

# Teaching ideas

Here are some creative ideas for teaching about climate change across a range of subject areas.

## Geography

### Focus on pollution

Ask pupils to find the following countries on a world map: UK / Ireland\*, India, USA, China, Philippines, Ethiopia, Bangladesh and Bolivia.

Split the class into eight groups and see if they can find out a little about each country using books or the internet (this task could also be done as homework with parental supervision). Direct them to find out some basic facts about: what the weather is like, what the natural geography is like, whether it is a rich or poor country, what sort of jobs people do, what things the country produces and exports (sells abroad), what sorts of food people eat there, what homes are like.

Ask each group to feed back to the rest of the class.

Write the eight country names on signs (one country per sign) and ask eight pupils to hold up one each. Ask the rest of the class to arrange the countries according to which countries they think have the biggest carbon emissions per person (you can explain this as 'in which countries do people cause the most pollution', but please note that this is a different question from 'which is the most polluting country', because each country has a different population). They can arrange themselves across the room from 'most' to 'least'. Go through the list below and tell them if they got it right:

Average carbon emissions (in tonnes) per person, per year:

**USA – 16.5**

**China – 7.5**

**UK: 6.5 / Ireland: 7.3**

**Bolivia – 2**

**India – 1.7**

**Philippines - 1**

**Bangladesh – 0.5**

**Ethiopia – 0.1**

Find different ways to represent the figures above: eg bar graph, pie chart.

\*This resource is available in the UK and Ireland – you can choose whichever country is more relevant to your context.

## Maths and History

### Focus on changing levels of pollution

Share the table below, which plots average carbon emissions per person (in tonnes) for different countries over time:

Country	1960	2009	2014
USA	16	17	16.5
Ireland	4	8.9	7.3
UK	11	7.6	6.5
China	1	6	7.5
Bolivia	0.3	1.5	2
India	0.3	1.5	1.7
Philippines	0.3	0.8	1
Bangladesh	0	0.3	0.5
Ethiopia	0	Less than 0.1	0.1

Data from [data.worldbank.org](http://data.worldbank.org). Figures have been rounded to nearest decimal place.

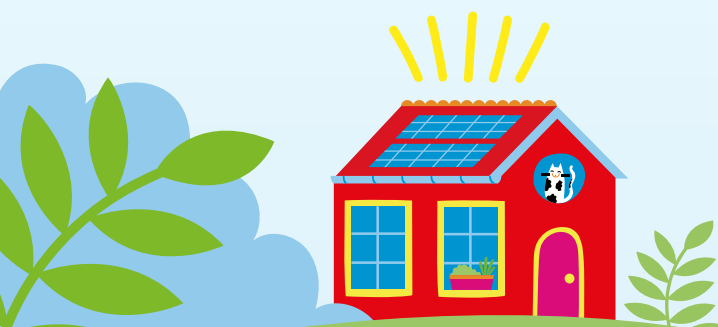
Ask pupils to plot these on a line graph. What observations can they make? (You can round the figures in this table further if that makes it easier for your pupils.) In which three countries do people cause the most pollution and in which the least? Look at the lines in the graph. In which countries are people causing less pollution over time? And in which countries are they causing more pollution over time? Observe that the countries where people are now causing less pollution are still among the most polluting overall.

### Focus on changing levels of pollution

Share the table below, which lists income per person for each of these countries. (Note: we have translated GDP as 'income' to make it understandable for this age group).

Country	£
USA	46541
Ireland	54128**
UK	39720
China	6900
Bolivia	2652
India	1518
Philippines	2336
Bangladesh	1185
Ethiopia	599

\*\*If children query why people in Ireland are relatively rich compared to people in the UK and USA, you can explain that this measure of working out income includes foreign investments and subsidies. If you are in Ireland, feel free to convert these figures into Euros.





Ask them to create a new table, with the countries ordered from wealthiest to least wealthy.

Then ask them to look at their graphs on pollution. What overall observations can be made?

Explain: The richest countries are the most polluting. This is because they have 'industrialised' – they have money-making industries that create pollution from factories and transport. The people in these countries also tend to have more money and lead more polluting lifestyles; they are more likely to fly, eat lots of meat, own cars and have heated homes.

People in poorer countries tend to be less polluting. This is because many still live in subsistence ways (eg they might be small-scale farmers who farm what they eat) and they are much less likely to fly or drive a lot – and they're also less likely to have homes that use lots of heat and electricity.

But it is also interesting to note that the carbon emissions for the UK, Ireland and USA are now dropping while the ones for other countries are rising – that is partly because these richer countries have started to invest in clean energy, which is good news! But it is also because they have shifted a lot of their polluting production to factories overseas – which is not good news at all! Explain that countries that are 'developing' (industrialising) tend to pollute more as they do it, but that once they have reached a certain stage of development, their carbon emissions start to drop again. Historically, economic development has been very polluting. This means that the richest countries in the world (including ours) have been most responsible for causing climate change.

