

Electrical Circuits and Components



This project teaches children about electrical circuits, their components and how they function. They recognise how the voltage of cells affects the output of a circuit and record circuits using standard symbols. It also teaches children about programmable devices, sensors and monitoring. They combine their learning to design and make programmable home devices.

- Series circuits;
- Circuit components;
- Recognised circuit symbols;
- Investigating circuit components;
- Electric current;
- Voltage;
- Researching cells and batteries;
- Investigating voltage changes;
- Working scientifically – identifying and classifying, pattern seeking, comparative testing, research

Children will consolidate their understanding of the components that make up a circuit, such as a lamp, cell, wire and switch. They will make a range of circuits and use symbols to draw circuit diagrams. They will learn about electric currents and measure the voltage of different cells. They will discover how cells produce electricity and research questions about cells and batteries. Children will also learn how the voltage across a circuit affects the performance of different components. They will explore how programmable devices are used in everyday life and create a program to switch a light on and off via a light sensor. They will use the knowledge gained throughout the project to design, make and evaluate a programmable home device.