

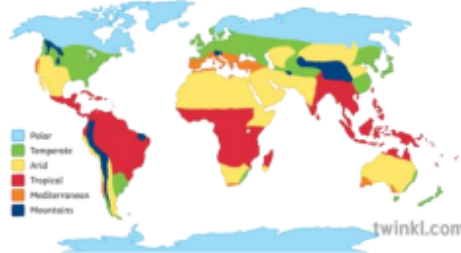
Key information

What is climate and climate change?

- Climate describes the weather conditions that are expected in a region at a particular time of year.
- Climate change describes a change in the average conditions — such as temperature and rainfall — in a region over a long period of time.

How does location impact climate?

- Climate is dependent on location in relation to the equator, earth's tilt and time of year.
- The distance from the equator affects the climate of a place, the closer a place is to the equator the warmer it is.
- At the poles, energy from the sun reaches the Earth's surface at lower angles and passes through a thicker layer of atmosphere than at the equator. This means the climate is cooler further from the Equator.



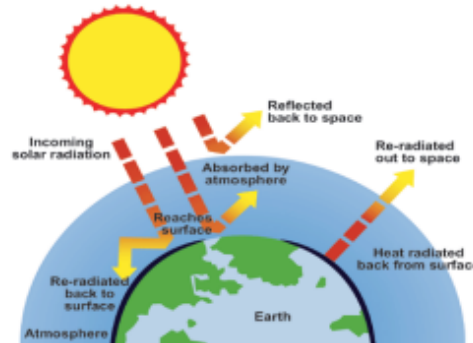
What are greenhouse gasses?

- Greenhouse gases are gases in Earth's atmosphere that trap heat. They let sunlight pass through the atmosphere, but they prevent the heat that the sunlight brings from leaving the atmosphere. The main greenhouse gases are water vapour, carbon dioxide, methane, ozone, nitrous oxide and chlorofluorocarbons.

What is happening to our global climate?

- The ozone layer is a layer of gas surrounding the Earth's atmosphere that insulates Earth from the power of the Sun.
- Co2 emissions are eroding the ozone layer therefore allowing more of the Sun's rays to reach Earth and increase our global temperature.
- Co2 can be emitted from cattle, humans, machinery, production of energy, burning of fossil fuels and vehicles.
- Over time our global climate is changing and the global temperature has increased.

Global warming and the greenhouse effect



How are the rising global temperatures affecting the natural world?

- Rising global temperatures can cause extreme weather patterns.
- The increased global temperature is causing environmental change including melting of the polar ice caps and rising sea levels.
- Environmental change impacts eco-systems, food chains and population of animals.
- Animals such as polar bears, whales, sea turtles and snow leopards are at risk of extinction due to climate change.

Key vocabulary

Biome	These are distinct biological communities that have formed in response to a shared physical climate.
Climate	The weather in an area.
Conservation	To save or protect something. To keep things the way they were.
Endangered	To be seriously at risk of extinction.
Temperate	A region or climate that has mild temperatures.
Tropic of Cancer	This is an imaginary line around the Earth that runs parallel but 23° north of the equator.
Tropic of Capricorn	This is an imaginary line around the Earth that runs parallel but 23° south of the equator.
Pollution	Harmful or poisonous substances being introduced to an area.
Habitat	The environment in which an animal or plant normally lives or grows.
Environmental quality	Varied characteristics that relate to the natural environment as well as the built environment.
Equator	An imaginary line around the middle of the Earth. It is halfway between the North Pole and the South Pole, at 0 degrees latitude.
Polar	Relating to the North or South Pole.
Emissions	The production and discharge of something, especially gas or radiation.