

RGS-IBG KS3 CPD Tutorial – Climate Change – Teacher Notes

The teaching of climate change is the teaching of topical issue and a controversial issue. Climate change is an exciting topic to teach because it is something that faces us all and it is something that everyone has an opinion about.

The student's booklet is a starting point, which provides an overview of the main aspects of climate change.

Students are increasingly aware of climate change issues. Both good and poor programmes have aired in the popular media and like teachers the students too will have developing opinions on the topic. This is where it is important that when teaching this topic, good information is at hand. There is much misinformation available about climate change as well as information and the teacher needs to not only be able to differentiate between the two, but also be able to counter the misinformation that is also in the public domain.

Recommended is the excellent and succinct review by the Royal Society that aims to put the information into context and is a very good starting point (see links at the end of this document).

It is possible too, that in the teaching of climate change as a part of your wider curriculum, it will be possible to discuss the impact of bias and misinformation, as well as touching on the impact of 'spin' in the political dimension.

The QCA identifies a number of key areas through which geography should best be explored. Climate change can be explored through these themes very effectively. The [online CPD tutorial on climate change](#) is structured around these Key Concepts. If you are unable to access this online presentation, a transcript is available on this site for download.

Suggestions for starting the topic

Collect a number of photographs from the popular press relating to climate change and global warming. Use these as a basis for discussion. If you have a large number of these, you could ask students to sort them into categories as an exercise encouraging them to think about and to discuss the issues in different ways.

Have a brainstorm to discuss the issue of climate change and what we should be doing about it, as a means for assessing just how much the students know about the issue.

Set an ICT exercise to look at some of the websites for which there are links on this page. You might give students the website so that they might explore

the links themselves. Each student should look at finding a limited number of points which during a plenary they could explain to the class.

Explore one of the websites for which a hyperlink is provided at the end of this document, in class on the screen of the interactive whiteboard, if you have it connected to a computer with internet access. Get students to make notes of significant findings as you proceed.

Use a climate change/global warming story from a very recent newspaper report or from a recent copy of TIME magazine or the like. Explore the issues that are raised in the report.

Download the accompanying student booklet on climate change/global warming, and photocopy it as a booklet and distribute it to your students. Alternatively, ask them to view the document online for homework or during a lesson where they may access computers.

Suggestions for structuring a unit on Climate Change

After deciding how many lessons you will be able to devote to the topic look at ways that you can provide a range of geographical experiences for students whilst they are exploring climate change. Listen again to the slide show and jot down any ideas you would like to pursue.

Try to include a use of ICT.

Use the accompanying downloadable sheets to have students build their own climate change graph. Most students will have seen a climate change graph, but the process of choosing a location and building the graph will make the graph and the gradient of its change much more compelling for them. Try to book the computer room early to ensure that students can complete this exercise.

Have students look at a range of information on climate change, some of which might be good and some of which might be biased. Some programmes are available for watching various sources from the Internet. Be careful about showing biased accounts of global warming, because many are very convincing. Ensure that prior to showing or all or part of any such programme you have found information about the programme and why it might be flawed.

With a little preparation it is possible to teach a very effective lesson on this, but with little planning, the showing of such material can do more harm than good. See the link (at the end of this document) to an assessment of misinformation in one such programme.

Consider connecting the teaching of climate change to other topics you have already covered in the syllabus. This will provide students with a background with which they have some knowledge and it will provide you with a number of places to investigate with regard to the impact of climate change. If you have an impending field trip coming up then it might be worthwhile considering the impact of climate change on that particular landscape, or perhaps you can refer to a field trip that students have been to in the past.

Completing a unit of work on climate change

Climate change and global warming are of course a continuing issue. Students will of course be aware of this. Try to think of ways that you can continue to engage with them. If you have an environment club in school you might look at ways at moving your school to becoming carbon neutral or you might make targets to reduce various forms of consumption (unnecessary school heating and lighting for example) or packaging.

