Cam Woodfield Junior School Science Curriculum Progression Map

Year Group	Animals inc humans	Plants	Living things and their habitats	Rocks	Light	Forces and Magnets	States of Matter	Sound	Electricity
3	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	identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers		compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	Recognise that they need light in order to see things and that dark is the absence of light	compare how things move on different surfaces			
	identify that humans and some other animals have skeletons and muscles for support, protection and movement	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		describe in simple terms how fossils are formed when things that have lived are trapped within rock	notice that light is reflected from surfaces	notice that some forces need contact between two objects, but magnetic forces can act at a distance			
		investigate the way in which water is transported within plants		recognise that soils are made from rocks and organic matter	recognise that light from the sun can be dangerous and that there are ways to	observe how magnets attract or repel each other and attract some			

					protect their eyes	materials and not others			
		explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal			find patterns in the way that the size of shadows change	describe magnets as having two poles			
					Recognise that shadows are formed when the light from a light source is blocked by a solid object	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			
						predict whether two magnets will attract or repel each other, depending on which poles are facing			

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4	Describe the simple functions of the basic parts of the digestive system in humans		recognise that living things can be grouped in a variety of ways				compare and group materials together, according to whether they are solids, liquids or gases	Identify how sounds are made, associating some of them with something vibrating	identify common appliances that run on electricity
	identify the different types of teeth in humans and their simple functions		explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment				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	recognise that vibrations from sounds travel through a medium to the ear	construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
	construct and interpret a variety of food chains, identifying producers, predators and prey		recognise that environments can change and that this can sometimes pose dangers to living things				identify the part played by evaporation and condensation in the water cycle and associate the rate of	find patterns between the pitch of a sound and features of the object that produced it	identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a

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							evaporation with temperature		complete loop with a battery
								recognise that sounds get fainter as the distance from the sound source increases	recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
								find patterns between the volume of a sound and the strength of the vibrations that produced it	recognise some common conductors and insulators, and associate metals with being good conductors
Year Group	**Animals inc humans**	Plants	**Living things and their habitats**	**Earth & Space**	**Light**	**Forces**	**Properties and Changes of Materials**	**Sound**	**Electricity**
5	describe the changes as humans develop to old age		describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird	describe the movement of the Earth, and other planets, relative to the Sun in the solar system		explain that unsupported objects fall towards the Earth because of the force of gravity acting between the	compare and group together everyday materials on the basis of their properties, including their hardness,		

						Earth and the falling object	solubility, transparency, conductivity (electrical and thermal), and response to magnets		
			describe the life process of reproduction in some plants and animals	describe the movement of the Moon relative to the Earth		identify the effects of air resistance, water resistance and friction, that act between moving surfaces	know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution		
			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	describe the Sun, Earth and Moon as approximately spherical bodies		recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect	Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating		

			give reasons for classifying plants and animals based on specific characteristics.	use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky		explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object	give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic		
			describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird	describe the movement of the Earth, and other planets, relative to the Sun in the solar system		identify the effects of air resistance, water resistance and friction, that act between moving surfaces	demonstrate that dissolving, mixing and changes of state are reversible changes		
						recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect	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		

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							and the action of acid on bicarbonate of soda		
Year Group	**Animals inc humans**	**Evolution and Inheritance**	**Living things and their habitats**	**Rocks**	**Light**	**Forces**	**Properties and Changes of Materials**	**Sound**	**Electricity**
6	identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood	recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents			recognise that light appears to travel in straight lines				associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit
	recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function	identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution			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				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

	describe the ways in which nutrients and water are transported within animals, including humans	recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents			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 recognised symbols when representing a simple circuit in a diagram
					use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them				associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit