



Climate change: global impact

What links the UK and the Arctic?

What causes climate change in the Arctic?

Climate change in the Arctic is caused by the same ordinary, everyday activities that affect the whole planet's climate. For example, greenhouse gases are mostly produced in other parts of the world but they still have a BIG impact on the climate in the Arctic, causing temperatures to rise more quickly than they should.

Why does the Arctic warm faster than other parts of the world?

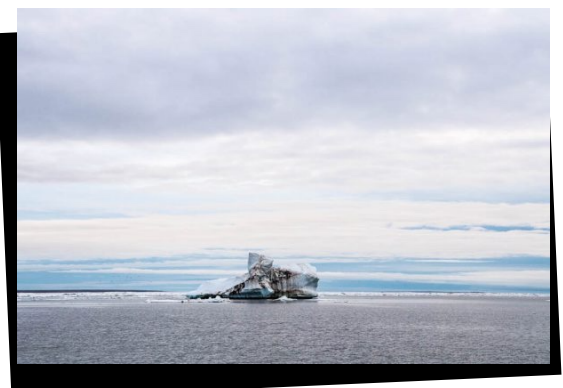
1. As snow and ice melt, darker land and ocean surfaces absorb more energy from the sun.
2. This energy turns into heat instead of evaporating.
3. The atmospheric layer over the Arctic is shallower than in other places – making the air even warmer.
4. As the sea ice melts, less heat from the sun is absorbed and more goes back into the air.
5. Changes in the circulation of the air and oceans in the Arctic increase warming further.

Did you know? Over the past few decades the annual average Arctic temperature has increased almost twice as fast as the rest of the world!

The warmer it gets, the more snow and ice melts and the cycle starts again...

Is climate change just an Arctic problem?

Climate change is happening all over the world, but it is affecting the Arctic more than anywhere else. Glaciers and sea ice are melting, the permafrost (a very thick layer of frozen soil in the Arctic) is thawing and precipitation (snow, rain or sleet) is increasing. This all means that the snow season is getting shorter. These changes are likely to continue and possibly get even worse as the Arctic region suffers more unpredictable and extreme weather conditions.



How does climate change in the Arctic affect the UK?

Climate change in the Arctic affects the whole world in many ways, including rising temperatures and sea level, and changing where animals and plants can live. The UK is affected in the following ways:

- Temperatures have risen by about 1°C since the 1970s. Further warming will happen although no one is sure how much hotter it will get.
- Extremely wet winters are more likely, causing more floods.
- Summers could be warmer and drier. While this may sound good, it could mean drought and water shortages. Older people in particular would be at risk of illness due to the higher temperatures.
- Our wildlife and plants will change. New species may arrive from other countries, some may move northwards, others may die out due to less food being available. However, farmers might be able to grow new crops such as wheat or sugar beet.

If changes in the Arctic affect the UK, do my actions here affect the Arctic?

YES! The Earth's climate has changed many times over thousands of years. However, over the last 50 years we – humans – have caused the planet to warm much more quickly by our everyday activities releasing too much carbon dioxide and other greenhouse gases into the atmosphere. And it is not just big industries. The energy that we consume in each of our homes and schools add to greenhouse gases too.

So what can I do?

We all need to reduce the amount of carbon that we produce - our 'carbon footprint'. If everyone made some small changes, it would make a BIG difference:

- Walk, cycle, or use public transport instead of cars that use fossil fuels.
- Switch off lights, power sockets, phone chargers and TVs when not in use.
- Don't fill the kettle full. Only boil the water you need.
- Use energy-efficient lightbulbs and rechargeable batteries.
- Use an energy monitor in your house or school. Saving energy saves money too!
- Recycle and reuse everything you can, especially plastic products.
- Could your school install solar panels or your family switch to an energy supplier that supplies greener electricity and gas?

