Science Long Term Plan with Concepts and Milestones

Black text shows coverage of milestones, as well as ***NC objectives*** *relating to the strands in the NC – Plants; Animals, including humans; Materials and their uses; Seasonal changes; Living things and their habitats; Rocks; Light; Forces and Magnets; States of Matter; Sound; Electricity; Earth and Space; Evolution and Inheritance. Science lessons at Mayflower are taught through the threshold concepts. Blue text indicates additional milestones to deepen children's understanding.*

The working scientifically strand is taught across all year groups, throughout the year, embedded in each unit.

At Mayflower we believe it is essential for children to recall previous learning in order for it to be stored in their long term memory. Therefore, learning from previous years/milestones will be recapped at the start of topics/lessons and in 'science meetings' to ensure children have an in-depth knowledge of the curriculum. This will enable them to make links between different topics/concepts to deepen their understanding, particularly if they are covered in that year group's curriculum e.g Plants in Years 4, 5 and 6. Red text indicates where a concept is not covered in discrete lessons in that year but learning is recapped as specified above to continue children's progression of learning.

Year groups are expected to recap previously taught vocabulary from the corresponding units taught in previous years.

EYFS

The most relevant statements taken from the Early Learning Goals in the EYFS statutory framework and the Development Matters to match the programme of study for Science are taken from the following area of learning: Understanding the World.

In Early Years we give children the opportunity to achieve a goal and have the confidence in their own abilities by increasing the range of resources and challenges within our environment as the year progresses. We model activities and encourage children to join in whilst giving them plenty of time to explore, practise and perfect their skills. The children are involved in the layout of the classroom and their interests are taken into consideration when enhancing and adapting the environment.

In Early Years we provide children with opportunities to explore the natural environment and make observations about what they see. Children are given the opportunity to explore the local environment, from visiting parks, places of worship and libraries to meeting important members of our community including nurses, police officers and fire fighters. Children are exposed to a diverse range of characters in stories to develop their cultural understanding. They are also given opportunities to explore development and growth in plants and animals as well as observing similarities and differences between themselves and those within our community.

	Autumn	Spring	Summer
Substantive Knowledge	**Natural World** Children will talk about how they have grown and changed from babyhood. Children will name body parts and senses. Children will know that the time of the year is Autumn. Children will explore floating and sinking. Children will take part in a senses investigation.	**Natural World** Children will identify seasonal changes from winter to spring. Children will melt and solidify different substances such as water, chocolate and butter. Children will identify habitats and animals in hot and cold places.	**Natural World** Children will observe the changes of caterpillars turning into butterflies. Children will care for minibeasts and plants. Children will dig for dinosaur bones. Children will talk about ocean habitats and marine life. Children will learn about herbivores and carnivores.

	Children will identify plastic, metal and wood. Children will understand the difference between manmade and natural objects. Children will know what material a magnet picks up. Children will know that there are 8 planets in the solar system.	Children will build homes using different materials to make a house for the 3 Little Pigs.	Children will know that this time of year is Summer.
Vocabulary	head, body, eyes, ears, mouth, teeth, leg, arms, feet, hands, water, wood, plastic, glass, metal, rock, paper, wool, card/cardboard, sun, moon, day, night, light, dark	plant, plants, tree, trees	names of different minibeasts
Disciplinary Knowledge	**Observation over time** Children can: • make observations of animals and plants. **Identifying and classifying** Children can: • know about similarities and differences in relation to places, objects, materials and living things. **Pattern seeking** Children can: • talk about the features of their own immediate environment and how	**Observation over time** Children can: • make observations of animals and plants. **Identifying and classifying** Children can: • know about similarities and differences in relation to places, objects, materials and living things. **Pattern seeking** Children can: • talk about the features of their own immediate environment and how	**Observation over time** Children can: • make observations of animals and plants. **Identifying and classifying** Children can: • know about similarities and differences in relation to places, objects, materials and living things. **Pattern seeking** Children can: • talk about the features of their own immediate environment and how

