Science Progression - Upper KS2

	Working Scientifically	Living Things & their Habitats	Animals including Humans	Materials	Evolution & Inheritance	Light	Forces & Magnets	Electricity
Y 5	• plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • use test results to make predictions to set up further comarative and fair tests • report and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • identify scientific evidence that has been used to support or refute ideas or arguments	• describe the differences in the life cycles of a mammal, amphibian, insect and bird • describe the life process of reproduction in some plants and animals	• 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 • describe the changes as humans develop to old age	• compare & group everyday materials using properties, e.g. hardness, solubility, transparency, conductivity (electrical & thermal), and response to magnets • know that some materials dissolve in liquid to form a solution, describe how to recover the substance • use knowledge of solids, liquids and gases to decide how mixtures might be separated (filtering, sieving and evaporating) • give reasons, based on evidence from testing, for the particular uses of everyday materials e.g. metals, wood and plastic • demonstrate that dissolving, mixing and changes of state are reversible changes • explain that some changes result in the formation of new materials; this kind of change is not usually reversible, e.g. burning and the action of acid on bicarbonate of soda.				
Y 6		• describe how living things are classified into broad groups according to common observable characteristics, based on similarities and differences, including microorganisms, plants and animals • give reasons for classifying plants and animals based on specific characteristics.			• 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.	• 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, 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.	• explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object • identify the effects of air resistance, water resistance and friction, that act between moving surfaces • recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect	• 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.