Science learning Objectives: Year 6

LIVING THINGS AND THEIR HABITAT	
I can describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals	
I can give reasons for classifying plants and animals based on specific characteristics.	
ANIMALS INCLUDING HUMANS	
I can identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood	
I can recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function	
I can describe the ways in which nutrients and water are transported within animals, including humans.	
EVOLUTION AND INHERITANCE	
I can recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago	
I can recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents	
I can identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	
LIGHT	
I can 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	
I can 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	
I can use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.	
ELECTRICITY	
I can use recognised symbols when representing a simple circuit in a diagram.	
I can 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	
I can associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit	
I can present information on how electricity is generated and transmitted to the classroom, and to discuss its generation in the future	

SCIENTIFIC SKILLS		AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 2	SUMMER 2
OBSERVATION AND CONCLUSION YEAR 5 AND 6	**Begin to relate conclusions to patterns, previous knowledge and observational evidence** **Make judgements and conclusions about what has been seen, and support these with known facts** **Justify their own theories through observation and conclusion** **Use straightforward scientific evidence to answer questions or support findings**						
YEAR 6	**Evaluate the results of observations** **Combine observations to give new hypotheses** **Look for and understand poor data** **Identify differences, similarities or changes related to simple scientific ideas and processes**						
ENQUIRY, PREDICTION AND TESTING YEAR 5 AND 6	**Offer explanations for differences** **Modify tests for accuracy** **Plan different types of scientific enquiries to answer questions** **Recognise and control variables** **Make practical suggestions about working methods and improvements** **Use results to draw simple conclusions, make predictions for new values, suggest improvements** **Develop further observations and experiments from results**						
YEAR 6	**Use a range of scientific enquiry to answer questions** **Use test results to make predictions and to set up further comparative and fair tests**						
DATA COLLECTION	**Gather and classify data in a variety of ways**						

YEAR 5 AND 6	**Distinguish and discriminate between different elements of data**						
YEAR 6	**Identify scientific evidence that has been used to support or refute ideas or arguments.** **Take accurate measurements using a range of equipment, including thermometers, with increasing accuracy and precision** **Repeat readings when appropriate**						
RECORDING YEAR 5 AND 6	**Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables** **Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions**						
YEAR 6	**Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results**						