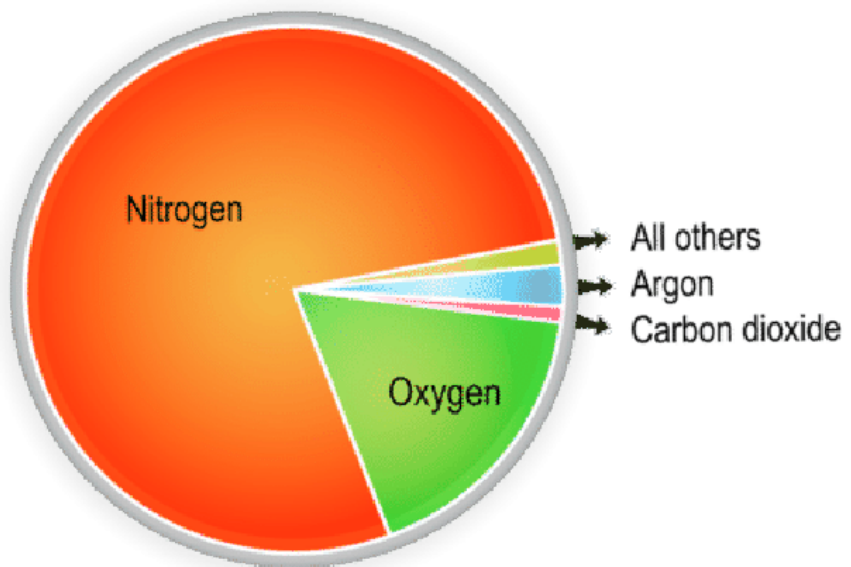
Oxygen

Carbon dioxide

Water vapour

Other elements

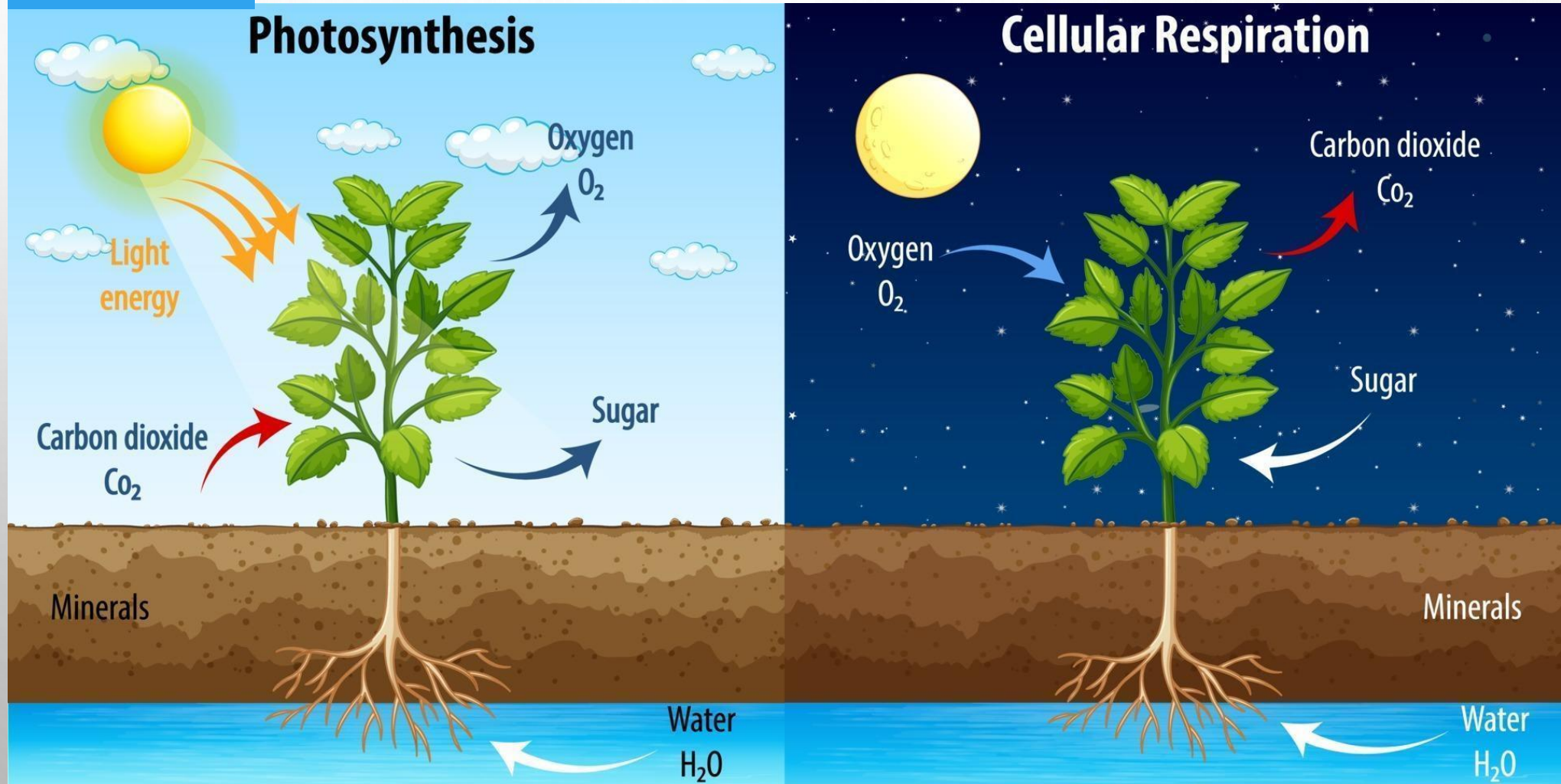
Gases in the Atmosphere



Living things use the **oxygen** and **carbon dioxide** to survive.

