Subject Overview - Science

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Nursery	Senses Growing and Changing	Materials/magnets Light and dark/shadows	Life Cycles – caterpillar Minibeasts	Materials – changes to Floating and sinking	Plants	Animals and Their Habitats
Reception	Senses Growing and Changing	Materials/magnets Light and dark/shadows	Life cycles – chicken/ladybird Minibeasts	Materials – changes to Floating and sinking	Plants	Animals and Their Habitats
Year 1	Seasonal Changes Animals Including Humans	Materials	Animals Including Humans	Materials	Plants	Animals Including Humans
Year 2	Animals Including Humans	Materials	Living Things and Their Habitats	Materials	Plants	Living Things and Their Habitats

Progression of Knowledge

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Nursery	Use all their senses in hands-on exploration of natural materials. (3-4)	Explore how things work. (3-4) Explore and talk about different forces they can feel. (3-4)	Understand the key features of the life cycle of an animal. (3-4) Talk about what they see, using a wide vocabulary. (3-4)	Talk about the differences between materials and changes they notice. (3-4)	Plant and grow cress. Plant seeds and care for growing plants. (3-4) Understand the key features of the life cycle of a plant. (3-4) Begin to understand the need to respect and care for the natural environment and all living things. (3-4)	Understand the key features of the life cycle of an animal. (3-4) Talk about what they see, using a wide vocabulary. (3-4)
Reception	Use all their senses in hands-on exploration of natural materials. (3-4) Explore collections of materials with similar and/or different properties. (3-4) Describe what they see, hear and feel whilst outside. (Rec)	Explore how things work. (3-4) Explore and talk about different forces they can feel. (3-4) Explore the natural world around them. (Rec)	Understand the key features of the life cycle of an animal. (3-4) Talk about what they see, using a wide vocabulary. (3-4)	Talk about the differences between materials and changes they notice. (3-4) Describe what they see, hear and feel whilst outside. (Rec)	Plant and grow lettuce. Plant seeds and care for growing plants. (3-4) Understand the key features of the life cycle of a plant. (3-4) Begin to understand the need to respect and care for the natural environment and all living things. (3-4) Explore the natural world around them. (Rec)	**ELG – Natural World** Explore the natural world around them, making observations and drawing pictures of animals and plants. 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. Understand some important processes and changes in the

						natural world around them, including the seasons and changing states of matter.
Year 1	Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies. Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	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.	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. **Identify and describe** the structure of a variety of animals (fish, amphibians, reptiles, birds and mammals including pets)	Compare and group together a variety of everyday materials on the basis of their simple physical properties. .	Plant and grow sunflowers. Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Identify and describe the basic structure of a variety of common flowering plants, including trees.	**Describe and compare** the structure of a variety of common animals. Identify and name a variety of common animals that are carnivores, herbivores and omnivores.
Year 2	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 and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	Explore and compare the differences between things that are living, dead and things that have never been alive. Identify and name a variety of plants and animals in their habitats, including micro-habitats.	Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	Plant and grow runner beans. 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 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. 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.

Progression of Skills

KS1 NC – working Scientifically statements

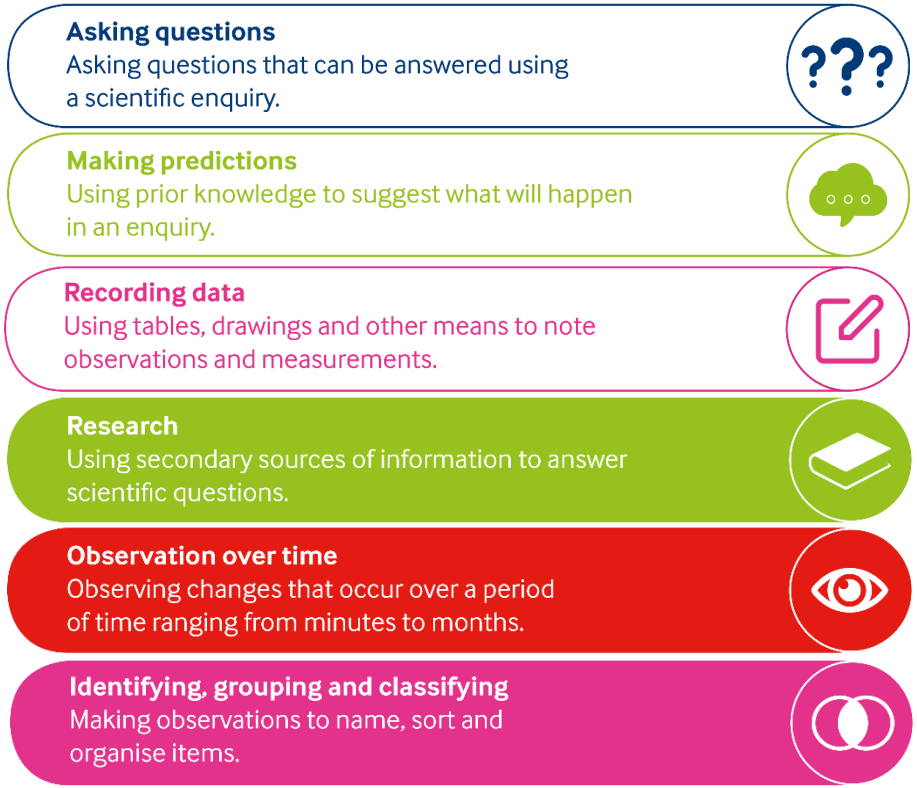
- Asking simple questions and recognising that they can be answered in different ways.
- Observing closely, using simple equipment.
- Performing simple tests.
- Identifying and classifying.
- Using my observations and ideas to suggest answers to questions.
- Gathering and recording data to help in answering questions.

