

Mayflower Skills Progression Map

Subject: Science

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	Nursery	Animals excluding humans <i>Key Vocabulary:</i> Common animal names, characteristics etc	Sound <i>Key Vocabulary:</i> Loud, quiet, squeak etc	Light <i>Key Vocabulary:</i> Sun, light, day, dark etc	Living things and their habitats <i>Key Vocabulary:</i> Common animal names and habitats	Forces Explore and talk about different forces they can feel <i>Key Vocabulary:</i> Push, pull etc	Materials Talk about differences between materials and the changes they notice. <i>Key Vocabulary:</i>
	Reception	Sound <i>Key Vocabulary:</i> Loud, quiet, short, long, high, low	Humans, Earth and Space <i>Key Vocabulary:</i> body, face, eyebrows, knees, neck, shoulders, feet, toes	Light <i>Key Vocabulary:</i> Sun, bright, dark	Animals excluding humans, Living things and their habitat <i>Key Vocabulary:</i> Common animal names and body parts, habitats	Forces <i>Key Vocabulary:</i>	Materials <i>Key Vocabulary:</i> metal, wood, plastic, hard, soft, smooth, float, sink
		Seasonal changes <i>Key Vocabulary:</i> autumn, winter, summer, spring, day, wind, snow, cloud, sun, warm, cold, leaf					
KSI	Year 1	Seasonal change <i>Key Vocabulary:</i> Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud. Names of trees in the local area. Names of garden and wild flowering plants in the local area.					
		Animals & ourselves <i>Key Vocabulary:</i> Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves. Names of animals experienced first-hand from each vertebrate group Parts of the body including those linked to PSHE teaching (see joint document produced by the ASE and PSHE Association). Senses – touch, see, taste, hear, fingers (skin), eyes, nose, ear and tongue.	Plants <i>Key Vocabulary:</i> Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud. Names of trees in the local area. Names of garden and wild flowering plants in the local area.			Everyday Materials <i>Key Vocabulary:</i> 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	
	Skills: Gather and recording data to help in answering questions Observing closely, using simple equipment Identifying and Classifying	Skills: Observing closely, using simple equipment			Skills: Identifying and classifying Performing Simple Tests		
		Ongoing Skills: Asking simple questions and recognising that they can be answered in different ways Using their observations and ideas to suggest answers to questions					
	Year 2	Plants <i>Key Vocabulary:</i> As for Year 1 plus light, shade, sun, warm, cool, water, grow, healthy	Materials <i>Key Vocabulary:</i> Names of materials – wood, metal, plastic, glass, brick, rock, paper, cardboard Properties of materials – as for Year 1 plus opaque, transparent and translucent, reflective, non-reflective, flexible, rigid Shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching	Animals including humans <i>Key Vocabulary:</i> Offspring, reproduction, growth, child, young/old stages (examples - chick/hen, baby/child/adult, caterpillar/butterfly), exercise, heartbeat, breathing, hygiene, germs, disease, food types (examples – meat, fish, vegetables, bread, rice, pasta)	Animals including humans <i>Key Vocabulary:</i> Offspring, reproduction, growth, child, young/old stages (examples - chick/hen, baby/child/adult, caterpillar/butterfly), exercise, heartbeat, breathing, hygiene, germs, disease, food types (examples – meat, fish, vegetables, bread, rice, pasta)	Use of everyday materials <i>Key Vocabulary:</i> Names of materials – wood, metal, plastic, glass, brick, rock, paper, cardboard Properties of materials – as for Year 1 plus opaque, transparent and translucent, reflective, non-reflective, flexible, rigid Shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching	Living things and their habitats <i>Key Vocabulary:</i> Living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed • Names of local habitats e.g. pond, woodland etc. • Names of micro-habitats e.g. under logs, in bushes etc
	Skills: Observing closely, using simple equipment Identifying and Classifying	Skills: Identifying and Classifying Performing Simple Tests Using their observations and ideas to suggest answers to questions	Skills: Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Identifying and Classifying			Skills: Identifying and Classifying Performing Simple Tests Gathering and recording data to help in answering questions	Skills: Observing closely, using simple equipment Identifying and Classifying Gathering and recording data to help in answering questions
KS	Year 3	Plants	Animals including humans	Light	Rocks	Forces	Forces