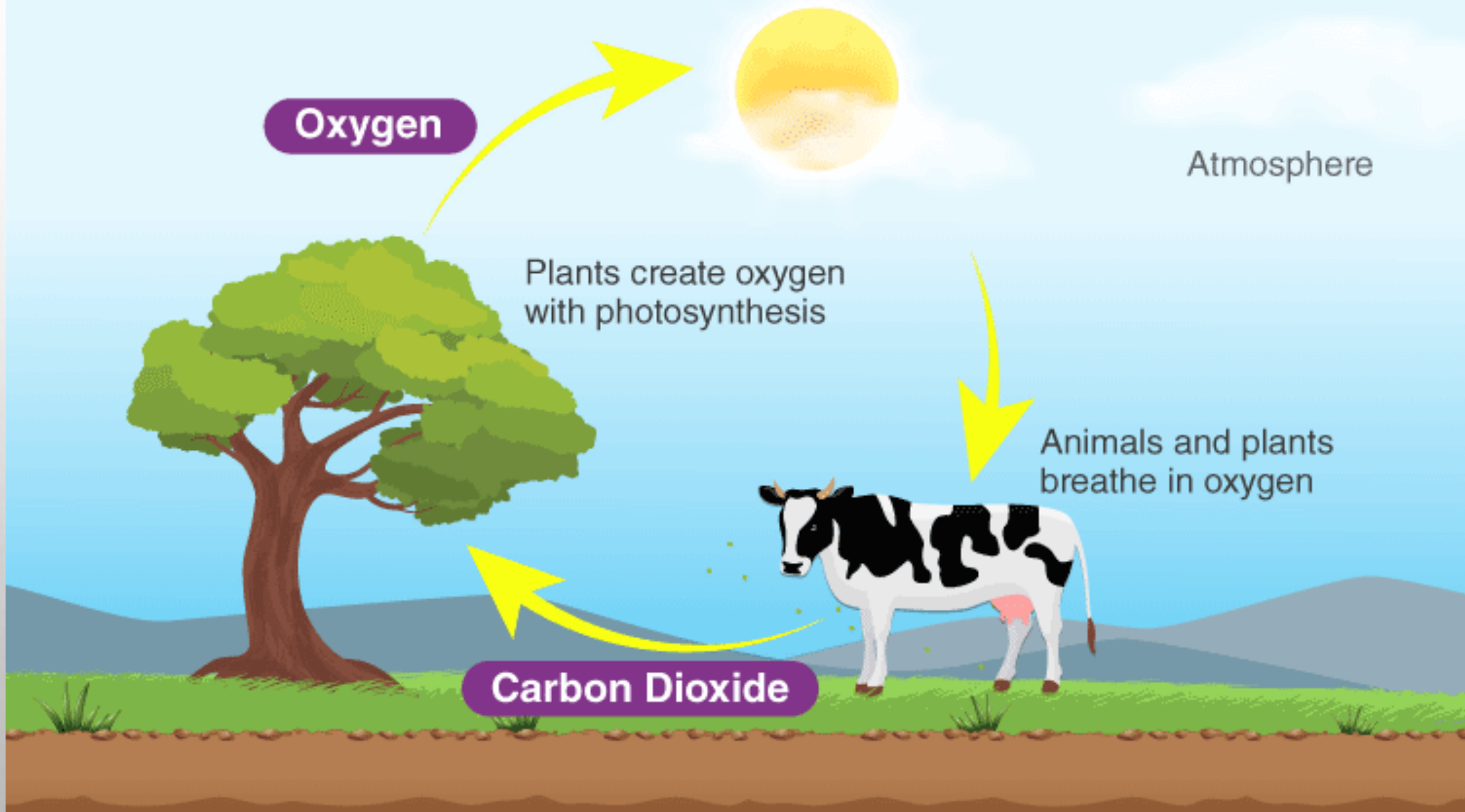
PLANTS

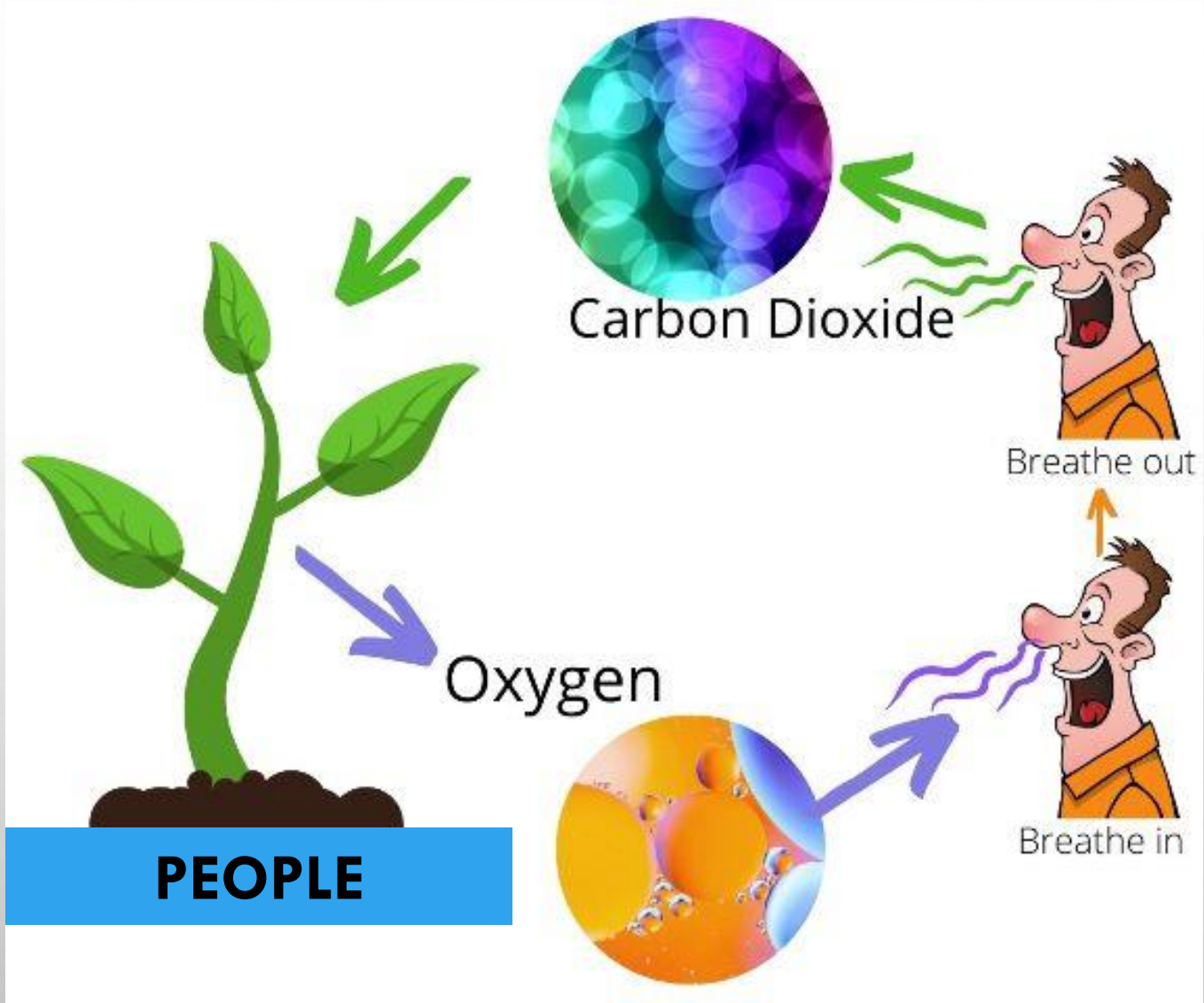
Trees and other plants take in carbon dioxide and release oxygen.



