

• Science: Year 6

National Curriculum links:

- 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.
- recognise that light appears to travel in straight lines
- use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye
- explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes
- use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
- recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago
- recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents
- identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
- describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals
- give reasons for classifying plants and animals based on specific characteristics.
- identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood
- recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
- describe the ways in which nutrients and water are transported within animals, including humans.

Sequence of lessons:

<u>Autumn</u>		<u>Spring</u>		<u>Summer</u>	
<u>Circuits, batteries and switches</u>	<u>Light and reflection</u>	<u>Evolution and inheritance</u>	<u>Classifying big and small</u>	<u>Circulation and health</u>	<u>Making connections: Are some sunglasses safer than others?</u>
Components and circuits	The pathway of light	Variation	Carl Linnaeus and classification	Factors affecting health	Investigating sunglasses-planning

Circuit diagrams	See the light	Inheritance	Cold blooded vertebrates	Heart and circulatory system	Investigating sunglasses- gathering data
Current and resistance	Measuring shadows	Adaptations	Warm blooded vertebrates	Blood	Investigating sunglasses- analysing, concluding and evaluating
Batteries and voltage	Reflecting light	Modelling natural selection	Invertebrates	Heart rate	Investigating sunglasses - Extending
Voltage and bulb brightness	Making a periscope	Evolution	Plants	Investigating exercise and heart rate	Investigating sunglasses- presenting
Practical circuits	Using mirrors	Evidence for evolution	Micro-organisms	Heart rate and fitness	

Key vocabulary:

Circulatory system	Blood vessels	Pulmonary	Alveoli
Capillary	Organism	Micro organism	Battery
Motor	Switch	Variation	Offspring
Sexual reproduction	Characteristics	Inherited	Adapted
Straight lines	Light rays	Refraction	Prism