



Climate Report

Teacher notes

Give your students the chance to think about how climate change could affect lives and livelihoods – even their own.

Age group: KS3 and KS4

Timing of activity: Approx. 35 minutes

Number of students: Up to 30 students

Overall learning outcome:

Students understand the difference between weather and climate, and understand the impact climate change can have on their and other people's lifestyles.

The activity

Introduction (5 mins)

- 1. Overview: 'During today's activities you will be learning about the science of climate change. But what will climate change mean for people's lives? In this activity we're going to get you to look into the future...'
- 2. Discuss the difference between weather and climate and how climates change over decades, whereas the weather can change hour by hour. Using a large globe or a world map, discuss why different parts of the world have such different climates (latitude, oceans, etc.), and how this is one of the factors that lead to people living different lives (political and socioeconomic factors are, of course, also important in determining lifestyle).

Part 1

Where - and when - are we? (10 mins)

Learning objective

■ To appreciate the diversity of climate types around the world – and that the climate is part of the character of a place and that it determines people's lifestyles to a certain extent.

What to do

- Divide the students into six groups (with about five students in each group). Give each group one 'Mystery Place and Time' cube. You should have six of these cubes – two for each of three countries (don't tell the students which is which yet!):
 - Costa Rica Russia Australia

For each location, one cube represents that country and its climate in 2011 and the other represents the same country in 2051, using five simple statements.

Note 1: The statements on the cards relating to 2051 come from predictions made by climate modellers and other climate scientists, based on the best estimates of global temperature rise and its associated impacts. There is clearly much more that could be said, but time is short in this activity!

Note 2: The statements on the cube relating to 2051 make it sound like climate change will be good for Russia – this is an oversimplification; please see the links section.

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and the Patrons of the Science Museum On a board or a flipchart, write the names of the three countries – plus one or two more to act as red herrings. You might want to choose the UK – but it could be anywhere, as long as it's in a different continent from the other three (correct) answers.

2. Using the five statements on the cubes as clues – and perhaps by looking on the world map or globe – the students should be able to work out which of the three countries their group has been assigned.

Part 2

Now and then (15 mins)

Learning objective

■ To consider some of the predicted effects of climate change in the next 40 years.

What to do

- Each group should now join up with the other group whose cube represents the same country, and work out which cube corresponds to which year: 2011 or 2051.
- 2. Within each of the (now three) groups, the students should discuss how climate change might affect people's lifestyles in their country in the coming decades, and compare the information on the cubes to see how this relates to predicted effects of climate change.

The students might want to consider difficulties people in their given location might face along the way as people adjust to the gradually changing climate – for example, money might be tight as traditional businesses are lost and flood prevention schemes built.

3. Ask each group to feed back to the rest of the students, with a climate change report for their given location (around two minutes each). They should include what the climate is like now, how it might change in the next 40 years, and what kinds of effects the country's population may face in the coming decades. They can use props if they wish (see 'You will need...' list below).

Part 3

Wrap-up (5 mins)

Recap what has been discussed in the session, reinforcing the difference between weather and climate. It will hopefully become clear that of the three featured countries, Russia seems to be well placed to benefit from climate change. You may want to balance this impression slightly: Russia will suffer from more dangerous heat waves and forest fires as temperatures rise, for example.

You could invite discussion about how the scenarios in this activity might relate to the students' own lives in Britain – for example through changes in migration, tourism and food production. See www.ukcip.org.uk for information and ideas.

These discussions could be instigated by asking the students to work out how old they will be in 2051 – they will be in their fifties.

You will need...

- Six 'Mystery Place and Time' cubes (two for each country)
- Some props for example some culturally relevant or weather-related items that the pupils could use to help with their presentations
- A large globe or world map

Links

Russia, geopolitical forecasts: www.dni.gov/nic/PDF_GIF_otherprod/climate_change/ cr200916_russia_climate_change.pdf

Australia, climate change: www.edo.org.au/edonsw/site/pdf/subs/ climate%20change%20review.pdf www.bom.gov.au/inside/eiab/ State-of-climate-2010-updated.pdf

Costa Rica, climate change: www.sciencedaily.com/releases/2008/07/ 080710200232.htm

Costa Rica, hydroelectric power: www.npr.org/templates/story/story.php?storyId=18832252

What are some of the likely impacts of climate change? www.sciencemuseum.org.uk/climateimpacts

For this activity and many more, visit sciencemuseum.org.uk/climatescienceresources

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