

# Science Overview - Electricity

Year 3/4 Cycle A

Spring Term

## Key Question: What does it mean to achieve?

### National Curriculum

- 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.

### SUBSTANTIVE KNOWLEDGE

- Know what electricity is and name some appliances which are powered by mains and battery power.
- Know what a circuit is and some of the components of a circuit.
- Know how to construct a circuit.
- Know the difference between a complete and an incomplete circuit.
- Know how switches can be used to open or close a circuit.
- Know the difference between electrical insulators and conductors- identify both.
- Know how to use electricity safely.

### Key words:

**circuit**  
**component**  
**conductor**  
**insulator**

### Vocabulary:

electricity, appliances, battery, cell, wires, mains electricity, complete circuit, incomplete circuit

### Working scientifically

- Set up simple practical enquiries, comparative and fair tests

### Enquiry type to cover and enquiry question

**Identifying, grouping and classifying (enquiry type)**

Which materials are conductors?

**Fair test (enquiry type)**

How does the thickness of a conducting material affect how bright the lamp is?

### Learning Milestones /Assessment

I can...

- identify a main/battery powered appliance.
- explain the importance of electrical safety.
- identify a complete and incomplete circuit.
- name circuit components.
- identify electrical insulators and conductors.