

Science Progression Map – Years N – 6

	Nursery	Reception
Animals Including Humans	Understand the key features of the life cycle of animals and humans. Compare adult animals to their babies. Observe how baby animals change over time. Learn about how to take care of themselves. Learn about their senses.	Name and describe animals that live in different habitats. Describe different habitats. Describe people who are familiar to them. Learn about how to take care of themselves.
Plants	Plant seeds and care for plants, beginning to understand what they need to survive. Understand the key features of the life cycle of a plant, growing vegetables, fruit, flowers etc. Begin to understand the need to respect and care for the environment and all living things.	Explore the natural world around them. Recognise some environments that are different to the one in which they live. Understand the effect of changing seasons on the natural world around them.
Living Things and their Habitats	Begin to understand the need to respect and care for the natural environment and all living things. Explore hibernation and nocturnal animals.	Explore the plants in the surrounding natural environment. Explore the animals in the surrounding natural environment. Explore plants and animals in a contrasting natural environment.
Seasonal Changes	Explore the natural world around them. Use all of the senses to explore weather changes and seasons	<i>Play and explore outside in all seasons and in different weather, explaining what they notice.</i> <i>Observe living things throughout the year.</i>

Forces and Magnets	Explore and talk about different forces felt. Explore how things work. Explore how objects/materials are affected by materials.	Explore how to change how things work. Explore how the wind can move objects. Explore how objects move in water.
Light	Explore light sources and shine light on or through different materials. Begin to understand day and night, light and dark.	Use scientific vocabulary to discuss day and night. Explore shadows and rainbows.
Sound	Tune into and create sounds and differentiate between different sounds. Explore how things work.	Create and describe sounds using different instruments. Listen to sounds outside and identify the source.
Earth and Space	Explore natural phenomena. Wind snow rain rainbows	Learn about the Solar System and stars. Find out more about space travel.
Electricity	Plug safety - why we do not touch sockets or play with electrical items. Identify electrical devices and use battery-powered devices.	Understand that some objects run on electricity and how this can be dangerous. Machines that help us in the home – washing machines, kettles, toasters etc.
Materials	Explore a range of materials. Shape and join materials. Combine and mix ingredients. Change materials by heating and cooling, including cooking.	Explore a range of materials, including natural materials. Make objects from different materials, including natural materials. Observe, measure and record how materials change when heated and cooled. Compare how materials change over time and in different conditions. Understand the concepts of floating and sinking.

	Year 1	Year 2
Animals Including Humans	identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals identify and name a variety of common animals that are carnivores, herbivores and omnivores describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense	notice that animals, including humans, have offspring which grow into adults find out about and describe the basic needs of animals, including humans, for survival (water, food and air) describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene
Seasonal Changes	observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies	
Everyday Materials	distinguish between an object and the material from which it is made identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock describe the simple physical properties of a variety of everyday materials compare and group together a variety of everyday materials on the basis of their simple physical properties	identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching
Plants	Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.	observe and describe how seeds and bulbs grow into mature plants

	Identify and describe the basic structure of a variety of common flowering plants, including trees.	find out and describe how plants need water, light and a suitable temperature to grow and stay healthy
Living Things and their Habitats		explore and compare the differences between things that are living, dead, and things that have never been alive 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 identify and name a variety of plants and animals in their habitats, including microhabitats 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

	Year 3	Year 4
Plants	identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers 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 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	
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 identify that humans and some other animals have skeletons and muscles for support, protection and movement	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 construct and interpret a variety of food chains, identifying producers, predators and prey
Rocks	compare and group together different kinds of rocks on the basis of their appearance and simple physical properties describe in simple terms how fossils are formed when things that have lived are trapped within rock recognise that soils are made from rocks and organic matter	
Light	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	
Forces and Magnets	compare how things move on different surfaces notice that some forces need contact between 2 objects, but magnetic forces can act at a distance observe how magnets attract or repel each other and attract some materials and not others 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 describe magnets as having 2 poles predict whether 2 magnets will attract or repel each other, depending on which poles are facing	
Living Things and their Habitats.		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

		recognise that environments can change and that this can sometimes pose dangers to living things
States of Matter		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
Sound		identify how sounds are made, associating some of them with something vibrating recognise that vibrations from sounds travel through a medium to the ear 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
Electricity		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 recognise some common conductors and insulators, and associate metals with being good conductors
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	Year 5	Year 6
Living Things and their Habitats	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 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
Animals Including Humans	describe the changes as humans develop to old age	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
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 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	

	give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including 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, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda	
Earth and Space	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 describe the sun, Earth and moon as approximately spherical bodies use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky	
Forces	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	

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 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
Light		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 and 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
Electricity		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