		<i>Key Vocabulary:</i> Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal (wind dispersal, animal dispersal, water dispersal)	<i>Key Vocabulary:</i> Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine	<i>Key Vocabulary:</i> Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous	<i>Key Vocabulary:</i> Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb water, soil, fossil, marble, chalk, granite, sandstone, slate, soil, peat, sandy/chalk/clay soil	<i>Key Vocabulary:</i> Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole	
		<i>Skills – All skills used see 3+4 knowledge matrices</i>	<i>Skills: Asking relevant questions Reporting on findings Using evidence to answer questions</i>	<i>Skills: Gather + record data Set up simple practical enquiries Observations + taking measurements Using results to draw conclusions Report on findings Ask relevant questions</i>	<i>Skills: Identify difference + similarities Record findings Ask relevant questions Use scientific evidence</i>	<i>Skills – All skills used see 3+4 Knowledge Matrices</i>	
Year 4	Living things and their habitats	Electricity	States of Matter	Sound	Animals including humans	Independent enquiries	
	<i>Key Vocabulary:</i> Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate	<i>Key Vocabulary:</i> Electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol N.B. Children in Year 4 do not need to use standard symbols for electrical components, as this is taught in Year 6.	<i>Key Vocabulary:</i> Solid, liquid, gas, state change, melting, freezing, melting point, boiling point, evaporation, temperature, water cycle	<i>Key Vocabulary:</i> Sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation	<i>Key Vocabulary:</i> Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, predator, prey, food chain	<i>Key Vocabulary:</i> N/A	
	<i>Skills – Ask relevant questions Identifying difference + similarities Report on findings Use scientific evidence to answer questions</i>	<i>Skills – All skills used see 3+4 knowledge matrices</i>	<i>Skills – All skills used see 3+4 knowledge matrices</i>	<i>Skills – All skills used see 3+4 knowledge matrices</i>	<i>Skills – All skills used see 3+4 knowledge matrices</i>	<i>Skills – All skills used see 3+4 knowledge matrices</i>	
Year 5	Living things and their habitats	Animals including humans	Forces	Forces	Properties and changes in materials	Earth and space	
	<i>Key Vocabulary:</i> Life cycle, reproduce, sexual, sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runners, bulbs, cuttings	<i>Key Vocabulary:</i> Puberty – the vocabulary to describe sexual characteristics	<i>Key Vocabulary:</i> Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears	<i>Key Vocabulary:</i> Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears	<i>Key Vocabulary:</i> Thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change, burning, rusting, new material	<i>Key Vocabulary:</i> Earth, Sun, Moon, (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune), spherical, solar system, rotates, star, orbit, planets	
	<i>Skills – Planning scientific enquiry Record Data using diagrams Report and present findings</i>	<i>Skills Reporting and presenting findings</i>	<i>Skills – All skills used see 5+6 knowledge matrices</i>	<i>Skills – All skills used see 5+6 knowledge matrices</i>	<i>Skills – All skills used see 5+6 knowledge matrices</i>	<i>Skills – Record data using diagrams Identify scientific evidence Report and present findings</i>	
Year 6	Evolution and inheritance	Living things and their habitats	Light	Electricity	Animals including humans	Independent enquiries	
	<i>Key Vocabulary:</i> Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils	<i>Key Vocabulary:</i> Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering, non-flowering	<i>Key Vocabulary:</i> As for Year 3 - Light, plus straight lines, light rays	<i>Key Vocabulary:</i> Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage N.B. Children do not need to understand what voltage is, but will use volts and voltage to describe different batteries. The words “cells” and “batteries” are now used interchangeably.	<i>Key Vocabulary:</i> Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle	<i>Key Vocabulary:</i> N/A	
	<i>Skills – Plan different types of scientific enquiry Identify scientific evidence Report and present findings</i>	<i>Skills – All skills used see 5+6 knowledge matrices</i>	<i>Skills – All skills used see 5+6 knowledge matrices</i>	<i>Skills – All skills used see 5+6 knowledge matrices</i>	<i>Skills – All skills used see 5+6 knowledge matrices</i>	<i>Skills – All skills used see 5+6 knowledge matrices</i>	

