

Climate Change

We rely on the Sun and our atmosphere to keep us warm. But human actions are causing changes in the atmosphere, which scientists think are making the world warm up too much.

The Greenhouse Effect

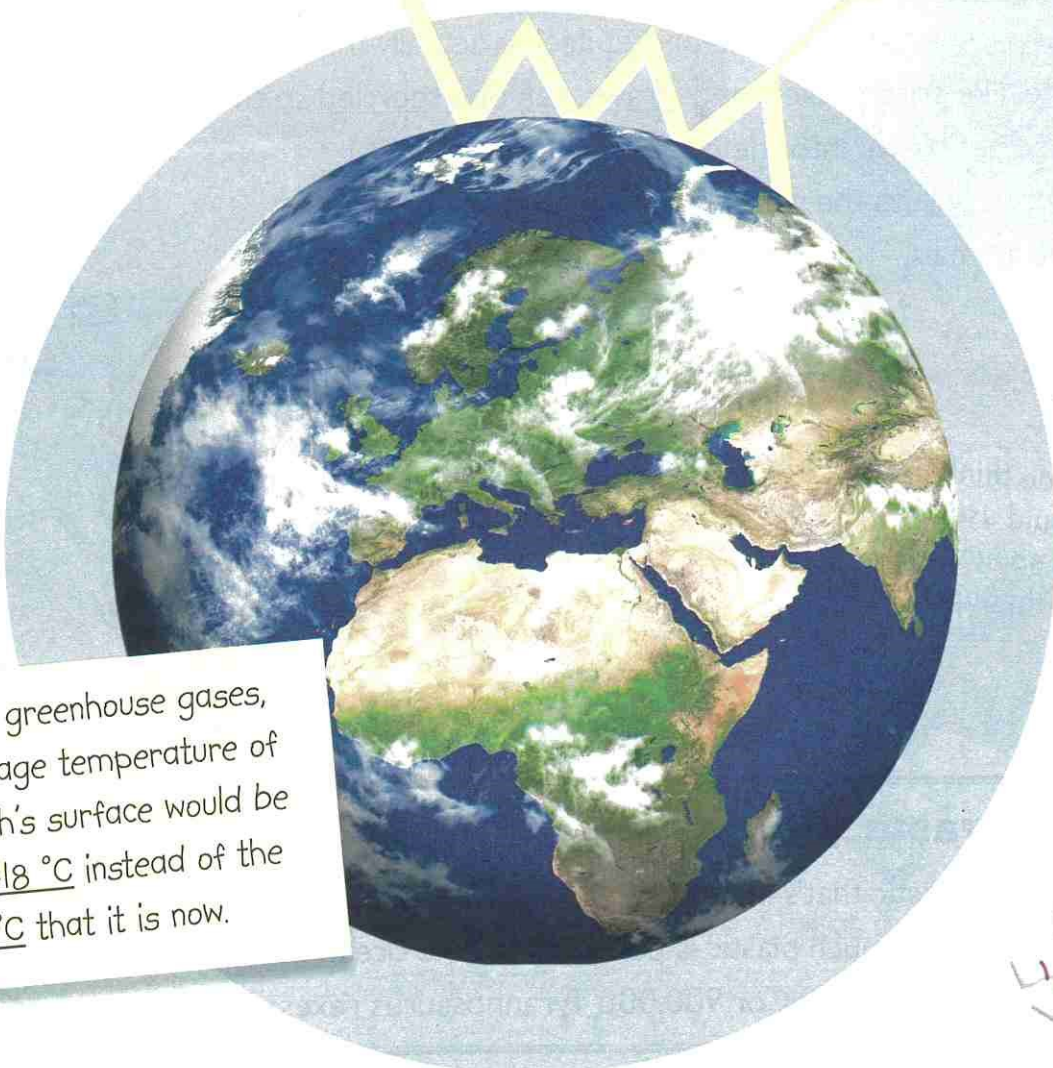
The atmosphere is like a protective bubble around the world. It's made of a mix of gases. Some of these gases are called greenhouse gases because they help keep the Earth warm.

The Sun gives out a lot of heat and light. Some of this heat and light reaches the Earth.

Some of this heat escapes back into space, but the atmosphere traps a lot of it like a blanket.



Without greenhouse gases, the average temperature of the Earth's surface would be about -18 °C instead of the 15 °C that it is now.



Too much of a good thing

The greenhouse gases in the atmosphere are a good thing — Earth would be too cold for us to live on without them. The trouble is that over the past two hundred years or so, people have been creating a lot of extra greenhouse gases.

The Earth is getting hotter. This is known as global warming. It's thought that humans are causing global warming because the extra greenhouse gases that we create are trapping too much heat in the atmosphere.

WHERE DO GREENHOUSE GASES COME FROM?

Power stations that burn oil and coal to make electricity produce a lot of greenhouse gases. So do cars, planes and agriculture (farming).

The greenhouse gas that people are particularly worried about is carbon dioxide, but there are others too.



Always changing?

Climate change means a long-term change in the weather and temperature of the planet. It can be caused by many things, like volcanic eruptions and changes in the amount of radiation given out by the Sun. The Earth's climate has gone through a lot of changes in the past.

FROZEN PLANET



When woolly mammoths were roaming the Earth, a third of the planet was covered in ice. That's why it was called the Ice Age. There have been at least five ice ages in the Earth's history.

Even though the Earth's climate does change naturally, most scientists agree that humans are forcing the climate to get warmer by putting too many greenhouse gases into the air.

This is having really serious impacts on the world and everything that lives in it, including us.

All about balance...

Plants and trees absorb (suck up) some of the carbon dioxide in the air. But people keep cutting down forests to make room for more factories and farmland. Now we're creating even more carbon dioxide and there are fewer trees to help get rid of it.