

Climate Change Information for Teachers: Short Summary

1 What is climate change, and what is the greenhouse effect?

Carbon dioxide, along with other greenhouse gases, traps heat radiating from the Earth's surface, acting like a greenhouse around the Earth. As the concentration of carbon dioxide and other greenhouse gases rises, more heat is retained and the Earth warms. This process is called the greenhouse effect. This warming, in turn, causes disruption and change in the long-term patterns of weather – the climate – all over the planet, and that is what we call '(human-caused) climate change'.

2 What is the scientific evidence for climate change?

The Intergovernmental Panel on Climate Change (IPCC), drawing on diverse published scientific research, concludes: 'Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, and sea level has risen.'

3 What are the consequences of climate change for people and planet?

The consequences of climate change include more erratic weather patterns and extreme weather events like typhoons, droughts, storms and floods. They are felt most by the world's poorest people, and can be linked to other critical global challenges such as conflict and migration. In Ireland, climate change may lead to a rise in sea level; more intense storms; more rain; increased flooding; water shortages in the summer (particularly in the East of Ireland); and changes to the plants and animals. Globally, species are placed at risk of extinction, which impacts on our ability to grow food.

4 What has climate change got to do with the ozone layer?

Climate change should not be confused with the hole in the ozone layer and these two issues are best thought of and taught as two distinct issues.

5 How does climate change relate to people's ethical values?

Climate change is very unjust. Vulnerable people living in developing countries, who are least responsible for greenhouse gas emissions, are most affected by climate change. Future generations will be affected by climate change. The environment, including all its plant and animal species, is detrimentally affected by climate change.

6 What is being done about climate change globally?

Global efforts to make commitments to tackle climate change have been ongoing since 1992. In November 2015, the Paris Agreement pledged a commitment to limit the global temperature rise to ‘well below two degrees celsius’.

7 What can we do to reduce the impact of climate change?

In our local communities we can reduce our greenhouse gas emissions by, for example, reviewing our energy and transport use and food consumption, but we can also contact environmental organisations, businesses, local authorities and politicians to show our concern for climate change.

8 What suggestions are there for teaching about climate change?

Climate change needs to be foregrounded in education and to be approached from different perspectives across the curriculum. Knowledge, skills, values, feelings and actions are all key components in teaching and learning on climate change.

9 Why do we need leadership for climate change, and what does it mean?

Political, institutional and individual leadership is going to be necessary to tackle climate change. This leadership requires holistic thinking, a caring attitude, an awareness of different values and cultures, being inclusive of different people, being innovative and radical, having a long-term perspective and having a vision for bringing about change.

10 Where can I get more information and ideas?

Intergovernmental Panel on Climate Change: www.ipcc.ch

United Nations Framework Convention on Climate Change: www.unfccc.int

Climate change in Ireland: www.change.ie

Trócaire: www.trocaire.org