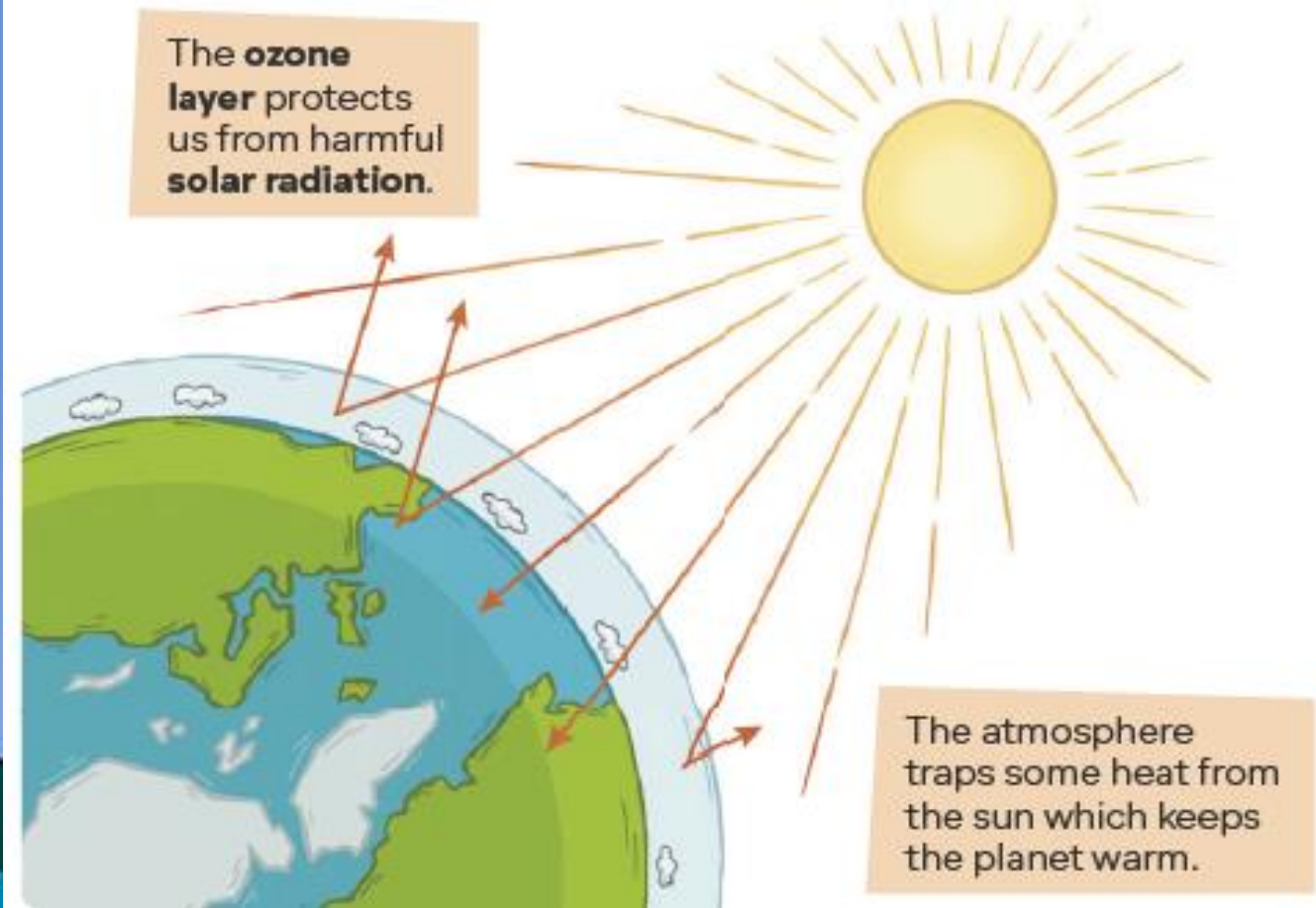
