

Climate Change Education in UK Secondary School

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In the UK, teachers are heavily constrained by the National Curriculum and the specification requirements of exams taken at 16 (GCSEs) and 18 (A levels). Following recent changes, the Royal Meteorological Society has produced, amongst others, the following resources:

1) Climate Change Negotiations Pack for Schools

In 2017, we worked with climate scientists, educators, social scientists and dramaturgs to provide teachers with an accessible, interactive and engaging on-line resource to engage pupils in a topical debate on climate change. Primarily aimed at supporting secondary geography, the Climate Change Negotiations Pack also engages students with wider societal issues and encourages interactions in which negotiating skills, critical thinking and political debate can be explored.

Our resource brings together rigorous climate science and good pedagogy. It differs from other, existing climate change negotiation events developed for schools in that it is a classroom resource, for use during standard lessons, without the need for expert input or previous preparation. This allows widespread use, widening participation and giving far more students and teachers ownership of the question of our response to climate change. Moreover, students are invited to negotiate from a viewpoint of one of 10 foreign countries, considering the country-specific scientific, environmental, social, economic, political and energy issues.

The resource, which is freely available on <http://www.metlink.org/climate-negotiations-for-schools/>, is designed to be used over the course of 2 standard lessons with students aged 14-18 and consists of a mixture of short videos, research exercises, speech preparation and negotiation sessions, and with a bespoke voting tool to allow the ultimate pledges to be evaluated.

2) Past Climate Change Teaching Resources

Secondary geography teaching has moved away from the previous emphasis on issues surrounding current and future climate to focussing on the past 2.6 million years. Although numerous materials exist to support schools teaching anthropogenic climate change, far fewer high quality resources concentrate on the more distant past. Recognising this gap and reacting to requests from teachers, the Royal Meteorological Society compiled a new resource collection in 2016.

Different atmospheric processes and phenomena are investigated in each of 5 modules:

- a) The climate of the last 2.6 million years: Milankovitch Cycles, Supervolcanoes
- b) The last 11000 years: The Holocene
- c) The last 2000 years: the Medieval Warm Period and the Little Ice Age
- d) The last 500 years: Volcanoes
- e) The last 200 years: the Sun and the Greenhouse Effect

We were able to collate and disseminate materials supplied by paleo-climate experts to ensure teachers and students could benefit from the latest research and understanding. Teachers are supplied with data, background information and lesson ideas. The resources, Highly Commended by the Geographical Association, can be found at <http://www.metlink.org/past-climate-resource-modules/>

3) Climate Change Updates Booklets

From 2014-2016 we worked together with scientists from the National Centre for Atmospheric Science to produce three IPCC focussed booklets for

- a) geography teachers,
- b) science teachers
- c) A level geography teachers.

These were distributed to schools throughout the UK and are online at <http://www.metlink.org/climate/climate-change-teaching-resources/>