

## C. Science

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### 3C. SCIENCE OPTION (i): Individual actions

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**Variation:** Students could simply lay the cards out in order rather than pegging them to the line.

**Differentiation:** To make this more suitable for Key Stage 4 students you can have a discussion on the costs, both financially and socially, of taking different actions. You could also put emphasis on the school and ask students what actions they feel the school should take.

This activity helps students to **identify with their learning as individuals** as well as **place their learning within their school**. Computer access will be useful for extending research activities.

- Divide students into groups or work as a whole class, hand out the *3C(i) individual action cards*.
- Inform students that they will now be given a challenge to peg the actions on the washing line in order of how much energy they think they would save per day from doing them - from the least energy one end to the most energy the other.
- Reveal the correct order to students using the “individual action answers” sheet. Inform the students that the data is only a rough idea and that the actual energy saving would differ from person to person depending on how much energy they used in the first place.
- Ask the students to name the things which they already do.
- The students should then put the cards on the washing line again, this time in order of preference of performing the actions – from the actions they would find more difficult to take at one end down to the actions they would prefer to take at the other. Students may need to research costs of some of the actions e.g. solar panels and double glazing.
- Discuss with the students the problems they would encounter when performing the actions and whether they are feasible. Are there some that they think could be implemented in school? Are there some which would be easier to do than others?

## C. Science

The aim of this activity is that students research different energy sources and form opinions about the advantages and disadvantages of each based on their findings. In this activity students will discover the science behind each energy option.

You will need to use the *3C(ii): Energy quotations* in the annex. You will also need internet access for students or books on the energy forms mentioned in the quotations, for the research element of the task.

- Split the students into groups.
- Give each group an opinion card about a type of energy. Each group should have a different quotation.
- Tell the students they are to research their given forms of energy; to find out how they are produced; and create a poster from their findings to show the advantages and disadvantages of that particular energy source.
- Students should focus on the advantages and disadvantages of each energy type.
- Emphasise that the quotations are opinions and not facts and that there is no right or wrong answer.
- After the students have completed their research, ask them to share their findings with the class and whether or not they agree with the quotation they were given. Did their research influence their opinions?

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### 3C. SCIENCE OPTION (ii): Energy Posters

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**Variation:** Students can be split into teams, with each person in the team given a quote. They can research individually and then go back into their groups and present their poster to the group.

**Differentiation:** Students can prepare a presentation rather than a poster and include diagrams of how their type of energy works. They can then pitch their energy type to the class and receive feedback. This option may be more suitable for Key Stage 4 classes or as an extension activity.