Science Progression

	Year 3	Year 4	Year 5	Year 6
Animals, including humans	•Can they explain the importance of a nutritionally balanced diet? •Can they identify that animals, including humans, cannot make their own food: they get nutrition from what they eat? •Can they describe and explain the skeletal system of a human? •Can they describe and explain the muscular system of a human?	•Can they describe the simple functions of the basic parts of the digestive system in humans? •Can they identify the simple function of different types of teeth in humans? •Can they explain what a simple food chain shows? •Can they construct and interpret a variety of food chains, identifying producers, predators and prey?	•Can they describe the changes as humans develop to old age?	•Can they identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood? •Can they recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function? •Can they describe the ways in which nutrients and water and transported within animals, including humans?
Living things and their habitats	•Can they identify and describe the functions of different parts of flowering plants? (roots, stem/trunk, leaves and flowers)? •Can they explore the requirement of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant? •Can they investigate the way in which water is transported within plants? •Can they explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal?	•Can they recognise that living things can be grouped in a variety of ways? •Can they explore and use a classification key to group, identify and name a variety of living things (plants, vertebrates, invertebrates) in the local and wider environment? •Do they recognise that environments can change and this can sometimes pose a danger to living things?	•Can they describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird? •Can they describe the life process of reproduction in some plants and animals?	•Can they 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? •Can they give reasons for classifying plants and animals based on specific characteristics?
Evolution and inheritence				•Can they recognise that living things have changed over time and that fossils provide information about living things that inhabited the earth millions of years ago? •Can they recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents? •Can they identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution?
Forces and magnets	•Can they compare how things move on different surfaces? •Can they notice that some forces need contact between two objects, but magnetic forces can act at a distance? •Can they observe how some magnets attract or repel each other? •Can they compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet? •Can they identify some magnetic materials? •Can they describe magnets have having two poles (N & S)? •Can they predict whether two magnets will attract or repel each other depending on which poles are facing?		•Can they explain that unsupported objects fall towards the earth because of the force of gravity acting between the Earth and the falling object? •Can they identify the effects of air resistance, water resistance and friction that act between moving surfaces? •Can they recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect?	

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Light	•Can they recognise that they need light in order to see things? •Can they recognise that dark is the absence of light? •Can they notice that light is reflected from surfaces? •Can they recognise that light from the sun can be dangerous and that there are ways to protect their eyes? •Can they recognise that shadows are formed when the light from a light source is blocked by a solid object? •Can they find patterns in the way that the size of shadows change?			•Can they recognise that light appears to travel in straight lines? •Can they 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? •Can they 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? •Can they use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them?
Sound		•Can they identify how sounds are made and associate some of them with something vibrating? •Can they recognise how vibrations from sound travel through a medium to an ear? •Can they find patterns between the pitch of a sound and features of the object that produce it? •Can they find patterns between the volume of the sound and the strength of the vibrations that produced it? •Can they recognise that sounds get fainter as the distance from the sound source increases?		
Electricity		•Can they identify common appliances that run on electricity? •Can they construct a simple series electric circuit? •Can they identify and name the basic part in a series circuit, including cells, wires, bulbs, switches and buzzers? •Can they 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? •Can they recognise that a switch opens and closes a circuit and associate a switch opening with whether or not a lamp lights in a simple series circuit? •Can they recognise some common conductors and insulators and associate metals with being good conductors?		•Can they associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in a circuit? •Can they compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers, the on/off position of switches? •Can they use recognised symbols when representing a simple circuit in a diagram?

Science Progression

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Earth and space			•Can they identify and explain the movement of the Earth and other plants relative to the sun in the solar system? •Can they describe and explain the movement of the Moon relative to the Earth? •Can they describe the sun, earth and moon as approximately spherical bodies? •Can they use the idea of the earth's rotation to explain day and night and the apparent movement of the sun across the sky?	
Rocks / States of matter / Properties of materials	•Can they compare and group together different rocks on the basis of their appearance and simple physical properties? •Can they describe in simple terms how fossils are formed when things that have lived are trapped within rock? •Can they recognise that soils are made from rocks and organic matter?	•Can they compare and group materials together, according to whether they are solids, liquids or gases? •Can they explain what happens to materials when they are heated or cooled and measure the temperature at which this happens? •Can they identify the part that evaporation and condensation has in the water cycle? •Can they associate the rate of evaporation with temperature?	•Can they compare and group together everyday materials on the basis of their properties, including hardness, solubility, transparency, conductivity (electrical and thermal),and response to magnets? •Can they explain how some materials dissolve in liquid to form a solution and describe how to recover a substance from a solution? •Can they use their knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving, evaporating? •Can they give reasons, based on evidence for comparative and fair tests for the particular uses of everyday materials, including metals wood and plastic? •Can they demonstrate that dissolving, mixing and changes of state are reversible changes? •Can they explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda?	