Of course, it is good for countries to develop and for people to enjoy better standards of living – but not when it threatens the planet. It is not at all good that our own country has developed by harming the environment. The exciting thing is that now the technology exists for all countries to develop in ways that do not cause lots of pollution and greenhouse gas emissions. And nearly every country in the world has signed up to a special agreement called the Paris Agreement, which commits them to reduce their greenhouse gas emissions and invest in clean energy. Part of this agreement also gets the richer, developed countries who have caused climate change to give money to poorer countries to deal with the effects of climate change and help them develop in green ways.

You could ask pupils to research which countries are signed up to the Paris Agreement. Is the USA, the world's biggest polluter, in or out?

## Science

### Focus on renewables

Ask the class to suggest different ways in which we use energy in our everyday lives. They might like to go around the school and find as many things that use energy as they can! Answers might include: humans, lights, cars, heating, canteen cookers, computers, water cooler, whiteboard.

Ask them: where does this energy come from?

Explain: Humans get their energy from food. But cars and buildings and gadgets get their energy from other sources, like electricity, gas and petrol. Petrol and gas are fossil fuels, which release greenhouse gases when they are burned to provide our energy. Electricity can release greenhouse gases too, because it is often made by burning coal (another fossil fuel) in big power stations. Livestock (like cows) are also a big contributor of greenhouse gases!

Greenhouse gases are bad for the planet because they thicken our atmosphere, warming the Earth (like a blanket around our world) and interfering with normal weather patterns. This makes extreme weather events like floods, droughts and storms much more frequent.

The exciting thing is that we no longer have to burn fossil fuels to make electricity – there are now clean, green ways to do it. Ask the class if they know any of these. Answers might include: solar panels, wind turbines, energy from the sea (tidal and waves).

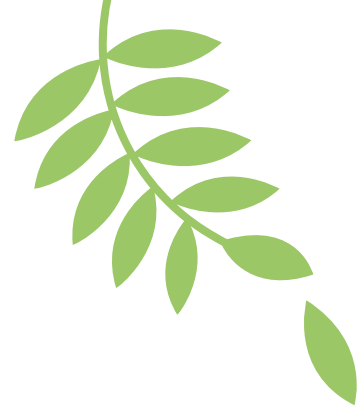
Split the class into groups and ask each group to focus on a different sort of power and research it, then report back to the class.

### Focus on rising sea levels

Put lots of ice cubes in a shallow tray. You could put in some rocks too, that poke above the water, and mark the water level on them. Measure the water level before and after the ice melts. Explain that climate change is causing the ice caps to melt and this contributes to rising sea levels. If the rocks represent land, what does this mean?

### Focus on the Greenhouse Effect

Take two thermometers and put them outside in the sun for five minutes. After five minutes, place one in a large, sealed glass or plastic jar. Leave for twenty minutes and then observe the temperatures. Which is hotter? The one in the jar is hotter, because the sun's energy has warmed the jar and the lid means that the warmth can't escape. That is the same principle as the greenhouse effect, which is warming our Earth. Greenhouse gases make our atmosphere (the jar!) thicker and the temperature inside warmer.



## English and Citizenship

### Focus on writing to local politicians

Ask your pupils to write to their local politician\* to explain what they have learned and what they would like them to do about climate change. They can ask them about their commitments to clean energy.

Share these top tips for communicating with politicians:

- Be polite.
- Be clear.
- Be persuasive.
- Remember that politicians should listen to what you say, as an important part of their job is to represent you and your views.

\*This might be their MP in England and Northern Ireland, MSP in Scotland or TD in Republic of Ireland. You can find the contact details of these representatives online.

### Focus on writing to banks

Did you know that some of the big banks still invest money in fossil fuels? Christian Aid is asking banks to stop funding projects that fuel climate change. You can find out more about the campaign (and watch a short film about it) at [caid.org.uk/climate](http://caid.org.uk/climate). Some pupils have already taken action and written to the CEO of HSBC.

### Focus on your school's own energy supply

Can your pupils turn detective and find out who supplies the energy for your school? Is it a green energy tariff, or is the school still running on fossil fuels? If it's the latter, can they form an action group to try to persuade school decision-makers to switch to a green energy tariff? They will need to find out who makes that decision. Is it the finance committee of the governing body, the multi-academy trust, or the local authority? The best people to ask in the first instance are the headteacher and/or the chair of governors. Once pupils have worked out who makes the decision, can they try to persuade them to switch to green energy? The people in charge of such decisions are obliged to get the best value for money – but that doesn't always mean the cheapest option. Could pupils work with the school council to build a convincing case for choosing green energy – and how will they present that to decision-makers?