Scientific questioning	Ask simple questions and recognise that they can be answered in different ways e.g. • Why are flowers different colours? • Why do some animals eat meat and others do not?	Ask simple questions and recognise that they can be answered in different ways including use of scientific language from the national curriculum e.g. • Why do some trees lose their leaves in autumn and others do not? • How long are the roots of tall trees? • Why do some animals have underground habitats?	Ask relevant questions and use different types of scientific enquiries to answer them e.g. • Why does the moon appear as different shapes in the night sky? • Why do shadows change during the day? • Where does a fossil come from?	Ask relevant questions and use different types of scientific enquiries to answer them e.g. • Why are steam and ice the same thing? • Why is the liver important in the digestive system? • What do we mean by pitch when it comes to sound?	Plan different types of scientific enquires to answer given questions.	Plan different types of scientific enquiries to answer their own or others' questions.
Measuring	Use simple equipment to observe closely (Y1 focus)	Use simple equipment such as thermometers and rain gauges to observe closely changes over time (Y2 focus)	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (Year 3 focus)	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (Year 4 focus)	Take measurements using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate (Y5 maths focus including capacity and mass)	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate (Y6 focus including capacity, mass, ratio and proportion)

Ref	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Gathering and recording	Gather and record data to help in answering questions (Year 1 focus)	Gather and record data to help in answering questions including from secondary sources of information using drawings, labelled diagrams, block graphs or tables. (Year 2 focus)	Gather, record, classify and present data in a variety of ways to help in answering questions drawings, labelled diagrams, keys and child constructed bar charts and tables (Year 3 focus)	Gather, record, classify and present data in a variety of ways to help in answering questions drawings, labelled diagrams, keys and child constructed bar charts and tables (Year 4 focus)	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs (Year 5 focus)	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs (Year 6 focus)
Communicating Findings	Make a simple written explanation about what has been learned from an investigation or what conclusions have been found.	Communicate his/her Ideas, what he/she does and what he/she finds out In a variety of ways e.g. simple written reports or write ups.	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (Year 3 focus)	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (Year 4 focus)	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations (Year 5 focus)	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations (Year 6 focus)

Ref	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Classifying	Identify and classify e.g. Mammals and birds (Year1 focus)	Identify, group and classify according to a given criteria e.g. Deciduous and coniferous trees (Year 2 focus) e.g. using a Venn Diagram	Group information according to common factors e.g. plants that grow in woodlands/plants that grow in gardens. (Yr 3 focus) e.g. Venn Diagrams with bisecting sets or Carroll Diagrams	Group information according to common factors e.g. materials that make good conductors or insulators. (Yr4 focus) e.g. Venn Diagrams with bisecting sets or Carroll Diagrams	Group and classify things and recognise patterns using appropriate ways of presenting e.g. classification keys.	Group and classify things and recognise patterns using appropriate ways of presenting e.g. classification keys.
Scientific research			Use research to find out a range of things e.g. - How reflection can help us see things that are around the corner. - What are the main differences between sedimentary and igneous rocks?	Use research to find out a range of things e.g. - Which materials make effective conductors and insulators of electricity? - How much time it takes to digest our food.	Find things out using a wide range of secondary sources of information	Find things out using a wide range of secondary sources of information
Concluding and questioning		Use his/her observations and ideas to suggest answers to questions noticing similarities, differences and patterns (Year 2 focus)	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions (Year 3 focus)	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions (Year 4 focus)	Use results to draw conclusions. Is evaluative when explaining findings from scientific enquiries and is clear about what has happened in recent enquiries and can relate this to other enquiries where appropriate (Year 5 focus)	Use results to draw conclusions. Is evaluative when explaining findings from scientific enquiries and is clear about what has happened in recent enquiries and can relate this to other enquiries where appropriate (Year 6 focus)

Ref	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Using scientific evidence			Use straightforward scientific evidence to answer questions or to support his/her findings (Year 3 focus)	Use straight forward scientific evidence to answer questions or to support his/her findings (Year 4 focus)	Identify scientific evidence that has been used to support or refute ideas or arguments (Year 5 focus)	Identify scientific evidence that has been used to support or refute ideas or arguments (Year 6 focus)