

# Climate change – should we be worried?

Reading Comprehension

Y5 Y6

In the news today, there is regularly talk of climate change and how it is an increasing crisis in our current times. Climate change is a threat to life on Earth. In this article, we will look at what climate change really means and consider what impact this may have on the world in which we live.

## What does climate mean?

The **global climate** (temperatures, rainfall, wind and other conditions) is the average **climate** over the whole of the world. It is true to say that the global climate is **changing** and it is changing at a faster rate than it has at any point in history, which is why scientists and environmentalists are worried. The Earth is getting **warmer**. Climate differs from weather and temperature. Weather is the temperature and precipitation **from day to day**, whereas climate is the average temperatures and precipitation **over a much longer time period**, for example over centuries. **Precipitation** is the collective word for all the different ways that water can fall from the sky; such as rain, snow, hail and sleet.

## How is the climate getting warmer?

It is a proven fact that the Earth's average temperature has increased about 1°C over the past 100 years between the 1900s and 2000s. It may not sound like a big change, but it is a quicker increase than at any other time in history and it will influence Earth and its people and wildlife. The changing climate will actually make our weather more **extreme** and **unpredictable**. As temperatures rise, some areas will get **wetter** and lots of animals and human population could find



they're not able to **adapt** to their changing climate. We are already seeing examples of unpredictable weather, for example the increasing frequency of flooding in the UK (which causes damage to homes) and increase of intensity and duration of bush fires in California, USA and in New South Wales, Australia.

### What is carbon?

Carbon is in **carbon dioxide**, which is a **greenhouse gas** that works to trap heat close to Earth. It helps Earth hold solar energy, so it doesn't all escape back into space. The greenhouse gases include mostly carbon dioxide, methane, and nitrous oxide. These gases act as a blanket for the Earth, helping to keep the Earth warm enough to support life. An increase in the greenhouse gases causes the Earth to become warmer. Think of it as a heavier blanket. So whilst the Earth needs some insulation, the blanket is getting too thick now and trapping too much gas in the atmosphere.

### What is making Earth's climate get warmer?

Climate change is the process of our planet warming up. Scientists have discovered that humans are causing this warming through our actions and how we choose to live our lives. There are several big factors in this:

- **Fossil fuels** are natural fuels found in and on the Earth (oil, coal, and natural gas). When they are burned in power stations to make energy for humans, they release gases which are then released into the



atmosphere. They are added to the 'blanket' that is covering the Earth – as the 'blanket' gets thicker, the atmosphere struggles to release its heat and the climate warms up more quickly than it should.



- **Farming** is a big contributor to the greenhouse effect. **Methane gas** is released into the atmosphere when a cow passes gas! There are over 1.5 billion cows in the world releasing methane gas daily, further adding to the 'blanket' covering the Earth.

- **Deforestation**, which is where trees and forests are cut down to make way for farms, roads, oil mines, and dams further leads to the greenhouse effect and a thicker 'blanket'. There



is the double impact here as when we cut down trees we are removing the 'Earth's lungs' as trees are vital in producing more oxygen. Trees are essential to helping the Earth as they take in carbon dioxide and produce oxygen in return. We breathe oxygen therefore the more trees, the more oxygen we have for our survival!

### Consequences of climate change

A warmer climate can affect the planet negatively. There are two major effects of global warming:

- Earth's temperature will increase by about 3° to 5° C (5.4° to 9° Fahrenheit) by the year 2100
- Rise of sea levels by at least 25 metres by the year 2100.

### Other consequences are listed below:

- Melting of land ice - Polar animals' natural habitats are melting because of warmer temperatures; this is affecting polar bears and seals
- Power of hurricanes increasing and causing more damage to environments and human life
- Changes in temperature and precipitation patterns increase the frequency,



duration, and intensity of other extreme weather events, such as floods, droughts, heat waves, and tornadoes

- Higher or lower agricultural yields (more or less crops for farmers)
- Glacial retreat
- Diseases like malaria are returning into areas where they have been extinguished earlier
- Deforestation is wiping out habitats for thousands of essential species, for example orang-utans in the rainforests are losing their homes and sea turtles are losing nesting beaches because of rising sea levels
- Farming in developing countries face increased rain, floods, and droughts; plus, certain kinds of food items may become scarce, unavailable, or more expensive for people to purchase.

It is not too late to change this though, but we have to act now and act fast!