	environments might vary from one another. • explain why some things occur and talk about changes. **Comparative and fair testing** Children can: • explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • choose the resources they need for their chosen activities and say when they do or don't need help. • represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories. • select and use technology for particular purposes.	environments might vary from one another. • explain why some things occur and talk about changes. **Comparative and fair testing** Children can: • explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • choose the resources they need for their chosen activities and say when they do or don't need help. • represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories. • select and use technology for particular purposes.	environments might vary from one another. • explain why some things occur and talk about changes. **Comparative and fair testing** Children can: • explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • choose the resources they need for their chosen activities and say when they do or don't need help. • represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories. • select and use technology for particular purposes.

Year 1

	Autumn	Spring	Summer
Substantive Knowledge	**Animals, including humans** Understand animals and humans • Identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates. • Identify and name a variety of common animals that are carnivores, herbivores and omnivores. • Identify name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	**Everyday materials** Investigate 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 some materials based on their properties.	**Plants** Understand plants • 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 flowering plants, including roots, stem/trunk, leaves and flowers.
Substantive Knowledge	**Seasonal Changes** Understand the Earth's movement in Space • Observe the apparent movement of the Sun during the day. • Observe changes across the four seasons. • Observe and describe weather associated with the seasons and how day length varies.		
Vocabulary	head, body, eyes, ears, mouth, teeth, leg, paws, hooves, tail, wing, claw, fin, scales, feathers, fur, beak, senses, touch, see, smell, taste, hear, fingers skin, eyes, nose, ear, tongue	object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see through, not see through	weather, sunny, windy, rainy, snowy, seasons, Spring, Summer, Autumn, Winter, sun, sunrise, sunset, day length

		leaf, flower, blossom, petal, stalk, root, seed, stem, bud, bulb, branch, bark, trunk, berry, fruit	
Disciplinary Knowledge	**Identifying and classifying** ● decide how to sort and classify objects into simple groups with some help.	**Observation over time** ● observe changes over time. ● observe the natural and humanly constructed world around them. **Identifying and classifying** ● use simple features to compare objects, materials and living things. **Comparative and fair testing** ● explore the world around them, leading them to ask some simple scientific questions about how and why things happen.	**Pattern seeking** ● notice links between cause and effect with support. ● begin to notice patterns and relationships with support. **Comparative and fair testing** ● begin to recognise ways in which they might answer scientific questions.

Year 2

	Autumn	Spring	Summer
Substantive Knowledge	**Animals, including humans** Understand animals and humans • Notice that animals, including humans, have offspring which grow into adults. • Investigate 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.	**Uses of everyday materials** Investigate Materials • Compare and group together a variety of everyday materials on the basis of their simple physical properties. • Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. • Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick/rock, and paper/cardboard for particular uses. **Living things and their habitats** Investigate living things • Explore and compare the differences between things that are living, that are dead and that have never been alive. • 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** Understand plants • 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. **Living things and their habitats** Investigate living things • 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 micro-habitats.
Vocabulary	offspring, reproduction, growth, child, young, old, exercise, heartbeat, breathing, hygiene, germs, disease, fish, vegetable, bread, rice, pasta	opaque, transparent, translucent, reflective, non-reflective, flexible, rigid, shape, push/pushing, pull/puling, twist/twisting, squash/squashing, bend/bending, stretch/ stretching	light, shade, water, warmth, cool, healthy, grow, sun habitat, pond, woodland, micro-habitat, logs, bushes

