

Teacher Guide

Circuits & Electronics



Levels : Early, First & Second
Maximum Number of Pupils: 30

- Duration:**
- **Early - 30 mins**
 - **First - 45 mins**
 - **Second - 60 mins**

What to Expect

Early: Pupils will learn about electricity and investigate which items conduct electricity and which don't. Pupils will also find out which items use electricity to work.

First: During the workshop pupils will take part in several challenges to build circuits and play a game to understand the flow of energy within a circuit.

Second: In this hands-on workshop, pupils will learn about electricity, circuits and components. Pupils will investigate how electrical items work and learn how to draw circuits using the correct terminology and symbols to describe different components. They will then have a chance to build a variety of different electrical circuits. The session will conclude with the importance of electrical recycling and a careers/follow up element.

What is Covered

- What is electricity
- Building electrical circuits
- Circuit symbols
- Drawing circuit diagram
- Conductivity and non-conductivity
- Items which use Electricity to work
- Importance of electrical recycling

Curriculum for Excellence links

We have identified the Curriculum for Excellence experiences and outcomes to which this workshop can most significantly contribute:

Early Level SCN 0-09a

I know how to stay safe when using electricity. I have helped to make a display to show the importance of electricity in our daily lives.

First Level SCN1-09a

I can describe an electrical circuit as a continuous loop of conducting materials. I can combine simple components in a series circuit to make a game or model.

Second Level SCN2-09a

I have used a range of electrical components to help to make a variety of circuits for differing purposes. I can represent my circuits using symbols and describe the transfer of energy around the circuit.

Second Level SOC 2-08a

I can discuss the environmental impact of human activity and suggest ways in which we can live in a more environmentally-responsible way.