



Climate Pact

In November 2021 leaders from all over the world gathered in Glasgow at a conference called COP26. They were there to discuss a very important topic – how to take action on climate change. They all agreed to work together to do this.

Greenhouse gases

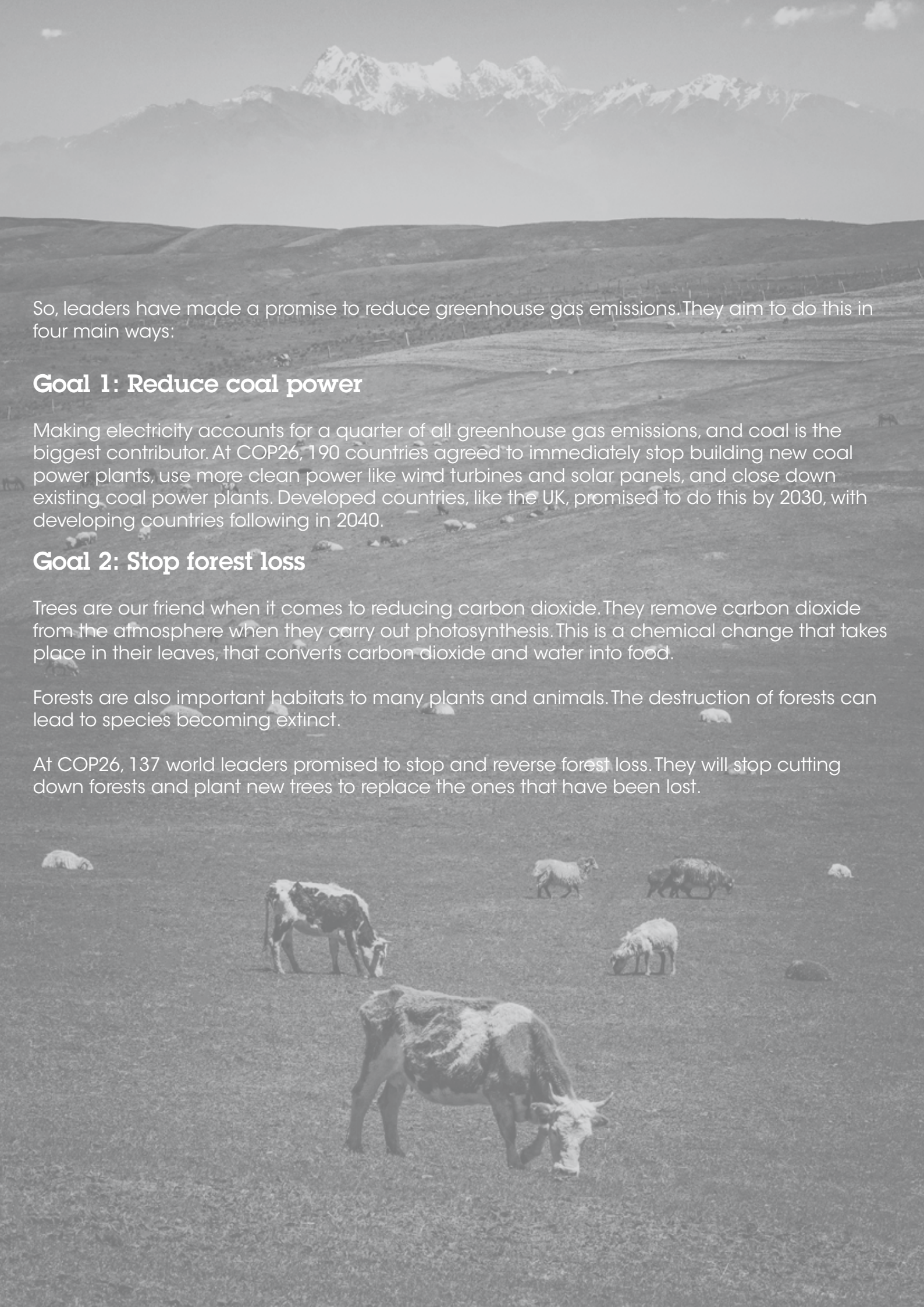
The reason why temperatures are rising is because we are putting too many greenhouse gases into the atmosphere. Greenhouse gases act like a blanket around the Earth, trapping in the Sun's heat.

