

- 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.

<b>Sequence of learning:</b>				
<b><u>Autumn</u></b>		<b><u>Spring</u></b>		<b><u>Summer</u></b>
<b><u>Electricity</u></b>	<b><u>Light</u></b>	<b><u>Evolution and inheritance</u></b>	<b><u>Living things and their habitats- classification</u></b>	<b><u>Animals including humans- circulatory system and keeping healthy</u></b>
Identify scientific evidence that has been used to support or refute ideas or arguments.	Explain how light travels in straight lines from light sources to our eyes.	Explain the scientific concept of inheritance	Give reasons for classifying plants and animals based on specific characteristics in the context of sorting and grouping animals for a zoo.	Identify and name the main parts of the human circulatory system.
Use recognised symbols when representing a simple circuit in a diagram.	Understand how mirrors reflect light, and how they can help us see objects	Demonstrate understanding of the scientific meaning of adaptation.	Describe how living things are classified into groups.	Describe the functions of the main parts of the circulatory system.
Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.	investigate how refraction changes the direction in which light travels.	Identify the key ideas of the theory of evolution.	Identify the different characteristics of animals and classify a creature based on its characteristics.	Explain how nutrients are transported within the body.
Plan/carry out an investigation into how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.	Investigate how a prism changes a ray of light.	Identify evidence for evolution from fossil records.	Describe and investigate helpful and harmful microorganisms.	Describe how diet and exercise impact on human bodies.
Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results	investigate how light enables us to see colours.	Understand how human beings have evolved.	Identify the characteristics of different types of microorganisms.	Plan a scientific enquiry; report, record and present results appropriately.

Use test results to make predictions to set up further comparative and fair tests by planning and conducting a further investigation.	Explain why shadows have the same shape as the object that casts them.	Explain how adaptations can result in both advantages and disadvantages and how human intervention affects evolution.	To explain the classification of organisms found in my local habitat.	Explain the impact of drugs and alcohol on the body and describe how scientific evidence highlighted the dangers of smoking.
---	--	---	---	--

Key vocabulary:

Circulatory system	Blood vessels	Pulmonary	Alveoli
Capillary	Organism	Micro organism	Battery
Motor	Switch	Variation	Offspring
Sexual reproduction	Characteristics	Inherited	Adapted