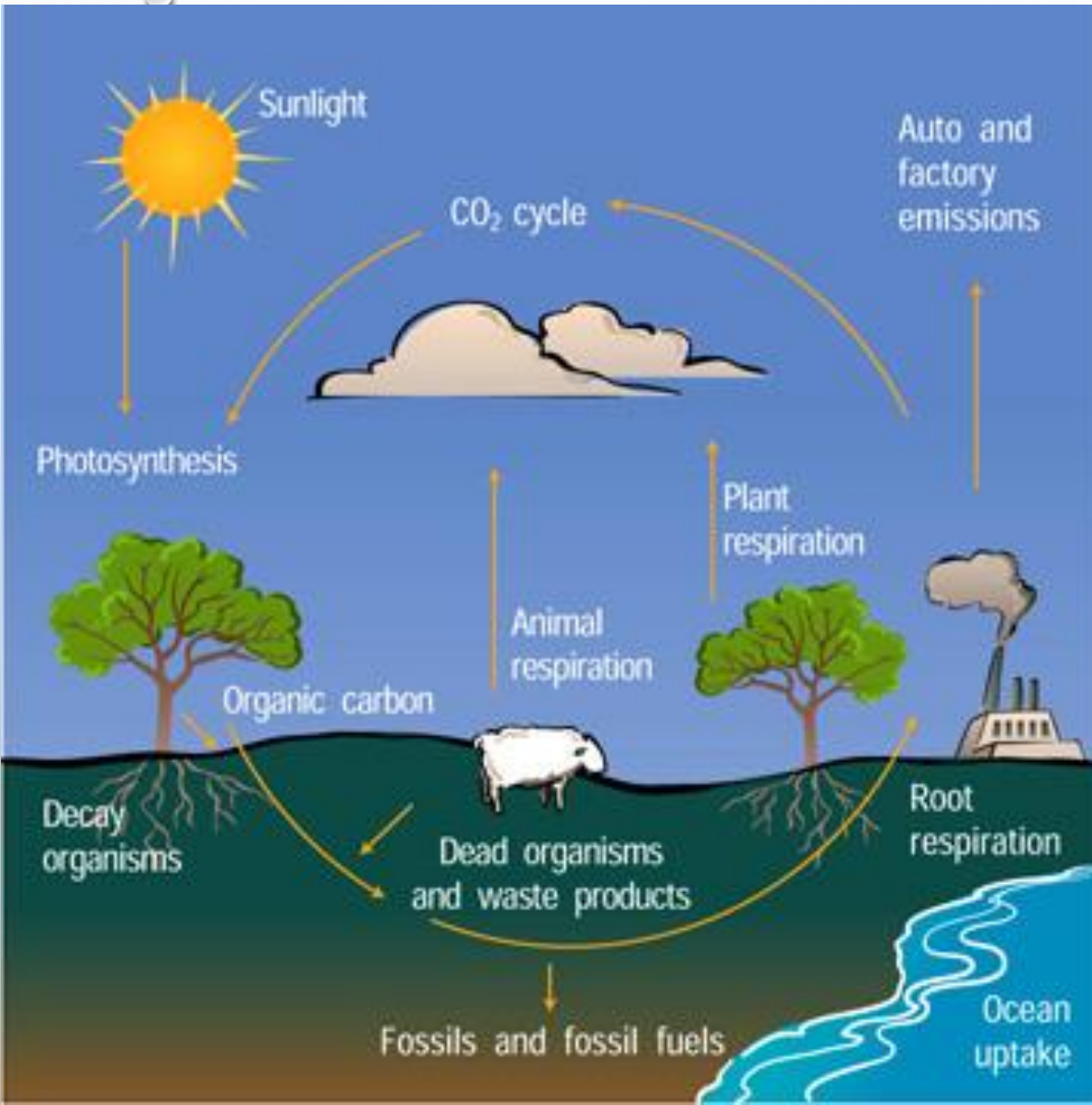
THE OXYGEN CYCLE