		living, dead, never-been-alive, suited, suitable, basic needs, food, food chain, shelter, move, feed	
Disciplinary Knowledge	**Identifying and classifying** • record and communicate findings in a range of ways with support. • sort, group, gather and record data in a variety of ways to help in answering questions such as in simple sorting diagrams, pictograms, tally charts, block diagrams and simple tables. **Patten seeking** • begin to draw simple conclusions. • use simple and scientific language. • read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage 1. • identify and discuss differences between their results. **Comparative and fair testing** • carry out simple practical tests, using simple equipment. • experience different types of scientific enquiries, including practical activities; talk about the aim of scientific tests they are working on.	**Observation over time** • make careful observations, sometimes using equipment to help them observe carefully. **Identifying and classifying** • record and communicate findings in a range of ways with support. **Pattern seeking** • begin to draw simple conclusions. • use simple and scientific language. • read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage 1. • identify and discuss differences between their results. **Comparative and fair testing** • carry out simple practical tests, using simple equipment. • experience different types of scientific enquiries, including practical activities; talk about the aim of scientific tests they are working on.	**Observation over time** • use simple measurements and equipment. • make careful observations, sometimes using equipment to help them observe carefully. **Identifying and classifying** • record and communicate findings in a range of ways with support. • sort, group, gather and record data in a variety of ways to help in answering questions such as in simple sorting diagrams, pictograms, tally charts, block diagrams and simple tables. **Pattern seeking** • begin to draw simple conclusions. • use simple and scientific language. • read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage 1. • identify and discuss differences between their results. • talk about their findings to a variety of audiences in a variety of ways.

			Comparative and fair testing • ask people questions and use simple secondary sources to find answers. • carry out simple practical tests, using simple equipment. • experience different types of scientific enquiries, including practical activities; talk about the aim of scientific tests they are working on

Year 3

	Autumn	Spring	Summer
Substantive Knowledge	**Animals, including humans** Understand animals and humans • Identify that animals, including humans, need the right types and amounts of nutrition, that they cannot make their own food and they get nutrition from what they eat. • Food contains a range of different nutrients. • Construct and interpret a variety of food chains, identifying producers, predators and prey. • Identify that humans and some animals have skeletons and muscles for support, protection and movement. **Rocks** Investigate Materials: Rocks and Soils • Compare and group together different kinds of rocks on the basis of their simple, physical properties. • Relate the simple physical properties of some rocks to their formation (igneous or sedimentary). • Describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock.	**Plants** Understand plants • Identify and describe the functions of different parts of flowering 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 way 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.	**Light** Understand light and seeing • 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 a solid object. • Find patterns in the way that the size of shadows change. **Forces** Understand movement, forces and magnets • Compare how things move on different surfaces. • 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.

	• Recognise that soils are made from rocks and organic matter.		• Describe magnets as having two poles. • Predict whether two magnets will attract or repel each other, depending on which poles are facing.
Vocabulary	nutrition, minerals, carbohydrates, sugars, protein, vitamins, fat, fibre, water, skeleton, spine, bones, muscles, support, protect, move, skull, ribs, joints rock, stone, pebble, boulder, grain, crystal, layers, hard, soft, texture, absorb, soil, fossil, marble, chalk, granite, sandstone, slate, soil, peat, sandy, chalky, clay, igneous, sedimentary, metamorphic	photosynthesis, pollen, insect, wind pollination, seed formation, seed dispersal	sunlight, light source, dark, absence of light, shadow, dangerous, reflect, shiny, matt, surface, mirror, transparent, translucent, opaque force, magnet, strength, magnetic, bar magnet, ring magnet, button magnet, attract, repel, metal, iron, steel, poles, north pole, south pole
Disciplinary Knowledge	**Identifying and classifying** ● talk about criteria for grouping, sorting and classifying. ● collect data from their own observations and measurements. ● present data in a variety of ways to help in answering questions. **Pattern Seeking** ● draw simple conclusions from their results. ● make predictions. ● first talk about, and then go on to write about, what they have found out.	**Observation over time** ● make systematic and careful observations. ● observe changes over time. **Pattern Seeking** ● draw simple conclusions from their results. ● make predictions. ● first talk about, and then go on to write about, what they have found out. **Comparative and fair testing** ● start to raise their own relevant questions about the world around them	**Observation over time** ● use a range of equipment, including thermometers and data loggers. **Identifying and classifying** ● collect data from their own observations and measurements. ● present data in a variety of ways to help in answering questions. **Pattern seeking** ● draw simple conclusions from their results. ● make predictions.

		in response to a range of scientific experiences.	● first talk about, and then go on to write about, what they have found out. **Research** ● make links between their own science results and other scientific evidence. **Comparative and fair testing** ● start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions. ● recognise when a fair test is necessary.

