

Topic:	Year group	Term
Sustainability - Energy	4	Spring

Background knowledge

Children explore the terms "energy" and "energy usage". They should learn the different ways in which electricity is generated and the way it is used in their daily lives. Children should think about their daily routines and their use of electricity. They should consider devices that are battery powered and mains-operated, both at home and in school. Children may be aware of energy usage, particularly because of the high cost, but it may be the first time they have thought about the impact it has on the planet.

Children explore how they can reduce their energy usage at home and in school. They should then discuss the positive impacts this has on planet Earth. Children should be encouraged to reflect on their routines and highlight the changes that they could make on a daily basis to reduce their energy usage. They also look at other changes they can make on a weekly, monthly or even annual basis. Encourage children to compare the energy usage of things that they use in their lives and think about their impact on the planet, for example they could compare playing on a games console for an hour with playing outside with a ball.

Common Misconceptions

- Children may think that battery-operated devices are better for the planet as they might not recognise that they need to be charged via the mains or that batteries need to be recycled, rather than discarded in the bin.
- Children may not be aware that an electrical appliance has a larger impact on the planet than just the electricity required to use it.

What should I already know?

Children will know certain things use energy and should be able to name some of these. Children will also be aware that plugs need to be plugged into a socket.

Working scientifically

Using straightforward scientific evidence to answer questions or to support their findings.

Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.

Scientific enquiry



1. What is energy?
2. How can we reduce our energy usage?

Outcomes

Working towards: I can name some ways in which we can reduce our energy usage.

Expected: I understand what energy is and how it can be used. I can name some ways in which we can reduce our energy usage.

Exceeding: I understand what energy is and how it can be used. I can name many ways in which we can reduce our energy usage and give examples.

Key Vocabulary

Timeline / Diagrams

electricity - energy that flows in wires
 mains electricity - energy flowing to homes, businesses and schools through wires
 battery-powered - a device that needs cells to work
 renewable energy - energy sources that do not run out such as wind and solar (Sun)
 energy
 non-renewable energy - energy sources that will eventually run out, such as coal, oil and natural gas
 appliance - a device used for a particular purpose, for example a fridge or an oven
 Earth - the planet we live on
 energy usage - the amount of energy that is used in a home, school or business

Tips to Save Energy at Home



GREENMATCH

Key people / places

STEM job; Electrician.
 Benjamin Franklin.

Assessment questions / outcomes

• What is electricity? • What is energy usage? • Which sources of energy are better for the planet? • What is the difference between mains and battery powered electricity? • What is renewable energy? • What is non-renewable energy? • What are some examples of renewable and non-renewable energies? • What is electricity? • What is energy usage? • Which sources of energy are better for the planet? • How can we change our routines to impact the planet in a positive way? • What would happen to the planet if ... ? • What are the ways that you can reduce energy usage at home or at school?