Sheldwich Primary School **– EYFS, Key Stage 1 and 2 –** Science Progression Map **– KNOWLEDGE**

	Pre-School	Class R	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
Animals including Humans	Make healthy choices about food, drink, activity and toothbrushing. Begin to make sense of their own life-story and family's history. Learn new vocabulary: nocturnal.	Know and talk about the different factors that support their overall health and wellbeing: Regular physical activity Health eating Toothbrushing Sensible amounts of screen time Having a good sleep routine being a safe pedestrian Manage their own basic hygiene and personal needs including dressing, going to the toilet and understanding the importance of healthy food choices. Learn about the 5 senses and explore using them.	Identify and name a variety of common animals that are birds, fish, amphibians, reptiles 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 (birds, fish, amphibians, reptiles and mammals, and including pets). Identify, name draw and label the basic parts of the human body and say which parts 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.	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 animals have skeletons and muscles for support, protection and movement. Identify the different types of teeth in humans and their simple functions. Describe the ways in which nutrients and water are transported within animals, including humans.	Describe the simple functions of the basic parts of the digestive system in humans Construct and interpret a variety of food chains, identifying producers, predators and prey. Identify and name the main parts of the human circulatory system, and explain the functions of the heart, blood vessels and blood	Describe the changes as humans develop from birth to old age.	Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function

Plants	Plant seeds and care for growing plants. Understand the key features of the life cycle of a plant. Learn new vocabulary: seed, leaf, stem, germination.	Learn about plants growing from bulbs and seeds. Understand the key features of the life cycle of a plant. Learn new vocabulary: seed, leaf, stem, germination.	Identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen Identify and describe the basic structure of a variety of common plants including roots, stem/trunk, leaves and flowers.	Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	Identify and describe the functions of different parts of plants; roots, stem, 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 ways in which water is transported within plants. Explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal			
Living things and their Habitats	Understand the key features of the life cycle of a plant and an animal. Begin to understand the need to respect and care for the natural environment and all living things.	Explore the natural words around them, making observations and drawings of animals and plants. Know some similarities and differences between the natural worlds around them and contrasting		Explore and compare the differences between things that are living, dead, and things that have never been alive. Identify that most living things		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	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Describe the life process of reproduction in	Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences,

		environments, drawing on their experiences and what has been read in class. Recognise some environments that are different to the one in which they live.		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 micro-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.		wider environment Recognise that environments can change and that this can sometimes pose dangers to living things	some plants and animals.	including micro-organisms, plants and animals Give reasons for classifying plants and animals based on specific characteristics
Evolution	Learn new vocabulary: Dinosaurs	Learn new vocabulary: Dinosaurs						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.
Seasonal Change	Understand the effect of changing seasons on the natural world around them. Learn new vocabulary: Winter, Spring, Autumn, Summer.	Understand the effect of changing seasons on the natural world around them. Understand some important processes and changes in the natural worlds around them including the seasons and changing states of matter. Learn new vocabulary: Winter, Spring, Autumn, Summer.	Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies.					
Electiricity	Learn new vocabulary: Batteries	Learn new vocabulary: Batteries				Identify common appliances that run on electricity		Associate the brightness of a lamp or the volume of a buzzer with the

						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.		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.
Forces	Explore and talk about forces that they feel.	Explore using magnets Explore the idea of gravity			Compare how things move on different surfaces		Explain that unsupported objects fall towards the	

	Learn new vocabulary: magnets, cause and effect.	Learn new vocabulary: magnets, cause and effect.			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. 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 two poles Predict whether two magnets will attract or repel each other, depending on which poles are facing.		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	
Light	Learn new vocabulary: sun, shadows, torches.	Learn new vocabulary: sun, shadows, torches.			Recognise that they need light in order to see things and that dark is the absence of light		Recognise that light appears to travel in straight lines	

					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 a solid object Find patterns in the way that the sizes of shadows change.		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	
Sound	Listen with increased attention to sounds. Play instruments with increasing control. Explore and engage in music making. Learn new vocabulary: Vibrations.	Listen with increased attention to sounds. Play instruments with increasing control. Listen attentively and talk about music and responses. Increasingly match pitch. Explore and engage in music making.				Identify how sounds are made, associating some of them with something vibrating Recognise that vibrations from a sound travel through a medium to the ear.		

		Learn new vocabulary: Vibrations.				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.		
Earth and Space	Discuss the earth, moon and stars.	Discuss and learn about the moon and planets of the solar system.						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
Materials	Use all their senses in hands-on exploration of natural materials Explore collections of materials with similar and/or different properties. Talk about the differences between materials and changes they notice.	Identify natural and man-made materials. Understand some important processes and changes in the natural worlds around them including the seasons and changing states of matter.	Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials, including wood, plastic, glass, 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 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	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.	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. Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	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 Understand 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.	