Year 4

	Autumn	Spring	Summer
Substantive Knowledge	**Animals, including humans** Understand animals and humans • 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. **Living things and their habitats** Investigate living things • Recognise that living things can be grouped in a variety of ways. • Explore and use classification keys. • Recognise that environments can change and that this can sometimes pose dangers to specific habitats.	**States of matter** Investigate Materials: 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 the temperature at which this happens in degrees Celsius (°C), building on their teaching in mathematics. • Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. **Sound** Investigate sound and hearing • Identify how sounds are made, associating some of them with something vibrating, understand volume and pitch. • Recognise that vibrations from sounds travel through a medium to the ear.	**Electricity** Understand electrical circuits • 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.
Vocabulary	digestive, digestion, mouth, saliva, oesophagus, stomach, small intestine, large intestine, nutrients, rectum, anus, teeth,	solid, liquid, gas, change-of-state, melting, freezing, boiling, evaporation, temperature, water cycle	electricity, appliance device, mains, plug, electrical circuit, circuit, component, cell, battery, positive, negative, crocodile clip,

	incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, predator, prey, food chain classification, environment, habitat, human impact, positive, negative, migrate, hibernate	sound, source, vibrate, vibration, travel, pitch, volume, faint, loud, insulation	bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol, loose connection, short circuit, connections, connect
Disciplinary Knowledge	**Identifying and Classifying** • group and classify things. • use, read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge. • record findings using scientific language, drawings, labelled diagrams, keys, bar charts and tables. **Research** • use straightforward scientific evidence to answer questions or support their findings. • identify similarities, differences, patterns and changes relating to simple scientific ideas and processes.	**Identifying and Classifying** • use, read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge. **Observation Over Time** • ask their own questions about what they observe. • where appropriate, take accurate measurements using standard units using a range of equipment. **Pattern Seeking** • suggest improvements to investigations. • raise further questions which could be investigated. • report and present their results and conclusions to others in written and oral forms with increasing confidence. **Research** • use straightforward scientific evidence to answer questions or support their findings.	**Comparative and Fair Testing** • help decide how to set up a fair test, making decisions about what observations to make, how long to make them for and the type of simple equipment that might be used. **Research** • recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations. **Pattern Seeking** • suggest improvements to investigations. • report and present their results and conclusions to others in written and oral forms with increasing confidence. **Identifying and Classifying** • group and classify things. • use, read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge.

		• identify similarities, differences, patterns and changes relating to simple scientific ideas and processes. **Comparative and Fair Testing** • set up and carry out simple comparative and fair tests.	• record findings using scientific language, drawings, labelled diagrams, keys, bar charts and tables. **Observation Over Time** • ask their own questions about what they observe. • where appropriate, take accurate measurements using standard units using a range of equipment

Year 5

	Autumn	Spring	Summer
Substantive Knowledge	**Living things and their habitats** Investigate living things • 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. **Forces** Understand movement, forces and magnets • Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. • Identify the effect of drag forces, such as air resistance, water resistance and friction that act between moving surfaces. • Describe, in terms of drag forces, why moving objects that are not driven tend to slow down. • Understand that force and motion can be transferred through mechanical devices such as gears, pulleys, levers and springs. • Understand that some mechanisms including levers, pulleys and gears, allow a smaller force to have a greater effect.	**Properties and changes of materials** Investigate Materials • Compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, conductivity (electrical and thermal), and response to magnets. • Understand how 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, oxidisation and the action of acid on bicarbonate of soda.	**Earth and Space** Understand the Earth's movement in 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 **Animals, including humans** Understand animals and humans • Describe the changes as humans develop to old age.