Temperatures around the world are rising. This is called global warming. The Earth's average surface air temperature has risen by about 1°C since 1900. This might not sound like a big problem, but scientists agree that if the temperature rises by more than another 1.5°C then there will be devastating effects. In fact, we have already begun to see the effects of rising temperatures: extreme weather like more storms and forest fires, some areas are more prone to flooding and animals are becoming endangered because their habitats are too warm for them to live in. The main aim of COP26 was to keep alive the hope that we can limit the rise in global temperatures to below 1.5°C .



The two main greenhouse gases that are a problem are carbon dioxide and methane. Every time a fuel is burnt carbon dioxide is released. We burn fuels in vehicle engines, so every time you travel in a car, bus or aeroplane carbon dioxide is being released into the atmosphere. Also, some of the electricity we use is made in a power station that burns a fossil fuel (coal, oil or gas). Power stations release a lot of carbon dioxide.

Methane is also called natural gas. It is the gas used in Bunsen burners and you might also use it at home for cooking. It comes from deep under the ground and is transported in pipes. A lot of the methane released into the atmosphere comes from leaking gas pipes. It is also released when bacteria break down dead matter. Methane is given out from landfills when rubbish decays and the bacteria inside cow's stomachs release it when they break down grass. In fact, farming cows is a major source of methane because they release it when they burp and break wind!



So, leaders have made a promise to reduce greenhouse gas emissions. They aim to do this in four main ways:

Goal 1: Reduce coal power

Making electricity accounts for a quarter of all greenhouse gas emissions, and coal is the biggest contributor. At COP26, 190 countries agreed to immediately stop building new coal power plants, use more clean power like wind turbines and solar panels, and close down existing coal power plants. Developed countries, like the UK, promised to do this by 2030, with developing countries following in 2040.

Goal 2: Stop forest loss

Trees are our friend when it comes to reducing carbon dioxide. They remove carbon dioxide from the atmosphere when they carry out photosynthesis. This is a chemical change that takes place in their leaves, that converts carbon dioxide and water into food.

Forests are also important habitats to many plants and animals. The destruction of forests can lead to species becoming extinct.

At COP26, 137 world leaders promised to stop and reverse forest loss. They will stop cutting down forests and plant new trees to replace the ones that have been lost.

Goal 3: Speed up the switch to electric vehicles

Road transport accounts for over 10% of global greenhouse gas emissions. Cars, vans and lorries also produce other pollutants that can damage human health. At COP26 both world leaders and vehicle manufacturers discussed their determination for all new car and van sales to be electric by 2040. With more electric vehicles on our roads there will be reduced carbon dioxide emissions, as well as cleaner air in our towns and cities.

Goal 4: Reduce methane emissions

When it comes to reducing greenhouse emissions, carbon dioxide usually gets the most attention. However, methane (which has the chemical formula CH_4) is a powerful greenhouse gas – it is more than 25 times better at trapping heat than carbon dioxide. At COP26 over 100 countries signed up to the Global Methane Pledge to reduce global methane emissions by 30% by 2030.

World leaders will next meet at the COP27 meeting in Egypt in 2022. We will have to wait until then to see if countries have kept their promises, and if they are having any impact on global temperatures.



Worksheet

1. Explain why reducing carbon dioxide emissions will help slow down global warming.
2. Describe two reasons why forests are an important habitat.
3. What do you think the UK can do to reduce methane emissions?
4. Do you think events like COP26 will help to slow down climate change? Give reasons for your answer.

Curriculum links

KS2

Living things and their habitats: Recognise that environments can change and that this can sometimes pose dangers to living things

KS3

Earth and atmosphere: The production of carbon dioxide by human activity and the impact on climate



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