

## Activity

Helping you develop the **Global Dimension** across the **curriculum**

# 17 Energy and global warming



### Activity description

This is a speaking and listening activity that will enable students to explore the complex issues around energy and the environment. By the end of the lesson the pupils will have knowledge about an environmental activist.

The activities could lead onto whole school activities to reduce, reuse, recycle and reclaim.

### What you need?

- One copy per student of the note taking frame for biography writing.
- The photograph of the world at night.
- One between two of the global warming photographs.
- Access to the internet for all students.

### Aims

- To explore the effects of climate change.
- To think about ways of reducing the use of fossil fuels.
- To use planning, drafting and editing processes to write a biography of an activist.

### Curriculum links

- English KS3 and KS4:
  - 1.1 Competence
  - 2:1 Speaking and listening
  - 2.2 Reading for meaning
- ICT KS3 and KS4:
  - 2.1 Finding information
  - 2.2 Developing ideas
  - 2.3 Communicating information
- Geography KS3:
  - 1:4 Interdependence
  - 1.5 Physical and human processes
  - 1.6 Environmental interaction and sustainable development

## GLOBAL DIMENSION

Underlying the concept of a global dimension to the curriculum are **eight key concepts**.

This activity covers the following five:



**Citizenship** – gaining the knowledge, skills and understanding necessary to become informed, active and responsible global citizens.



**Social Justice** – understanding the importance of social justice as an element in both sustainable development and the improved welfare of all people.



**Sustainable Development** – understanding the need to maintain and improve the quality of life now without damaging our planet for future generations.



**Values and Perceptions** – developing a critical evaluation of images of the developing world and an appreciation of the effect these have on people's attitudes and values.



**Interdependence** – understanding how people, places and environments are all inextricably interrelated and that events have repercussions on a global scale.

The other key concept which can be explored using other Makutano Junction activities are

**Conflict resolution**

**Diversity**

**HumanRights**

Find out more: [www.globaldimension.org.uk](http://www.globaldimension.org.uk)

Further details of how this activity meets requirements of the new Secondary Curriculum appear on the Curriculum Links table. For subjects outside the statutory curriculum, check your own exam board for their requirements. For general information on the Global Dimension across the curriculum, see [www.globaldimension.org.uk](http://www.globaldimension.org.uk)

## Top Tips

- Encourage students to realise that we are all responsible for the environment. Climate Change and the world's finite natural resources are problems that unite both Kenya and the U.K. Nairobi suffers from regular power cuts just as the U.K is facing increases in fuel bills.
- Annual CO2 emissions in 2004 were:

Kenya	10,588
United Kingdom	587,261
United States[9]	6,049,435

## What you do

- 1 In pairs, look at the photos and decide what they have to do with energy and global warming.
- 2 Watch series 3 episode 10 and ask pupils to note down how energy is used in the episode.
- 3 Feedback on how energy is used in Makutano Junction, and in our homes. Then look at the photo of the earth at night or look at it on the website. [http://www.geog.nau.edu/courses/alew/maps/Earth\\_at\\_night.jpg](http://www.geog.nau.edu/courses/alew/maps/Earth_at_night.jpg)

What do the students notice about where the most amount of energy is being used? What lessons can we learn from Africa?

The UK's carbon footprint is over 500 million tonnes of Carbon dioxide per year. Individuals account for 45% of this. How can we reduce our use of precious fossil fuels?

Who in Makutano Junction takes a role in campaigning for local environmental issues?

- 4 Brainstorm examples of environmental activists who have made a difference. Split the class into two and remind the class of the features of biography writing. Give one half Arundhati Roy and the other group Wangari Muta Maathai. These are two strong minded women that have defended the environment and taken action to protect it. How do their actions help to reduce carbon dioxide emissions? Each group needs to research and compile notes to write a biography. Use the note taking frame if needed.
- 5 Come back together as a class and ask the experts on each environmentalist to team up with a non-expert. The experts need to use their notes to inform their partner. The non-experts complete the notes sheet.

## Variations/additions

- In the two groups research the effects of nuclear power and the variety of renewable energies available to us. Have a debate on the arguments.
- Compile a list of class promises to reduce the use of energy e.g.

I promise to...turn my television off at the set, and not use the remote control to leave it on standby. Why? Because it uses 85 per cent as much electricity to keep the little red light on as when watching TV. Use <http://www.google.co.uk/carbonfootprint/cal.html> for ideas of actions.

## Follow-up/research questions

- Each class member can choose to write up in full a biography of the woman they personally found most inspiring.
- Where are the provisions in your local area for recycling?
- Calculate the food miles involved in your favourite meal.
- Is eating local food better for the environment than buying from abroad? [http://www.bbc.co.uk/food/food\\_matters/foodmiles.shtml](http://www.bbc.co.uk/food/food_matters/foodmiles.shtml)

## Useful resources

[http://www.geog.nau.edu/courses/alew/maps/Earth\\_at\\_night.jpg](http://www.geog.nau.edu/courses/alew/maps/Earth_at_night.jpg)



## TAKE ACTION

- Organise a trip to the local recycling centre and interview the manager to find out the successes and problems of the scheme.
- Interview managers of local businesses, what are they doing to reduce their carbon footprint?
- Write to a variety of supermarkets and ask them what measures they are taking to reduce plastic packaging.
- Invite your local Green Party MP to discuss actions that they think the government should be taking to save energy.
- Audit the use of energy in your school. How much does the school spend on electricity each year? Take actions to reduce the use of energy and compare the monthly bills.
- Look at what other schools are doing to reduce their carbon dioxide emissions can your school pledge to do the same?  
<http://www.energysavingtrust.org.uk/cafe/Community-Action-for-Energy/Community-Projects/Projects-and-case-studies>
- Get involved with the International Climate Challenge, a project involving schools and youth groups in UK, Kenya and India in taking action around climate change. Look at [www.InterClimate.org](http://www.InterClimate.org) for examples of what's going on in the three countries, and for how you could get involved.