	Asking Questions	Making Predictions	Recording Data	Research	Observation over time	Identifying, grouping and Classifying
Nursery	Asking questions is modelled by adults during play and children are encouraged to ask their own questions. Children respond to simple questions when asked by an adult.	Children discuss as a class what they think might happen next with adult support. Adult records children's ideas.	Children's observations may be recorded as a whole class or on individual tapestry based on child voice.	Children explore non-fiction books as a class and within the provision.	Children demonstrate curiosity when observing the world around them and use their senses when exploring. Children have access to simple tools and equipment to explore.	Children identify different objects with support. Children simply sort objects into two categories after being modelled.
Reception	Children demonstrate curiosity about the world around them. Children ask simple questions about their observations. Children work with adults to find answers through observation, books, videos. With support/prompting, children explain why something happened.	With support/prompting, children talk about what they think might happen. Adult records children's ideas.	Children's observations may be recorded as a whole class or on individual tapestry based on child voice. Children begin to record their findings very simply e.g. tick boxes, drawing an observation.	Children explore non-fiction books as a class and within the provision. Children use technology as a whole class to explore information e.g. using the interactive whiteboard, watching videos.	With prompting and support, children talk about what they saw, felt, heard, smelt and taste. Children use simple equipment in their play to observe the world around them e.g. magnifying glasses, pipettes, rulers, measuring jugs. Children carry out investigations in small groups with adult support.	Children group objects by simple criteria, into two or more categories. Children begin to explain why they have put an object in a specific group.

Year 1	Children ask simple questions at the start of a unit about what they would like to find out. Children ask simple questions based on their observations. Children use their ideas to suggest answers to questions. Children can say what has changed when observing and can say what they found after carrying out an investigation.	Children make plausible predictions based on prior knowledge. Children can talk simply about why they think that will happen. Adults scribe predictions at the beginning of the year, moving onto children writing their own prediction as the year goes on. This could be scaffolded e.g. finishing the sentence or filling in the gaps in a sentence.	Children use non-standard units to make measurements. Children present evidence collected in simple templates that are provided for them. Children draw/label observations with support.	Children explore non-fiction texts and adults model how to find information e.g. using the contents page. Children use technology with support to find information e.g. using ipads.	Children talk about their observations and record some observations with adult support. Children carry out simple investigations using basic scientific equipment e.g. pipettes, magnifiers. Children are modelled to and supported at the beginning of the year and begin to carry out tests with some elements of independence/peer support as the year goes on. Children can discuss what makes a fair test with adult guidance.	Children sort objects into multiple different criteria. Children use sorting to compare different objects and explain why they have sorted their objects in that way. Children begin to sort objects by their own criteria.
Year 2	Children ask relevant questions at the start of a unit about what they would like to find out. Children suggest different ways to discover an answer or solve a problem, recognising that some questions can be answered in a variety of ways. With support, children can look for answers e.g. in books, videos, texts, investigations.	Children use their observations to make plausible predictions. Children explain why they have predicted that, backed up by prior knowledge. Children write down their own predictions. They use their understanding of what has already been observed or their own experiences to predict the outcome of further actions or observations e.g. what if we changed this instead? What would happen.	Children use non-standard and standard units to make measurements e.g. cm, seconds/minutes. Children present evidence in tables/charts with increasing independence. Children draw and label diagrams with increasing independence.	Children independently use non-fiction texts and technology (e.g. ipads) to find information.	Children can talk about their observations without adult prompts. Children can record what they have observed independently or with peer support. Children carry out simple investigations using basic scientific equipment e.g. pipettes, magnifiers. Children are given opportunities to carry out simple investigations with their peers, without adult	Children can independently sort objects into multiple different criteria to compare them. Children can sort objects using their own criteria. Children can use scientific vocabulary to independently explain why they have sorted objects in that way.

					support after being modelled to. Children can talk about what makes a fair test – how we are going to make our own investigation fair e.g. what will be keep the same, what is the only thing we will change.	

