

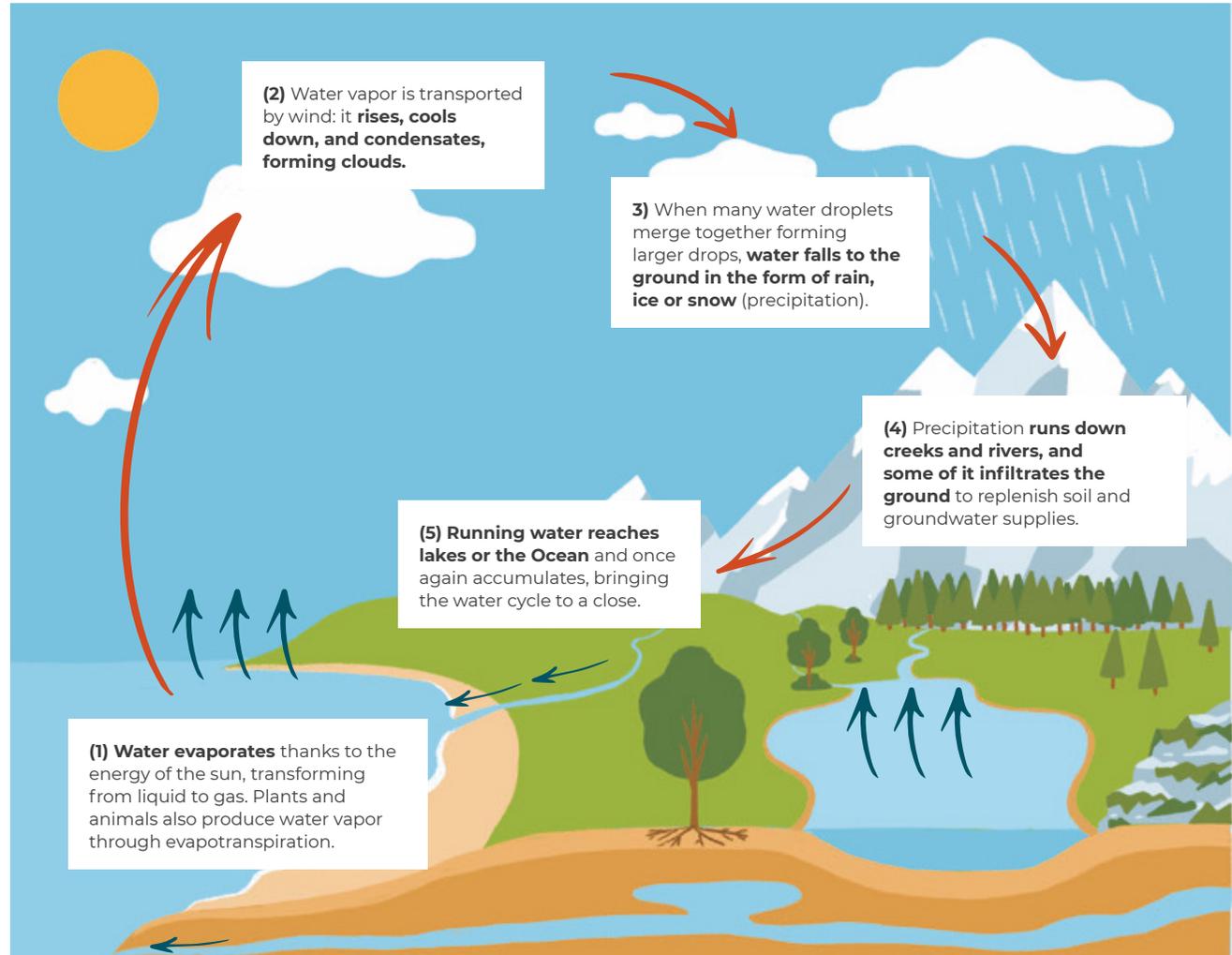


The Ocean is our main source of water

Water on our planet

Approximately **71% of the Earth's surface is covered by water**. Water is also the main compound found in living organisms. In fact, water accounts for 50-75% of the human body, depending on age, body constitution and gender.

97% of all the water on the planet is found in the Ocean. This means that most water is salt-water. **Freshwater is only 3% of total water**. This small proportion of water is mainly found in ice caps, glaciers and permanent snow (68.7% of total freshwater), and groundwater (30.1%). Freshwater in lakes and rivers does not even account for 1%!



Climate change

Find extra information in the factsheet on Earth's temperature!

Climate change is one of the most challenging issues that humankind has ever faced, and scientists have proven that its causes are *anthropogenic* (of human origin). Greenhouse gases emitted to the atmosphere are responsible for global warming, resulting in a current global average temperature 0.85°C higher than in the late 19th century.

But the effects of climate change go beyond heat, as they increase the probability of extreme weather events:

- Higher ocean temperatures mean higher evaporation rates, which may lead to **stronger and more frequent tropical storms, hurricanes or cyclones**.

- Global warming may also **alter wind movement or ocean circulation**, destroying a complex system on which we closely depend.

We have already suffered some effects of these changes.

1  The **Arctic polar vortex** is a persistent, low-pressure area near the Arctic's pole, which "keeps" the cold winds in the pole. It has weakened in the last few years due to the warming of the poles, allowing those winds to "escape". This has led to extreme cold events in Europe, Russia and North America, and has warmed the Arctic further.



2  **The melting of the poles**, caused by the increase in the Ocean's temperature.

- Due to melting of ice, **around 350 billion tons of freshwater per year** flow into the Ocean, **changing the Ocean's salinity**. This might affect normal circulation patterns (because of changes in water density).

- It also entails a **rise in sea level**: a recent study estimated that if we are able to limit the global temperature increase to 2°C (the United Nation's agreed threshold, beyond which climate change risks would become unacceptably high), the sea level would rise 63cm by the year 2100. This would mean a global cost of about €10.3 billion / year due to floods, if no further adaptations are made. This is certainly worthy of reflection...