Science progression years R-6

Reception (Taken from DM and ELG)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Understanding the world: Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter	**Plants:** identify and name a variety of common wild and garden plants, including deciduous and evergreen trees	**Living things and their habitats:** explore and compare the differences between things that are living, dead, and things that have never been alive	**Plants:** identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	**Living things and their habitats:** recognise that living things can be grouped in a variety of ways	**Living things and their habitats:** describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird	**Living things and their habitats:** 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
Understanding the world: Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class Describe what they see, hear and feel whilst outside.	**Plants:** identify and describe the basic structure of a variety of common flowering plants, including trees.	**Living things and their habitats:** …identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other	**Plants:** identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	**Living things and their habitats:** explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment	**Living things and their habitats:** describe the life process of reproduction in some plants and animals.	**Living things and their habitats:** give reasons for classifying plants and animals based on specific characteristics
Understanding the world: Explore the natural world around them, making observations and drawing pictures of animals and plants	**Animals, including humans:** identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals	**Living things and their habitats:** identify and name a variety of plants and animals in their habitats, including microhabitats	**Plants:** investigate the way in which water is transported within plants	**Living things and their habitats:** recognise that environments can change and that this can sometimes pose dangers to living things.	**Animals, including humans:** describe the changes as humans develop to old age.	**Animals, including humans:** identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood
	Animals, including humans: describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	**Living things and their habitats:** describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.	**Plants:** explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	**Animals, including humans:** describe the simple functions of the basic parts of the digestive system in humans	**Properties and changes of materials:** 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	**Animals, including humans:** recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
	Animals, including humans: identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	**Plants:** observe and describe how seeds and bulbs grow into mature plants	**Animals, including humans:** 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	**Animals, including humans:** identify the different types of teeth in humans and their simple functions	**Properties and changes of materials:** know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution	**Animals, including humans:** describe the ways in which nutrients and water are transported within animals, including humans.

	Everyday materials: distinguish between an object and the material from which it is made	**Plants:** find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	**Animals, including humans:** identify that humans and some other animals have skeletons and muscles for support, protection and movement.	**Animals, including humans:** construct and interpret a variety of food chains, identifying producers, predators and prey.	**Properties and changes of materials:** use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating	**Evolution and inheritance:** recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago
	Everyday materials: identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock	**Animals, including humans:** notice that animals, including humans, have offspring which grow into adults	**Rocks:** compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	**States of matter:** compare and group materials together, according to whether they are solids, liquids or gases	**Properties and changes of materials:** give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic	**Evolution and inheritance:** recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents
	Everyday materials: describe the simple physical properties of a variety of everyday materials	**Animals, including humans:** find out about and describe the basic needs of animals, including humans, for survival (water, food and air)	**Rocks:** describe in simple terms how fossils are formed when things that have lived are trapped within rock	**States of matter:** 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)	**Properties and changes of materials:** demonstrate that dissolving, mixing and changes of state are reversible changes	**Evolution and inheritance:** identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution
	Everyday materials: compare and group together a variety of everyday materials on the basis of their simple physical properties	**Animals, including humans:** describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	**Rocks:** recognise that soils are made from rocks and organic matter.	**States of matter:** identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	**Properties and changes of materials:** 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.	**Light:** recognise that light appears to travel in straight lines
	Seasonal changes: observe changes across the four seasons	**Uses of everyday materials:** identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses	**Light:** recognise that they need light in order to see things and that dark is the absence of light	**Sound:** identify how sounds are made, associating some of them with something vibrating	**Earth and space:** describe the movement of the Earth, and other planets, relative to the Sun in the solar system	**Light:** 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
	Seasonal changes: observe and describe weather associated with the seasons and how day length varies.	**Uses of everyday materials:** find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	**Light:** notice that light is reflected from surfaces	**Sound:** recognise that vibrations from sounds travel through a medium to the ear	**Earth and space:** describe the movement of the Moon relative to the Earth	**Light:** 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
			Light: recognise that light from the sun can be dangerous and that there are ways to protect their eyes	**Sound:** find patterns between the pitch of a sound and features of the object that produced it	**Earth and space:** describe the Sun, Earth and Moon as approximately spherical bodies	**Light:** use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.

			Light: recognise that shadows are formed when the light from a light source is blocked by an opaque object	**Sound:** find patterns between the volume of a sound and the strength of the vibrations that produced it	**Earth and space:** use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	**Electricity:** associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit
			Light: find patterns in the way that the size of shadows change.	**Sound:** recognise that sounds get fainter as the distance from the sound source increases.	**Forces:** explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object	**Electricity:** 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
	PUSH AND PULLS, FRICTION to be able to identify and describe movement according to a push, pull or twist and to know that pushes and pulls can make things start to move		**Forces and magnets** compare how things move on different surfaces	**Electricity:** identify common appliances that run on electricity	**Forces:** identify the effects of air resistance, water resistance and friction, that act between moving surfaces	**Electricity:** use recognised symbols when representing a simple circuit in a diagram.
	PUSH AND PULLS, FRICTION to understand that increased force leads to increased energy and movement		**Forces and magnets** notice that some forces need contact between two objects, but magnetic forces can act at a distance	**Electricity:** construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers	**Forces:** recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	
	PUSH AND PULLS, FRICTION to understand how friction slows and stops things from moving		**Forces and magnets** observe how magnets attract or repel each other and attract some materials and not others	**Electricity:** 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		
			Forces and magnets 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	**Electricity:** recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit		
			Forces and magnets describe magnets as having two poles	**Electricity:** recognise some common conductors and insulators, and associate metals with being good conductors.		
			Forces and magnets predict whether two magnets will attract or repel each other, depending on which poles are facing.			