

Investigating Climate Change

Teacher's Notes

Summary	<p>Children ask parents and older relatives to recall their experiences of the weather during their childhood. Compare to the current weather.</p> <p>A second activity looks at historical data from the Meteorological Office over the last 100 years. Children plot the data on a graph and look for trend in temperature. A ready-drawn graph is also supplied.</p>
Aims	<p>Investigate weather in living memory and compare to their own experiences</p> <p>Draw conclusions about the reliability of spoken evidence</p>
Activities	<p>Children 'interview' their parents and grandparents (or older relatives). Gather recollections of weather.</p> <p>Children summarise their own experience of the weather.</p> <p>Summarise the results of their interviews and assemble a timeline of weather</p> <p>Look to see if trend in climate change can be seen from their interview data.</p> <p>Compare historical data on temperature measurements. The data from past and present is from archived information at: www.metoffice.gov.uk/education/data/index.html</p>
Teacher info	<p>Weather and climate.</p> <p>Broadly speaking, weather is the local and day to day conditions. Climate looks at more regional and long-term patterns.</p> <p>The main outcome of the interviews is to gather evidence and then think about its reliability. It prompts the children to think about evidence; are memories reliable or should we take and note 'scientific' measurements?</p> <p>The activity challenges children to think about how they describe the weather and also look for evidence of trends.</p> <p>Discussion can also be made on the reliability of evidence and how many people should be interviewed to get more reliable results.</p> <p>Trends in the historical data are difficult to spot. Many scientists now agree that the trend is for global temperatures to be rising. However, observations from just one location are not necessarily proof. The data given here shows an increase in temperatures over the last 20 years or so. Ideally, data from other parts of the country and around the world should also be looked at.</p> <p>Note: increases will only be noticeable on the graph if the scale chosen is sufficiently large (see pre-drawn graph).</p>
Timing	<p>2 or 3 homework sessions</p> <p>30 minutes in class</p> <p>Extension, 30 minutes in class</p>
Resources	<p>Worksheets supplied below (more able, less able and data sheet)</p>
Curriculum links	<p>Literacy – ask relevant questions, extend and follow up ideas</p> <p>Geography – collect and record evidence</p> <p>Historical enquiry</p> <p>Maths (extension activities)</p> <p>ICT Prepare information for development using ICT</p>
Differentiation	<p>More able children can be left to devise questions for their interview.</p> <p>A second worksheet suggests some questions to ask.</p>

Can you find evidence of climate change?



You will ask your older relatives what the weather was like when they were young. The further back you can go, the more chance of seeing climate change in action.

Your task

Think of some questions you could ask to find out what the weather was like in the past.

Interview 2 or 3 of your relatives to see what the weather was like when they were young.

Answer the questions yourself to see what the weather is like now.

Put the answers to your questions into order according to how old the person was. The oldest relative's answers first and your answers last.

Your results

Look to see if the answers people gave show that the weather has changed.

If it has changed, what are the patterns?

Is it warmer, colder, wetter or drier?

How reliable do you think this evidence is?

Can you find evidence of climate change?



You will ask your older relatives what the weather was like when they were young. The further back you can go, the more chance you have of seeing climate change in action.

Your task

Arrange to ask 2 or 3 of your relatives some questions. You will talk to them about the weather when they were young.

Ask them these questions about winters when they were young.

You will need to write down their answers.

1. What were the winters like when you were young?
2. Were they hot or cold?
3. Did it snow a lot?
4. Were they wet or dry?

Ask them these questions about the summer when they were young.

You will need to write down their answers.

5. What were the summers like when you were young?
6. Were they hot or cold?
7. Was there lots of sun?
8. Did it rain much?

Answer the same questions yourself. That's what the weather is like now.

Remember to write your answers down too!

Put the answers to your questions into order according to how old the person was. The oldest relative's answers first and your answers last.

Your results

Look to see if the answers people gave show that the weather has changed.



If it has changed, what are the patterns?

Are the summers the same or have they changed?

Have the winters changed?

How reliable do you think this evidence is?

Charting the weather



This table shows the average temperature for Sheffield in the UK. It looks back over the last 100 years.

Years	Average* temperature (°C)
1906 - 1915	12.6
1916 - 1925	12.4
1926 - 1935	12.8
1936 - 1945	12.8
1946 - 1955	12.8
1956 - 1965	12.7
1966 - 1975	12.8
1976 - 1985	12.8
1986 - 1995	13.2
1996 - 2005	13.7

Plot a graph to show these results.

Should it be a bar chart or a line graph?

Think about the range on the temperature axis.

What trend is shown by your graph?

Is this evidence for climate change and global warming?

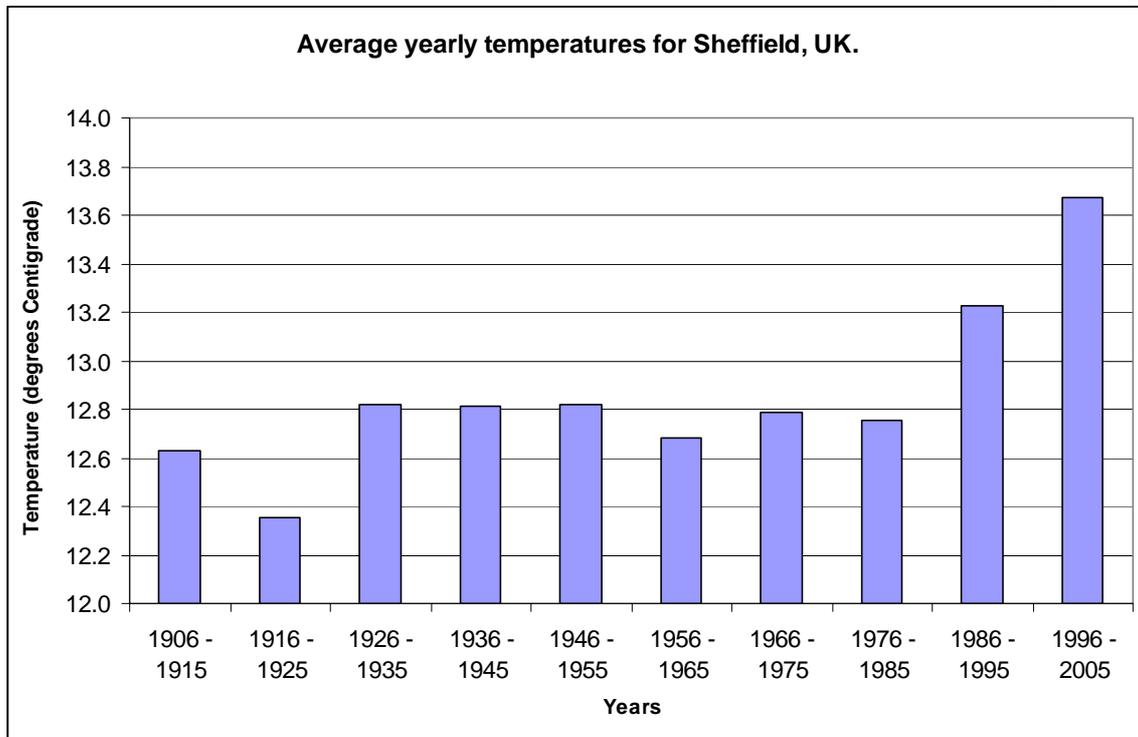
How could we make the evidence more reliable?

*average of highest temperature each month

Charting the weather



The graph shows the average* temperature for Sheffield in the UK.



What trend is shown by the graph?

Is this evidence for climate change and global warming?

How could we make the evidence more reliable?

* Average of highest temperature each month