

Progression of knowledge – KS2 Science – Mere Brow CE Primary School

Y3 curriculum statements	Y4 curriculum statements	Y5 curriculum statements	Y6 curriculum statements	Assessment framework. The pupil can:
<ul style="list-style-type: none"> identify that humans and some other animals have skeletons and muscles for support, protection and movement. * 	<ul style="list-style-type: none"> describe the simple functions of the basic parts of the digestive system in humans identify the different types of teeth in humans and their simple functions 	<ul style="list-style-type: none"> describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird describe the life process of reproduction in some [plants and] animals * describe the changes as humans develop to old age. 	<ul style="list-style-type: none"> identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood describe the ways in which nutrients and water are transported within animals, including humans 	<ul style="list-style-type: none"> name and describe the functions of the main parts of the digestive [Y4], musculoskeletal [Y3], and circulatory systems [Y6], and can describe and compare different reproductive processes and life cycles in animals [Y5].
<ul style="list-style-type: none"> identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat * 			<ul style="list-style-type: none"> recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function 	<ul style="list-style-type: none"> describe the effects of diet, exercise, drugs and lifestyle on how the body function [Y6].
<ul style="list-style-type: none"> identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers investigate the way in which water is transported within plants explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. 		<ul style="list-style-type: none"> describe the life process of reproduction in some plants [and animals] * 		<ul style="list-style-type: none"> name, locate and describe the functions of the main parts of plants, including those involved in reproduction [Y5] and transporting water and nutrients [Y3].
<ul style="list-style-type: none"> identify that humans and some other animals have skeletons and muscles for support, protection and movement * 	<ul style="list-style-type: none"> recognise that living things can be grouped in a variety of ways explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment 		<ul style="list-style-type: none"> 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 give reasons for classifying plants and animals based on specific characteristics 	<ul style="list-style-type: none"> use the observable features of plants, animals and micro-organisms to group, classify and identify them into broad groups, using keys or in other methods [Y6].
<ul style="list-style-type: none"> identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat * 	<ul style="list-style-type: none"> construct and interpret a variety of food chains, identifying producers, predators and prey. 			<ul style="list-style-type: none"> construct and interpret food chains [Y4].
<ul style="list-style-type: none"> explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant 	<ul style="list-style-type: none"> recognise that environments can change and that this can sometimes pose dangers to living things 			<ul style="list-style-type: none"> describe the requirements of plants for life and growth [Y3]; and explain how environmental changes may have an impact on living things [Y4].
Y3 curriculum statements	Y4 curriculum statements	Y5 curriculum statements	Y6 curriculum statements	Assessment framework. The pupil can:
<ul style="list-style-type: none"> describe in simple terms how fossils are formed when things that have lived are trapped within rock 			<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> use the basic ideas of inheritance, variation and adaptation to describe how living things have changed over time and evolved [Y6]; and describe how fossils are formed [Y3] and provide evidence for evolution [Y6].
<ul style="list-style-type: none"> compare and group together different kinds of rocks on the basis of their appearance and simple physical properties recognise that soils are made from rocks and organic matter compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials 	<ul style="list-style-type: none"> recognise some common conductors and insulators, and associate metals with being good conductors 	<ul style="list-style-type: none"> compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic 		<ul style="list-style-type: none"> group and identify materials [Y5], including rocks [Y3], in different ways according to their properties, based on first-hand observation; and justify the use of different everyday materials for different uses, based on their properties [Y5].

Progression of knowledge – KS2 Science – Mere Brow CE Primary School

	<ul style="list-style-type: none"> compare and group materials together, according to whether they are solids, liquids or gases observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. 			<ul style="list-style-type: none"> describe the characteristics of different states of matter and group materials on this basis; and can describe how materials change state at different temperatures, using this to explain everyday phenomena, including the water cycle [Y4].
		<ul style="list-style-type: none"> know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating 		<ul style="list-style-type: none"> identify, and describe what happens when dissolving occurs in everyday situations; and describe how to separate mixtures and solutions into their components [Y5].
		<ul style="list-style-type: none"> demonstrate that dissolving, mixing and changes of state are reversible changes 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. 		<ul style="list-style-type: none"> identify, with reasons, whether changes in materials are reversible or not [Y5].
<ul style="list-style-type: none"> recognise that they need light in order to see things and that dark is the absence of light notice that light is reflected from surfaces recognise that light from the sun can be dangerous and that there are ways to protect their eyes * recognise that shadows are formed when the light from a light source is blocked by an opaque object find patterns in the way that the size of shadows change. 			<ul style="list-style-type: none"> recognise that light appears to travel in straight lines 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 that objects are seen because they give out or reflect light into the eye use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them 	<ul style="list-style-type: none"> use the idea that light from light sources, or reflected light, travels in straight lines and enters our eyes to explain how we see objects [Y6], and the formation [Y3], shape [Y6] and size of shadows [Y3].
Y3 curriculum statements	Y4 curriculum statements	Y5 curriculum statements	Y6 curriculum statements	Assessment framework. The pupil can:
	<ul style="list-style-type: none"> identify how sounds are made, associating some of them with something vibrating recognise that vibrations from sounds travel through a medium to the ear 			<ul style="list-style-type: none"> use the idea that sounds are associated with vibrations, and that they require a medium to travel through, to explain how sounds are made and heard [Y4].
	<ul style="list-style-type: none"> find patterns between the pitch of a sound and features of the object that produced it find patterns between the volume of a sound and the strength of the vibrations that produced it recognise that sounds get fainter as the distance from the sound source increases 			<ul style="list-style-type: none"> describe the relationship between the pitch of a sound and the features of its source; and between the volume of a sound, the strength of the vibrations and the distance from its source [Y4].

Progression of knowledge – KS2 Science – Mere Brow CE Primary School

<ul style="list-style-type: none"> compare how things move on different surfaces notice that some forces need contact between two objects, but magnetic forces can act at a distance observe how magnets attract or repel each other and attract some materials and not others describe magnets as having two poles predict whether two magnets will attract or repel each other, depending on which poles are facing 		<ul style="list-style-type: none"> 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 		<ul style="list-style-type: none"> describe the effects of simple forces that involve contact (air and water resistance, friction) [Y5], and others that act at a distance (magnetic forces, including those between like and unlike magnetic poles [Y3]; and gravity [Y5]).
		<ul style="list-style-type: none"> recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect 		<ul style="list-style-type: none"> identify simple mechanisms, including levers, gears and pulleys, that increase the effect of a force [Y5].
	<ul style="list-style-type: none"> identify common appliances that run on electricity construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers 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 recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit 		<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> use simple apparatus to construct and control a series circuit, and describe how the circuit may be affected when changes are made to it; and use recognised symbols to represent simple series circuit diagrams [Y6].
<ul style="list-style-type: none"> recognise that light from the sun can be dangerous and that there are ways to protect their eyes * 		<ul style="list-style-type: none"> describe the Sun, Earth and Moon as approximately spherical bodies describe the movement of the Earth, and other planets, relative to the Sun in the solar system describe the movement of the Moon relative to the Earth use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky 		<ul style="list-style-type: none"> describe the shapes and relative movements of the Sun, Moon, Earth and other planets in the solar system; and explain the apparent movement of the sun across the sky in terms of the Earth's rotation and that this results in day and night [Y5].

National Curriculum statements with a * appear in more than one place