Vocabulary	life cycle, reproduce, sexual, asexual, sperm, fertilises, egg, metamorphosis, plantlets, runners, cuttings, fish, amphibians, reptiles, birds, mammals force, gravity, air resistance, water resistance, friction, mechanisms, levers, pulleys, gears	thermal, electrical, insulator, conductor, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible, non-reversible, irreversible, burning, rusting	Earth, Sun, Moon, Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune, spherical, solar system, rotates, orbit, star, planet vagina, penis, testicles, scrotum, ovaries, fallopian, uterus, womb, menstruation, erection
Disciplinary Knowledge	**Identifying and Classifying** • independently group, classify and describe living things and materials. • record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar graphs and line graphs. **Pattern Seeking** • notice patterns. • read, spell and pronounce scientific vocabulary correctly. **Comparative and Fair Testing** • with growing independence, raise their own relevant questions about the world around them in response to a range of scientific experiences.	**Identifying and Classifying** • independently group, classify and describe living things and materials. • record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar graphs and line graphs. **Pattern Seeking** • draw conclusions based on their data and observations. • read, spell and pronounce scientific vocabulary correctly. **Comparative and Fair Testing** • with increasing independence, make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions. • make their own decisions about what observations to make, what measurements to use and how long to	**Identifying and Classifying** • complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar graphs and line graphs. **Pattern Seeking** • use their scientific knowledge and understanding to explain their findings. • read, spell and pronounce scientific vocabulary correctly. **Comparative and Fair Testing** • explore and talk about their ideas, raising different kinds of scientific questions. **Research** • use primary and secondary sources of evidence to justify ideas. • identify evidence that refutes or supports their ideas

		make them for, and whether to repeat them.	

Year 6

	Autumn	Spring	Summer
Substantive Knowledge	**Animals, including humans** Understand animals and humans • Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. • Describe the ways in which nutrients and water are transported within animals, including humans. • Recognise the importance of diet, exercise, drugs and lifestyle on the way the human body functions.	**Living things and their habitats** Investigate living things • Describe how living things are classified into broad groups according to common observable characteristics. • Give reasons for classifying plants and animals based on specific characteristics. **Evolution and inheritance** Understanding 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** Understand light and seeing • Understand 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 eyes. • Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them, and to predict the size of shadows when the position of the light source changes. • 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. **Electricity** Understand electrical circuits • 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.
Vocabulary	heart, pulse, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, circulatory, diet, exercise, drugs, lifestyle	vertebrates, invertebrates, amphibians, reptiles, birds, mammals, fish, insects, spiders, arachnids, flowering, non-flowering offspring, vary, characteristics, suited, adapted, environment, inherited, species, fossils	straight lines, line rays circuit, complete circuit, diagram, bulb, switch, buzzer, motor, conductor, insulator, symbol, battery
Disciplinary Knowledge	**Observation over time** ● make careful and focused observations. **Research** ● use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas. **Comparative and fair testing** ● ask their own questions about scientific phenomena. ● select and plan the most appropriate type of scientific enquiry to use to answer scientific questions.	**Identifying the classifying** ● use and develop keys and other information records to identify, classify and describe living things and materials. **Pattern seeking** ● identify patterns that might be found in the natural environment. **Research** ● recognise where secondary sources will be most useful to research ideas and begin to separate opinion from fact. ● talk about how scientific ideas have developed over time.	**Observation over time** ● know the importance of taking repeat readings and take repeat readings where appropriate. **Identifying and classifying** ● use and develop keys and other information records to identify, classify and describe living things and materials. ● decide how to record data from a choice of familiar approaches. **Pattern seeking** ● look for different causal relationships in their data. ● discuss the degree of trust they can have in a set of results. ● independently report and present their conclusions to others in oral and written forms.

			Comparative and fair testing ● plan, set up and carry out comparative and fair tests to answer questions, including recognising and controlling variables where necessary. ● use their test results to identify when further tests and observations may be needed. ● use test results to make predictions for further tests.