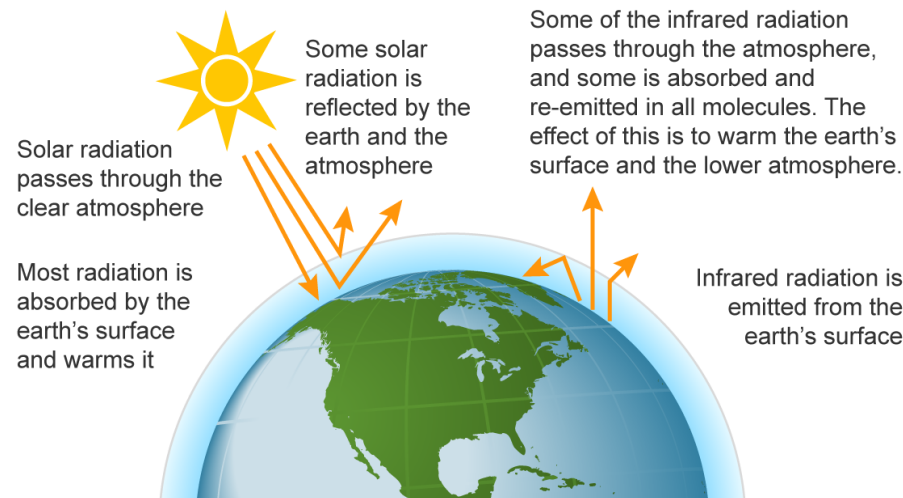


Year 5 Autumn 1 Sustainability Knowledge Organiser

Word	Definition
Climate	The usual weather in a place over a long time.
Climate Change	When the Earth's weather patterns change over many years.
Greenhouse Effect	When gases trap heat around the Earth, like a blanket.
Greenhouse Gases	Gases that trap heat. Examples: carbon dioxide (CO ₂), methane (CH ₄), water vapour.
Carbon Dioxide (CO ₂)	A gas made when we burn fuel like coal, oil, or gas.
Methane (CH ₄)	A gas from animals (like cows) and rotting rubbish.
Renewable Energy	Energy that won't run out, like wind or solar.

The greenhouse effect

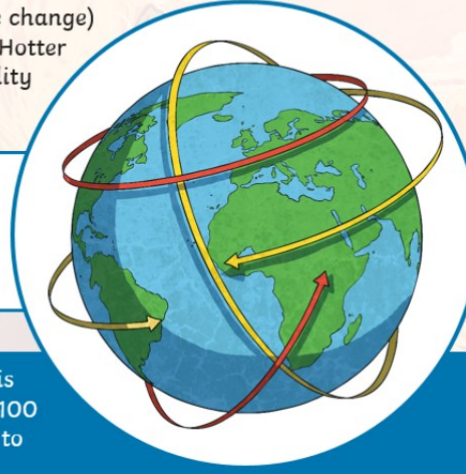


What Is Global Warming?

Global warming (a large part of climate change) is the increase in temperature of Earth. Hotter weather might sound lovely but the reality is very different.

In the past century, the average temperature has risen by 1°C. This might not sound like very much, but this increase has had a huge impact on our planet.

The rate of the increase in temperature is increasing. This means that in the next 100 years, the average temperature is likely to increase by more than 1°C.



Key Vocabulary

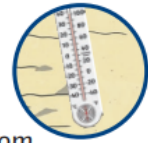
ocean	An ocean is a large, continuous body of salt water. There are five oceans on Earth.
marine	The term ' marine ' refers to anything found in or related to the ocean or sea.
habitat	A habitat is a specific area or environment where particular animals or plants live.
biodiversity	Biodiversity refers to the variety of living things found in a specific area.

climate change	Climate change is the long-term change in temperature and weather patterns in a particular area or across the planet.
global warming	Global warming is the gradual increase in the overall temperature of Earth.
conservation	Conservation is the protection and preservation of living things and their natural environments.
pollution	Pollution is the introduction of harmful materials into the environment.
sustainable	If something is sustainable , it uses natural resources in a way that causes little or no harm to the environment, now or in the future.

Threats to Our Oceans

Human activity is rapidly changing our **oceans** and threatening **marine** life. Many of these changes result from **global warming**, driven by human activities such as burning fossil fuels.

rising sea levels – Melting glaciers and thermal expansion are causing sea levels to rise.



temperature – **Oceans** are absorbing more heat from the atmosphere, resulting in a rise in global average sea surface temperatures. Many **marine** species are sensitive to temperature changes.

coral bleaching – Rising **ocean** temperatures can stress corals, causing them to expel their symbiotic algae. This leaves corals without their vibrant colour and an important source of nutrients, which can damage the reef.



acidification – **Oceans** remove carbon dioxide from the atmosphere, making the **ocean** water more acidic. This can damage the shells and skeletons of **marine** animals such as **plankton**, molluscs, coral and shellfish.

pollution – Plastics, metals, sewage and pesticides **pollute** coastal waters, harming **marine** life.



Supporting Life

Oceans cover over 70% of Earth's surface and make up about 97% of all Earth's water.

It's estimated that **oceans** provide us with over 50% of the world's oxygen, most of which is produced by **plankton**.



Oceans absorb about 25% of human-made carbon dioxide, removing it from the atmosphere and lowering levels of greenhouse gases.

Oceans are a source of renewable energy and help regulate Earth's weather and climate. They absorb heat, distribute it through currents and play a key role in the water cycle.

Oceans provide food and jobs for billions of people worldwide through the fishing industry. They are also important for global tourism and leisure activities.