Working Scientifically 'lenses'



Progression of Vocabulary

	Seasonal Changes	Animals Including Humans	Materials	Living Things and Their Habitats	Plants	Working Scientifically
Nursery	Autumn Names of autumn objects Winter Cold, snow, ice, rain, clouds Spring Flowers, baby animals, green leaves Summer Hot, sunny, sun	Animal Common animal names – cow, sheep, horse, fish, rabbit, cat, dog, bird, frog, chicken	soft, hard, fluffy, spiky, bumpy		Plant, tree, flower, leaf, ground	What can you see? What happened?
Reception	Autumn conker, pine cone, leaves (plus adjectives to describe these e.g. crispy, yellow, brown, spiky, smooth), harvest Winter cold, snow, ice, sleet, hail, icicles, scarf, hat, gloves , Christmas Spring green, plants, lambs, Easter Summer	Animal, different names of: Farm animals Zoo animals Pet animals Minibeasts Names of common animal body parts: leg, head, tail, eyes, nose, ears, claws, wings Names of common human body parts: head, shoulders, knees, toes, leg, foot, eyes, ears, mouth, nose	wood, metal, glass, plastic soft, hard, shiny, rough, smooth float, sink magnetic		Plant, tree, seed, leaf, flower, grow, soil Names of some common plants found around the school grounds e.g. daisy, dandelion, rose, clover, grass	Science What do you think will happen? What happened/is happening? Why do you think that happened?

	hot, sunny, sunglasses, sun cream, sun hat					
Year 1	Seasons Autumn Winter Spring Summer Changes Weather Day/night Day length Light/dark	Fish, reptiles, mammals, birds, amphibians, insects, alive, eat, herbivore, omnivore, carnivore, live young, fur, lay eggs, scales, gills, fins, antlers, wings, beak, feathers, claws/talons, human, body, leg, arm, hand, elbow, shoulder, wrist, feet, ankle, head, neck, ear, nose, cheek, forehead, back, hips, knees, fingers, toes, face, teeth, eyebrows, eye lashes, nails, hair, tongue, bones, skeleton senses, touch, sight, smell, taste, hear	object, material, wood, metal, plastic, glass, paper, cardboard, fabric, water, rock, brick, hard, soft, bendy, stiff, rough, smooth, heavy, light, shiny, dull, waterproof, see through		Tree, plant, deciduous, evergreen, roots, stem, leaf, leaves, flower, petals, blossom, bulb, seed, trunk, branches, bark, garden plants, wild plants, flowering plants, fruit, vegetables, change, grow, soil, water, sunlight Names of common British plants: daffodil, poppy, sunflower, daisy, lily, snowdrop, bluebell, daffodil, tulip, crocus, rose, foxglove, buttercup, lavender, cow parsley, iris and trees: oak, ask, sycamore, horse chestnut, pine, birch, beech, willow	What? Why? How? Predict Observe Questions Sort/group Patterns Fair test Change Same Different Explain Investigate Explore Test Compare Equipment
Year 2		**As in year 1 plus:** Adult, offspring, reproduce, develop, exercise, heart, heart rate, brain, lungs, diet, hygiene, survive, healthy, unhealthy, basic needs, water, food, air, shelter, calf, hoglet, puppy, kitten, foal	**As in year 1 plus:** rubber, leather, cotton, clay, wool, properties, man-made, natural, flexible, rigid, strong, fragile, brittle, waterproof, absorbent, opaque, transparent, squashing, bending, twisting, stretching, elastic, suitable, unsuitable, useful, purpose	Living, dead, never alive, life processes, reproduce, breathe, excrete, move, grow, conditions, suited to, adapted habitat local habitat - woodland, meadow, pond, coastal, urban	**As in year 1 plus:** temperature, nutrients, soil, growth, life cycle, germination, dispersal, pollination, seedling, shoot, mature, healthy, unhealthy, wither, droop	**As in year 1 plus:** Prediction Observation Identify Classify Record Similarities Differences Table Chart Data Diagram Results

		life cycle, human, baby, toddler, child, teenager, adult, elderly, frogspawn, tadpole, froglet, frog, egg, chick, chicken, hen, cockerel, caterpillar, chrysalis, butterfly, larvae,		world habitat - rainforest, arctic, ocean, desert microhabitat – log, grass, flowerbed, bush food chain, predator, prey, producer, consumer, food source, energy, depend on		Conclusion