

Energy Activity 1: What Uses Energy At Home?

An Iceworld Activity

This activity is all about raising awareness of how energy is used in the home. The more energy that we use, the more greenhouse gases are created, contributing to the climate change. In this activity you and your students will:

- Think about where energy is used around the home
- Produce a poster or image listing what items use energy in the home.
- Discuss which items are used the most, or on for the longest time.

Context

In the [Iceworld Mission Briefing comic](http://www.rootsnshoots.org.uk) (downloadable from the Resources section of <http://www.rootsnshoots.org.uk>), Chrono-bot 5H00T5 travels to a future where the gulf stream has shifted due to climate change, leaving Scotland frozen. The smallest improvement in the rate of climate change today could help, so the more energy we can individually save the better.

What do I need to make it work?

Using your interactive white board, project a simple cross section of a house showing the main rooms (kitchen, bedroom, bathroom, living room) or draw or print out a simple cross section onto A2 or A1 paper and affix to a wall or board.

You will also need small slips of paper for students to write suggestions on, a selection of pens, and blu tack or similar to attach the slips to the image above.

(sample image suggested http://i.istockimg.com/file_thumbview_approve/12937341/2/stock-illustration-12937341-country-house-cross-section.jpg)

Useful websites for energy saving ideas are:

- <http://www.energysavingtrust.org.uk/>
- <http://www.blewbury.co.uk/energy/energy.htm>

What things will my students create

- A poster showing the different rooms in a house, and where energy is used in each of them.



Energy Use at Home

This activity will look at where energy is used around the home.

Step 1 - What is energy?

Energy makes things happen. Specifically, we want to introduce the kinds of energy supply you find at home. For example, you could ask your students:

- What do they do when the battery on their mobile phone runs down? (Plug it in to the electricity supply)
- How would they heat up a can of beans to eat? (In a microwave that's plugged in to an electricity supply, on an electric cooker, on a gas cooker)
- Have you ever been to a barbecue? How was the food cooked?
- What kind of activities do they do for fun at home that might use energy? (games consoles, television, computers)

Step 2 - Where do we use energy at home?

Divide your class into groups of 4 or 5 students, and in their groups ask them to make a list of as many things that use energy at home as they can in 5 minutes. Ask them to think about the items in each room of a house (bedroom, kitchen, living room), with each item suggestion to be written down on a slip of coloured paper. When the time is up, ask each group to put up one item per room on the house cross section image, repeating until all the item suggestions are up.

Use this as a basis to look at other areas where energy is used in the house, if there are missing items. For example;

- Things that they plug in (e.g. phone chargers, computers, televisions, mp3 players)
- Things that use batteries (e.g. remote controlled toys, portable radios)
- Things that they switch on (e.g. lights, a heater, central heating)
- Things that burn (e.g. a gas cooker, a solid fuel fire, oil fired heating)

Older students might also want to make a list of where energy is indirectly used in the home. E.g. energy is required to process the water that comes out of your tap, and to package and transport your food (there is a whole activity on food miles available on the Roots & Shoots website should you wish to go into this in detail).

Once there are no more items to add, ask the students to think about the following things:

- Are there any items that are in more than one room? (lights, televisions, computers)
- Which items are on the most?
- Are there items that are on all the time? (use this to introduce the 'standby' mode on electrical products)

Further work

This activity links to Energy Activity 2: Home Energy Questionnaire (Iceworld Activity – coming soon!) - using the list of items from above, students can devise a questionnaire to see how many items they have at home that use energy.

