



Electricity Unearthed KS2

Duration 1h, Max capacity: 35 students

Students learn about the energy sources that we can use to generate electricity, investigate conduction properties of different materials (including the human body!) and apply their understanding to build circuits.

Key Words:

Electricity. Circuits. Conductors & insulators. Components. Investigation.

Learning objectives

Understand that there are a variety of ways we can generate electricity

Understand that electricity is generated and then is transported to our homes

Identify electrical appliances that use electricity and recognise that some appliances use more electricity than others.

Understand that a circuit will only work if it is complete

Recognise that some materials are electrical conductors, some are electrical insulators

Recognise and identify the different parts of a circuit, including different components.

UKS2 only

Use recognised symbols to represent the different components of a circuit

Recognise that more cells in a circuit make a light brighter and a motor faster, and be able to explain why

Content: Students will:

LKS2:

· Test a series of familiar objects in the human circuit to determine if they're electrical conductors or insulators

KS2:

· Use a range of small devices to explore some of the ways we can generate electricity

· Consider how electricity is distributed to our homes

· Think about how much electricity different familiar appliances use

· Build a 'human circuit' to light a bulb in a 'cosmic ball'

· Construct and investigate simple circuits using components and circuit boards

UKS2:

· Identify the names and symbols of the components of that circuit (Upper KS2 only)

Curriculum links:

LKS2

Identify common appliances that run on electricity

Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers

Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery

Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit

Recognise some common conductors and insulators, and associate metals with being good conductors.

UKS2

Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the



circuit

Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches

Use recognised symbols when representing a simple circuit in a diagram