## RE and Art

### Focus on the core Christian value of stewardship

Teach that Christian Aid is a Christian organisation and its goal is to end poverty. Explain that the charity doesn't just help Christians – it works with people of all faiths and people who aren't religious at all. But it is motivated by its Christian faith to do this work.

There are lots of Christian teachings that inspire Christian Aid's work. Here are some important Christian concepts that inspire Christian Aid.

#### 1. The dignity of all people

A really important aspect of Christian belief is that all people are made in the image of God – that all people have dignity and are worthy of God's love. That means that Christians have a duty to care for others.

#### 2. The example of Jesus

Jesus cared for the poor and marginalised; he stood in solidarity with those who were ignored by the rest of society. Christian Aid applies this teaching in the modern world by standing up for poor people who might otherwise be overlooked by those in power – like the people most affected by climate change.

#### 3. Care for creation

Christians believe that God created our beautiful world. The Bible begins by telling the story of creation and includes an instruction from God to humans to care for, or show 'stewardship' for, the Earth.

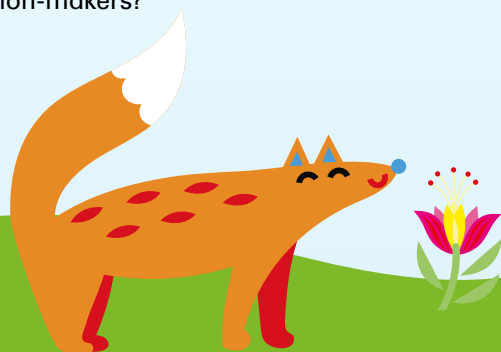
You could ask pupils to draw pictures that illustrate one of these concepts.

### Write a Letter for Creation

You could encourage your pupils to join a letter-writing project called Letters for Creation. This project encourages young people to tell world leaders why they think they should care for Creation better. You can email your letters to [lettersforcreation@lambethpalace.org.uk](mailto:lettersforcreation@lambethpalace.org.uk) or post them to:

Letters for Creation  
Christian Aid Schools Team  
PO Box 100  
London SE1 7RT

Share the global neighbours case studies on the next page with children. Ask them to read through these and discuss what these people have in common. What do we also have in common with them? How is each person responding to climate change? How will we respond?







# Our global neighbours are feeling the effects of climate change



## Glory and Lanie: The Philippines

Glory and Lanie live in the Philippines, a group of islands in the Pacific. Here, people are already feeling the effects of stronger storms, which hit the islands more often than they used to. In 2013, a terrible tropical storm hit their island. Their family opened the doors of their home to let people shelter from the storm there. With great courage, Glory and Lanie overcame the devastation of that storm. Their parents are working with Christian Aid's partner to support clean energy, such as solar lighting.



## Janet Machuka: Kenya

Janet lives in Kenya and as a child she was directly affected by the fumes from fossil fuels, which made her mum's asthma very bad. Later, she also became concerned about the impact that this pollution was having on the planet through climate change, and became an active member of Clean Energy Now – a special campaign to get leaders to invest in clean energy.



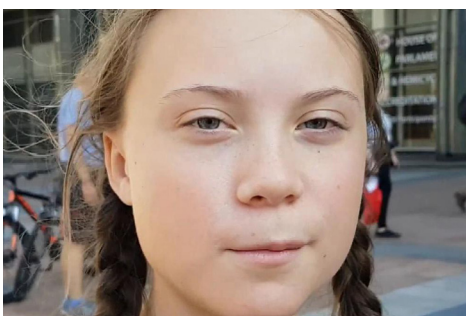
## Morsheda Begum: Bangladesh

Morsheda and her children live on an island in a river in Bangladesh, where they are constantly threatened by flooding. When her little girl was a baby, she fell out of her bed and into the floodwater. Luckily, Morsheda heard the splash and pulled her out just in time. Now Morsheda is using worm farms and compost to help her adapt to the changing climate and grow food on her island home.



## Sue Charlton: United Kingdom

Sue is from the UK, and has travelled to places that are affected by climate change, like the Himalayas. She is now working hard to help people in her church think about the environment. They encourage everyone to reduce, reuse and recycle and to think more about energy efficiency. They have attended rallies and lobbies of Parliament and have services dedicated to thinking about the environment.



## Greta Thunberg: Sweden

Greta is a teenager from Sweden. She has risen to fame as a campaigner on climate change, with protests outside the Swedish Parliament – as a result of these she has been invited to give speeches to world leaders. Her protests have inspired other young people around the world to tell their governments that they want them to take action on climate change, too.