

A photograph of several white wind turbines in a field, set against a warm, orange-toned sky. The turbines are arranged in a line, receding into the distance.

THINKING THROUGH CLIMATE CHANGE

SORT IT OUT!

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Teachers' notes

Most scientists agree that climate change is already happening. This section is about how we respond to that reality. On so doing, it is clear that humans need both to adapt to it, and to attempt to reduce its effect.

Climate change is an uncertain subject. Therefore, how we respond to it is based on how we read that uncertainty. What we know about it is developing and changing all the time, and that too affects our ideas about effective action.

Such action may involve both long and short term solutions. For example, even if we cut out all global Carbon dioxide emissions today, it is highly probable that what is already in the atmosphere will continue to have an effect for tens of years to come.

We have found that it is best to be open and honest about these things with young learners. They need to be made aware of the uncertainties, and arrive at their own informed working ideas about what can be done.

In order to empower learners, we have sought to avoid blame and negativity, and to focus instead on positive solutions. Nonetheless, learners need to be aware that although little personal steps are helpful, they are not the whole picture: it is perfectly proper to expect others [such as politicians] to do things on our behalf.

Responding to climate change

The first part of this section supports a basic understanding of existing responses to climate change at local, national and international scales.

There is a wealth of information about such responses and links are given to some key sources. In this, we have endeavoured to offer a reasonable balance between different perspectives: we therefore recommend that learners look at a variety of links as they develop their background knowledge.

> [Responses to Climate Change](#)

Design activity

Creative and innovative design in response to climate change is an important and growing agenda – and may incorporate elements of both adaptation and mitigation. It offers purposeful, positive and productive possibilities for action and imagination. This balances the risk that a response to climate change [eg by not wasting energy] can become a list of “thou shalt not”s.

Learners are asked to take an everyday object and:

- either design/re-design it in order to reduce the effects of climate change;
- or design/invent a new product that may have an impact on carbon emissions.

We offer some real-life examples [which should inspire them rather than merely be imitated] and a downloadable proforma for their design. The design itself could be executed using a drawing program, or pencil and paper. Design could be an individual or group task. We suggest that learners’ designs are saved in [or scanned into] their personal folders, and used as part of a final presentation. > [Design activity](#)

The energy question

In this activity, learners consider the pros and cons of two controversial schemes regarding large-scale energy production. In both instances, these are low carbon options which have other significant environmental and social implications. The activity is aimed at older or more advanced learners, who are invited to explore some of the difficulties involved in decision making at this scale.

The examples are:

- the Three Gorges Dam across the River Yangzi in China [which has already been completed];
- the debate about building new nuclear power stations in the UK [which is going on at the time of writing].

Learners are given some background information, before going on to a drag-and-drop activity where they sort statements into their positive or negative implications for each place. They are then invited to compare the two. > [The Energy Question](#)

Extension opportunities

As we imply in the local responses information, learners could consider a variety of external links from people and organisations responding to climate change. They could reflect on their own ideas and feelings about these responses, and go on to expressed their own opinions about what can be done [eg as part of a final presentation]. They may wish to go on to take action themselves, personally, as a class, or with the whole school.

Personal action might focus on

- travel choices
- houses
- how they spend their money
- waste and recycling

There are a number of websites offering online or downloadable games and activities geared to young learners. Many of these focus on energy reduction.

For example:

- > Carbon Gym
- > Energy matters
- > Energy ninjas*
- > Climate friendly
- > Mad about climate change
- > Think!Energy

Cool kids for a cool climate is a website established and managed by young people: it may inspire learners into setting up their own initiatives. www.coolkidsforacoolclimate.com

**Energy ninjas is a "South Park" style cartoon game, which may not be appropriate for some younger learners.*

We offer some news stories in this section. Learners could be encouraged to find current news stories relating to climate change on both daily/ weekly basis. They could select one local and one global story to be displayed and discussed.

Useful news sites include:

- > BBC news
- > Cartoonweb
- > Guardian
- > Newsround
- > TNN [portal for a range of news sites worldwide]

Assessment

green

We imagine most learners at KS2 and KS3 will be able to do the **introductory and design activities** without significant support. Some learners, however, may require substantial time looking at existing examples, and some guidance in ensuring that their own designs are not simply imitations of these.

red/black

We anticipate that learners may need support to understand the background to **the energy question activities**. Once the background information has become clear, we expect most learners will be able to complete the activities unaided.

Curriculum

Citizenship This section has strong links to themes of:

- Political literacy [political structures responding to climate change at local, national and international levels; Local Agenda 21];
- Participation [see, for example KS3 Unit *10 Debating a global issue*; KS2 Units 1 *Taking part* and 2 *Choices*].

There are opportunities in other areas, especially Geography, ICT and Literacy.

Next

This is one of five sections which explore particular aspects of climate change. We imagine that learners will look at two or more of these before going on to the final section, where they report back.

> [Final Task](#)

Learners can access the final task from the learners' logs, while teachers can also access it from the site map.

To return to introductory teachers' notes

> [Introductory Notes](#)

Teachers' site map

> [Sitemap](#)