Ensure that at the end of the unit of work that students have a robust understanding of the science as well as an understanding of the implications of climate change on real places, with some, preferably being local.

Finding a suitable local or distant, climate change case study

One aspect of climate change is that there are implications of climate change at all scales. Moreover, the implications of climate change occur in all sorts of different places. Sometimes, phenomena that might appear to be related to climate change might be due to factors unrelated to climate change and in other instances phenomena that might appear to be unrelated to climate might, in fact, be strongly related.

For schools there is many opportunities for students to play a significant role in measuring and even identifying these changes. Schools teach geography every year and therefore are able to build a dataset that can be developed over time. Students too, often come from a range of locations and this provides an opportunity to measure phenomena in a range of areas, possibly feeding information into a locality GIS.

The scope for finding such a project is enormous, but it is important that the construction of such a project has strong legitimacy in terms of assessing climate change.

It is worthwhile approaching local national parks, country parks, park rangers etc for ideas of local indicators that might be reasonably measured. In a rural area, the incidence of bird song might be measured, or the spotting of various kinds of animals, birds or insects. In urban areas, local temperatures might be measured at different times of the day, feeding information back into a central GIS.

The Field Studies Council may also be a useful source of information.

Alternatively there might be an opportunity to link with another school in another part of the country or abroad to share information collected.

It is not necessary to collect data first hand. A local area study might look at flood statistics in a local area or rainfall data or the incidence of storms. Your school might choose a specific kind of weather event such as rainfall and produce an annual 'state of the nation,' profile of rain throughout the UK or throughout the school's county.

Alternatively the school might take an active interest in an area away from the school. Schools that are engaged with the sponsorship of a person in another part of the world might reasonably focus on climate change issues facing that locality during the course of a twelve month period, by using information available on the internet.

Schools who provide support for an environmental concern or the looking after of a species somewhere in the world might similarly look at the implications of climate change for that species.

The key is to make connections with places locally or further a field and then to carefully connect changes in those areas with larger trends and phenomena relating to climate change. Most organisations now will have information relating to climate change and if they do not, it might be a good opportunity to help produce this information or to encourage such organisations to produce such information.

Conclusion

Teaching climate change and global warming can be great fun and enormously rewarding. Young people are increasingly interested in the environment because they are implicitly aware that this is the world that they are inheriting. In fact, often, environmental decisions in the home are made or strongly influenced by the impact of children.

Geography, therefore, has a responsibility to address this because climate change is its issue.

Internet sources for more information on climate change

BBC Site on Climate Change: <http://www.bbc.co.uk/climate/>

Royal Society Climate change portal:
<http://www.royalsoc.ac.uk/landing.asp?id=1278>

Letter written by the Royal Society to ask the Exxon oil company to stop funding work which undermined climate change research:

<http://image.guardian.co.uk/sys-files/Guardian/documents/2006/09/19/LettertoNick.pdf>

DEFRA Climate change page:
<http://www.defra.gov.uk/environment/climatechange/index.htm>

Wikipedia also provides good quality up-to-date information on climate change and global warming: http://en.wikipedia.org/wiki/Climate_change and http://en.wikipedia.org/wiki/Global_warming

An Inconvenient Truth website: <http://www.climatecrisis.net/>

US portal to teaching resources on climate change and global warming:
<http://hdgc.epp.cmu.edu/teachersguide/teachersguide.htm#background>

Assessment of misinformation in one biased programme relating to climate change. thinkingeography.com The Great Global Warming Bingle.

<http://web.mac.com/draklee/iWeb/thinkingeography/geovoicecast/1FDDDC5D-98E1-4ED8-8993-D7BC4ED2A045.html>

Climate of Change

<http://web.mac.com/draklee/iWeb/thinkingeography/geovoicecast/7927C04F-AC74-4042-BE37-FFB4EFE4DB72.html>