

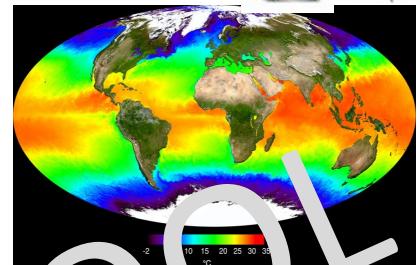
# Knowledge Organiser - Year 5—Geography: Global Warming

Key Question — What can we do to prevent further climate change?



## What are the causes of climate change?

Burning fossil fuels	Over the past <b>150 years</b> , <b>industrialised countries</b> have burnt large amounts of <b>fossil fuels</b> , through increased air and road travel , factories producing goods and providing energy. Gases released into the <b>atmosphere</b> during this process act like an invisible 'blanket', trapping heat from the sun and warming the Earth.
Farming	There are 1.5 billion cows in the world and they release <b>methane gas</b> that is built up in their digestive system
Deforestation	Forests absorb huge amounts of <b>carbon dioxide</b> , a greenhouse gas, from the air, and release oxygen back into it.



## Key Vocabulary

Atmosphere	Layer of air surrounding the Earth.
Carbon Footprint	The amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organization, or community.
Greenhouse Gases	Gases which trap heat energy from the sun in the Earth's atmosphere.
Carbon Dioxide (CO <sub>2</sub> )	Emitted or absorbed by all living things. Enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and as a result of other chemical reactions such as making cement.
Methane (CH <sub>4</sub> )	Emitted during the production and transport of coal, natural gas, and oil.
Nitrous Oxide (N <sub>2</sub> O)	Emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid wastes.
Greenhouse Effect	Damaging effect on the environment caused by an imbalance of greenhouse gases.
Ozone Layer	Pale blue gas that regulates the temperature of the earth and absorbs rays of the sun which can be harmful to plants and animals, including humans.
Fossil Fuels	Sources of energy, such as oil, coal and natural gas. Derived from the remains of living things.
Precipitation	Water that falls to the earth as hail, snow, rain, sleet, or dew.

## What can we

## do to prevent further climate

Alternative clean energy sources	Reduce CO <sub>2</sub> emissions from energy emissions by harnessing wind, wave, tidal and solar energy.
Improve public transport	Increase efficiency of petrol vehicles, ultimately replacing with electric vehicles
Make changes to our diets	Eating less meat and meat by-products reduces the demands on space and energy in the meat production industry, less cattle farming would reduce methane emissions too.
Recycling	Buy recyclable products and ensure items are correctly disposed of when no longer useable.
Reducing	Reduce the amount of single use plastic and plastic packaging that you buy.
Reusing	Containers and bottles can often be reused, upcycled or repurposed.
Reduce energy consumption	Ensure lights, computers, switches and other electrical devices are turned off whenever they are not in use, don't leave them on standby.
Reduce use of fossil fuels	Low carbon economy (producing less CO <sub>2</sub> , CH <sub>4</sub> and N <sub>2</sub> O)
Stop rainforest destruction	Only buy wooden products with the FSC mark on and don't buy products with palm oil in them
Walk or cycle	Walking or cycling to school will reduce car journeys and therefore help reduce pollution.

## Impacts of a changing climate

Drought	Global warming will increase the risk of drought in some regions. Also, warmer temperatures can increase water demand and evaporation, stressing water supplies even more.
Extreme Weather Events	Storms, hurricanes, monsoons and cyclones will happen more often and be more intense.
Heat waves	Above normal temperatures for extended periods of time.
Heavy Precipitation	Heavy downpours are happening more frequently in many locations.
Ocean Acidification	Extra carbon dioxide in the atmosphere is absorbed by the oceans, making the water more acidic.
Sea-Level Rise	Sea levels have risen about 8 inches due to the melting of glaciers and ice sheets. The warming of seas and oceans is also making coastal storms more damaging.
Threats to habitats and animals	As temperatures warm, many plants and animals are migrating to higher elevations or away from the equator. Some animals may have difficulty moving or adapting to new habitats.
Wildfires	These are large, raging fires that burn and destroy vast amounts of land with combustible vegetation

## Key Concepts

Climate	The average measurements of temperature, wind, snow and rain over an extended period of time., which can be <b>adversely</b> affected by human activity.
Global Citizenship	Encouraging people to develop the knowledge, skills and values they need to engage with the rest of the world <b>in order to make a positive impact with their actions</b> .
Global Warming	The gradual rise in the average temperature of the Earth caused by high levels of carbon dioxide and other gases in the atmosphere.
Natural resources	Materials or substances occurring in nature which can be exploited for economic gain.
Sustainability	The ability to be maintained at a steady level without exhausting natural resources or causing severe ecological damage to the planet.
Weather	The condition of the atmosphere in a particular area at a particular time. This includes temperature, <b>precipitation</b> and wind and <b>can vary over a short period of time</b> .