



Climate Change



Vocabulary

alternative energy	The use of any of various renewable power sources in place of fossil fuels and other traditional sources of energy
atmosphere	A mixture of gases that surrounds any planet
carbon dioxide (co2)	The gas formed when carbon is burned, or when people or animals breathe out,
climate change	the long-term changes in global temperatures and other characteristics of the atmosphere
emissions	The production and release of a gas.
environment	all the physical surroundings on Earth
fossil fuels	a natural substance formed from the buried remains of ancient organisms that can be used as a source of energy
global warming	The increase in Earth's average temperature over a long period of time
greenhouse effect	a process that occurs when gases in Earth's atmosphere trap the Sun's heat
greenhouse gases	Gases which help to reflect the sun's energy/heat back to the Earth. The most common examples include carbon dioxide, methane, nitrous oxide and water vapour.
solar radiation	Energy from the sun.
sustainability	using natural resources in a way that we could keep doing for a long time
water vapour	Water in its gaseous state, or water that has evaporated into the atmosphere.
pollution	when the environment is contaminated, or dirtied, by waste, chemicals, and other harmful substances

Dear parents,

Our next Humanities topic is a History unit called '**Climate Change**'. Please help your children to prepare for this topic by learning some of the key words and the facts on this sheet.

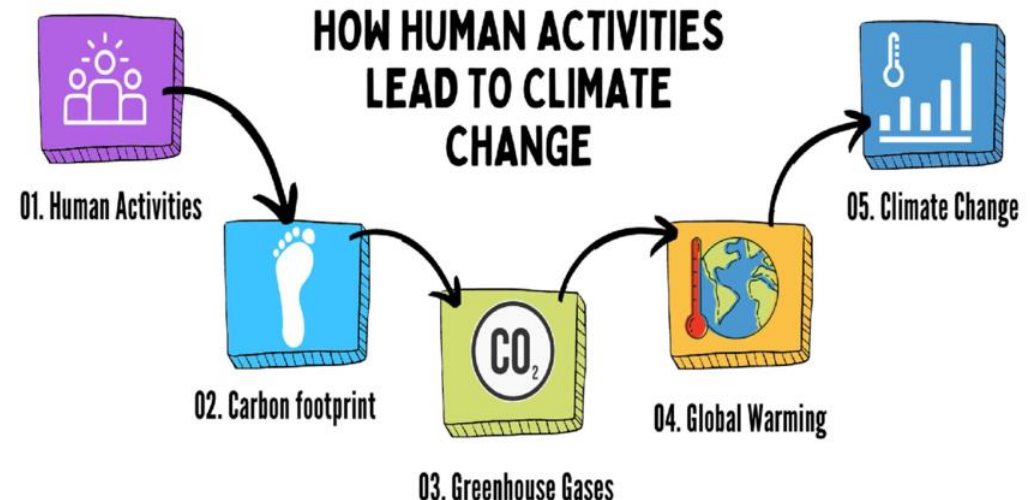
There are some homework activities on the back of this sheet. Your child can complete these at any time. Your child's teacher would love to see what they have created.

Thank you for your support,
Kind regards,
Year 5 Teachers



Our world is getting hotter.

This is called **climate change**.



The Greenhouse Effect

The **greenhouse effect** is a naturally occurring event.

Energy from the sun (**solar radiation**) hits the Earth and is reflected back. Some of this energy and heat (approximately 30%) is however reflected back down to the Earth by **greenhouse gases**.

This causes the Earth's temperature to be around 15°C. Without the **greenhouse effect**, the Earth's average temperature would be around -18°C, which would be too cold for many forms of life that exist on our planet.

Over the last few centuries more fossil fuels are being burnt and more livestock (cows, sheep etc) are being kept. This is due to the world's population growing and more industry and building in countries around the world. This releases more greenhouse gases into the **atmosphere**.

The Earth's average temperature has increased by 1°C since 1880 with two thirds of the warming occurring since 1975.

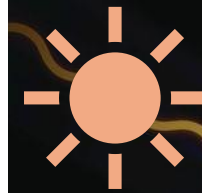
Most of the world's scientists believe that this climate change is due to human creating more greenhouse gases, although some scientists believe that this warming is being caused by other factors.

Climate change has happened for millions of years, before human were ever present. There have been period of warmth and cold.

Possible reasons for this include:

- changes in the Earth's orbit around the sun
- changes with the Earth's tilt on its axis
- the sun entering periods of more intense or quieter periods of activity
- volcanic eruptions on Earth releasing large amounts of dust which blocks out sun light and leads to cooler temperatures.

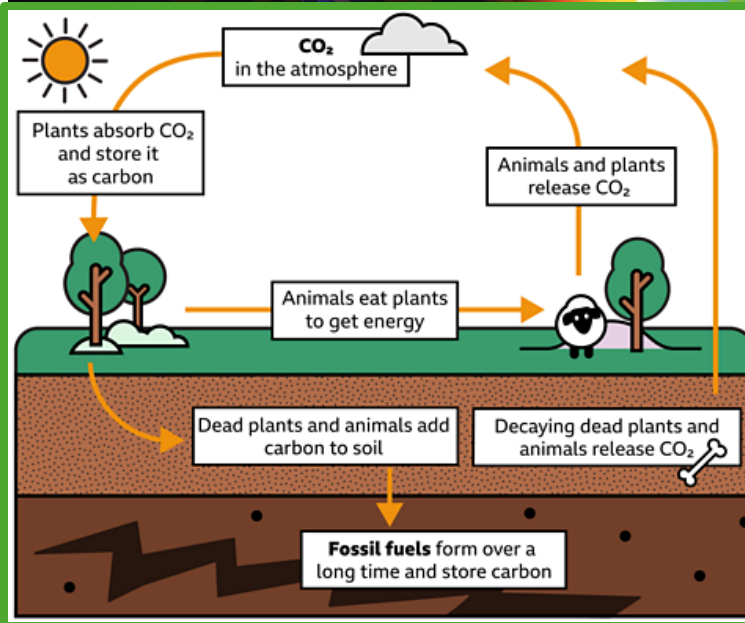
The Greenhouse Effect



Some sunlight that hits the Earth is reflected. Some becomes heat.

atmosphere

CO₂ and other gases in the atmosphere trap heat, keeping the Earth warm.



Homework Ideas:

- Create a poster encouraging people to save energy or reduce waste.
- Make something creative using recyclable materials.
- Encourage your family to develop eco-friendly habits.