

# THE ENERGY JOURNEY: PART 3

## HOW TO USE ELECTRICITY SENSIBLY

### SUBJECT LINKS

Science, Geography, Citizenship and ESD with links to Maths, English and PSHE/PSD

### LEARNING OBJECTIVES

- To reinforce that everyday appliances use electricity
- To help pupils understand that different appliances have different power ratings measured in Watts and Kilowatts and how these influence the energy used
- To encourage children to think about how they can save energy
  - Why do we want to save electricity?
  - How will we save electricity?
  - How will we know we've saved electricity?
- To recognise the different risks in different situations and then decide how to behave responsibly

### RESOURCES

- Resources to support all activities are clearly signposted. PowerPoint presentations, information cards, worksheets, animated diagrams and video clip footage can be found on the easy-to-navigate CD-Rom. Posters and flash cards have been provided as printed materials.

## TEACHER NOTES

This section covers the importance of energy efficiency and safety. In terms of the topic of energy efficiency, it reinforces how much electricity we use; helps pupils understand how to reduce their usage of electricity and energy by being more energy efficient; stimulates thought and discussion around how our actions impact on the environment; encourages them to actively identify opportunities for their own involvement around their school and home. They will also learn the 'shocking' truth about electricity and how to keep themselves safe through a selection of engaging activities.

Climate change is a natural process and happens naturally over time, but we as humans have speeded up the climate change process and our environment is now unable to adapt to it. This may be because the Earth's atmosphere is warming up – global warming. The result is more severe weather. We are already seeing increased droughts in many countries, with heavy rain and winds causing flooding and structural damage in others.

This is a worldwide problem and unfortunately we cannot undo the damage that has been caused over the years, but we can do our bit to stop it from getting worse so quickly by being more environmentally friendly. Particularly during the last 50 years most countries in the world have been rapidly increasing the burning of fossil fuels such as oil, natural gas and coal to heat and power our homes and schools and to power our businesses and transport. This has increased the amount of carbon dioxide into the atmosphere above the Earth's capacity to maintain a balance. We must learn how to reduce our usage of energy to help reduce the impact on the environment. We can do this by being more energy efficient; after all, the most environmentally friendly energy is the energy we don't use. There are many ways in which we can do this in our homes, schools, offices and factories.

It is also important to be safe around electricity. Electricity can shock, burn and kill. If someone dies of an electric shock they have been electrocuted.

As well as electricity, understanding gas safety can also save lives. Carbon monoxide is a poisonous gas that can be produced from poorly maintained gas appliances, but you can't see it and you can't smell it. The materials for this section also provide tips on how to keep safe from gas including carbon monoxide.



# ACTIVITY PLANNERS

In the Climate Cops resource you will find a suite of activities that will help you to deliver the learning objectives outlined for The Energy Journey: Part 3 – “How to use electricity sensibly”. Every activity is supported with PowerPoint slides and relevant stimulus materials e.g. worksheets, posters, flash cards, animated diagrams, information cards and/or interactive whiteboard games.

You can select the activities that are best suited to your pupils and devise lesson plans accordingly. To give you a flavour of what to expect, we have detailed one of the activities below.

## TASTER ACTIVITY...

### **THE EARTH NEEDS YOU**

The most environmentally friendly energy is the energy we don't use. Have a class discussion on the importance of energy efficiency. Introduce three key concepts:

1. To reduce carbon dioxide emissions and therefore cut global warming
2. To save the Earth's non-renewable sources
3. To save money

The 'Be Energy Wise' PowerPoint presentation introduces these concepts.

Other supporting resources include a 'Climate Change' information card and animation which could be played via the whiteboard to explain how climate change works.

### **CLIMATE CRIME CARDS**

Then split the class into groups of three or four.

- Hand out one climate crime card to each group
- Each card carries one climate crime and there are 10 different types of cards in total
- Each group has to work together to decide how best to get the class to guess their climate crime. They can use drama or charades for example

### **RESOURCES**

- ★ BE ENERGY WISE – POWERPOINT SLIDES
- ★ THE EARTH NEEDS YOU – CLASS POSTER
- ★ CLIMATE CHANGE – INFORMATION CARD

- ★ HOW CLIMATE CHANGE WORKS – ANIMATION
- ★ CLIMATE CRIME CARDS – WORKSHEET

### **RESOURCES**

YOU CAN DOWNLOAD THE POWERPOINT SLIDES AND THE CLIMATE CRIME CARDS WHEN YOU GO BACK TO THE 'LESSON PLANNER' PAGE OF THIS SITE. THEY GIVE YOU THE OPPORTUNITY TO SEE THE TYPE OF MATERIALS YOU CAN EXPECT TO FIND IN THE CLIMATE COPS PROGRAMME.

