



St Paul's Church of England Primary School



Don't let anyone look down on you because you are young but set an example for the believers in speech; in conduct; in love; in faith

and in purity."

(1 Timothy 4:12)

Subject: Science

Year group: 4 Term: Autumn 1

Title: Sparks May Fly! - Physics

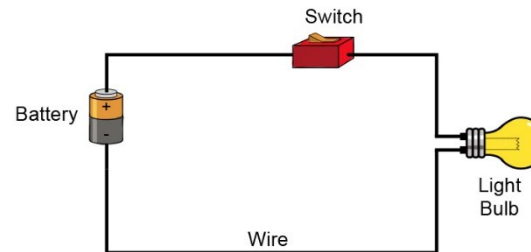
What should I know?

- That electricity enables things all around us to work
- That electricity comes from 2 main sources – mains and batteries
- That electricity can be dangerous



Facts I will learn ...

- What appliances need electricity to run
- How to construct a simple circuit and the name of all its basic parts
- To identify common conductors and insulators
- The dangers of electricity
- That batteries are used to 'push' electricity around a circuit to make bulbs, buzzers and motors work
- That drawings, pictures and diagrams can be used to represent circuits



Key questions ...

- What do we use electricity for?
- What if we had no electricity?/Could we survive without electricity?
- Why can electricity be dangerous?
- How can we make a lightbulb work?
- Can you make a simple switch to turn a light on and off?
- Are all switches the same?
- Can we design different switches for different purposes?
- What materials allow electricity to flow through them?
- Why should we try not to waste electricity?
- Can you design a circuit for a particular purpose?

Key Skills...

- Identifying what appliances need electricity to work and whether this is through mains or a battery

Experiences that school may provide:

- A visit from an electrician
- A visit to the electricity museum



Key vocab and definition

Cell

A lamp that emits light when heated

• How to make and label a simple circuit • What makes a good conductor and insulator and how they work • To explain the dangers of electricity • To explain the role of a battery in a circuit • To interpret diagrams and drawings showing different circuits	department at Burnley college.		by electricity.
		Bulb	A mechanical signalling device.
		Buzzer	The device which converts electrical energy into mechanical energy.
		Motor	A device used to generate electricity.
		Switch	An electronic device used for making, breaking or changing the connections in a circuit.
		Circuit	A path in which electrons from a voltage or current flow.
		Electrical conductor	An object which allows the flow of charge (electricity) through.
		Electrical insulator	A material whose electric charges do not flow freely.
		Connection	A direct path between two points in a circuit.
		Component	Any device in an electrical circuit.
		Break	A place in the circuit where things are not connected
Web links https://www.bbc.co.uk/bitesize/subjects/z2pfb9q (Electricity area) http://www.sciencekids.co.nz/gamesactivities/electricitycircuits.html	Experiences that could be provided at home... • An ‘electricity hunt’ around your house – find items that need electricity to run and identify whether it gets this from the mains or a battery		

			meaning the circuit is incomplete.
		Mains electricity	The electricity supply from power stations to households.
		Battery	A device that stores energy and makes it available in electric form.