ANIMALS





- When we burn fossil fuels we release extra carbon dioxide into the atmosphere, which is causing a **climatic emergency** and **global warming**.



The Greenhouse Effect

Some solar radiation is reflected by the Earth and the atmosphere.

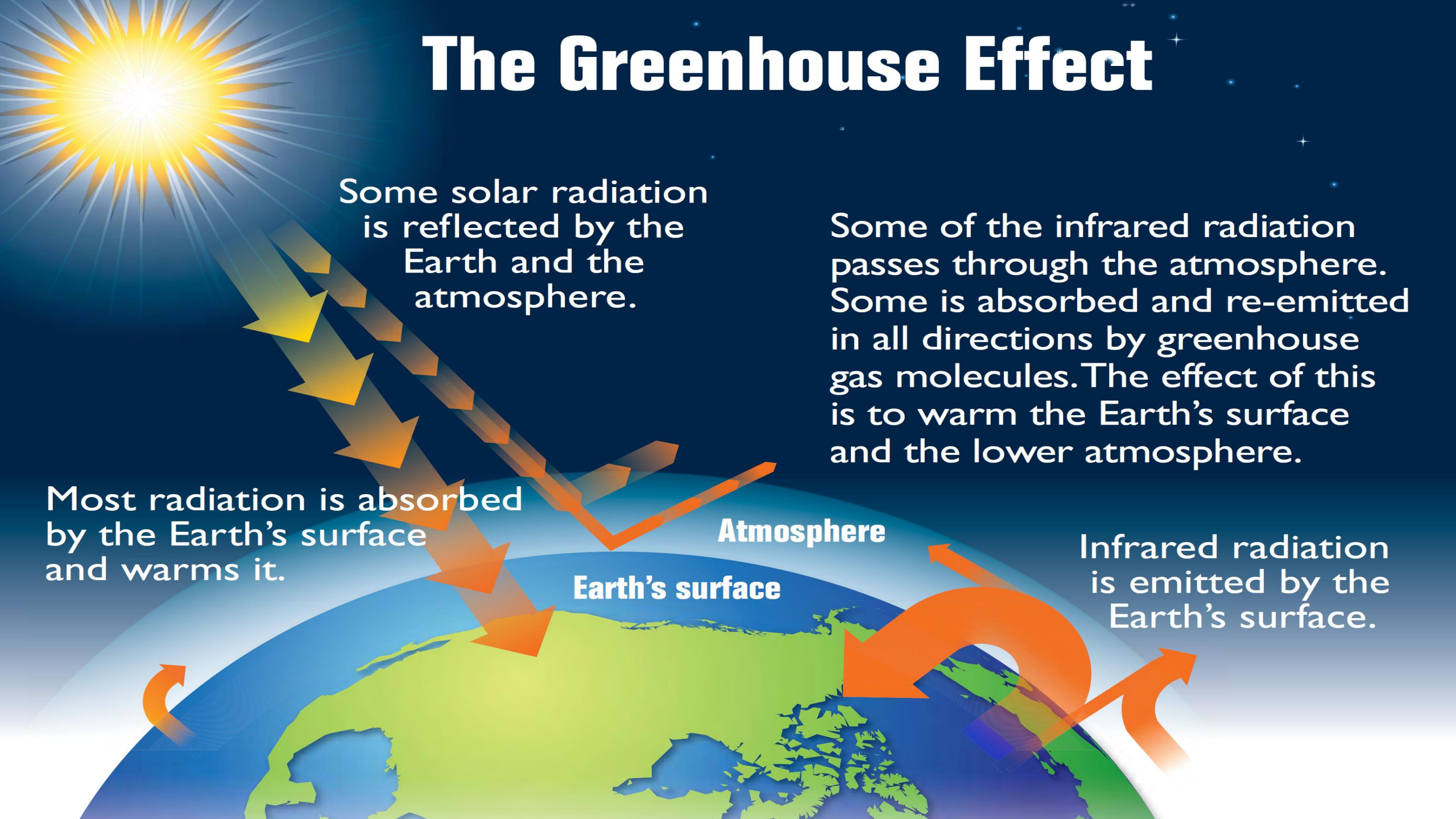
Some of the infrared radiation passes through the atmosphere. Some is absorbed and re-emitted in all directions by greenhouse gas molecules. The effect of this is to warm the Earth's surface and the lower atmosphere.

Most radiation is absorbed by the Earth's surface and warms it.

Infrared radiation is emitted by the Earth's surface.

Atmosphere

Earth's surface



We should protect the atmosphere by keeping our **carbon footprint** as low as possible and working against **deforestation**.

