Subject: Progression Map

Academic Year: Longitudinal Study	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Topic:	N/A	N/A	What changes can we see across the seasons?	Which minibeasts can you find in different seasons?	How do plants grow across different seasons?	How do the seasons affect the rate of evaporation in puddles?	How much do we grow over the year?	What is the relationship between diet, exercise, drugs, lifestyle and health?
Knowledge			I know changes across the four seasons. I know weather associated with the seasons and how day length varies.	I know a variety of plants and animals in their habitats, including micro-habitats	I know the functions of different parts of flowering plants: roots; stem/trunk; leaves; and flowers I know 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. I know the way in which water is transported within plants.	Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	I know that humans (children) grow as they age I can describe the changes in humans over a year. I know the appropriate units of measure to use	I know the impact of diet, exercise, drugs and lifestyle on the way their bodies function.

Subject: Progression Map

					I know the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.			
Skills			observing closely, using simple equipment performing simple tests gathering and recording data to help in answering questions.	using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions.	setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers recording findings using simple scientific language, drawings, labelled diagrams, keys,	Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeated measurements when appropriate. Recording data and results in tables bar and line graphs reporting and presenting findings from enquiries, including conclusions,	taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs

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					gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	bar charts, and tables using straightforward scientific evidence to answer questions or to support their findings.	causal relationships and explanations in oral and written forms	reporting and presenting 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 identifying scientific evidence that has been used to support or refute ideas or arguments.
Vocabulary			Weather (sunny, rainy, windy, snowy etc.) Seasons (winter, summer, spring, autumn)	Living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed	Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal (wind dispersal, animal	evaporation, temperature, water cycle, state change	Growth, height, hand span, arm span, foot length, calculate, compare, centimetres, meters	Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles,

Subject: Progression Map

			Sun, sunrise, sunset, day length	Names of local habitats e.g. pond, woodland Names of micro-habitats e.g. under logs, in bushes	dispersal, water dispersal)			cycle, circulatory system, diet, exercise, drugs, lifestyle

Subject: Progression Map

Term: Autumn 1	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Topic:	God's creation	Changing State: ice (seasons)	Seasonal Changes: weather, length of day	Plants: seeds, bulbs, need to grow	Plants: parts of plant, requirements for growth, life cycle	Living things and their habitats: grouping, classifying, environmental changes	Earth and Space: Movement of Earth and other planets, day and night	Living things and their habitats: classification
Knowledge	**0-3 years** Explore materials with different properties. Explore natural materials indoors and outside Repeat actions that have an effect **3-4 years** Begin to understand the need the need to respect and care for the natural environment	**Reception:** Understand the effect of changing seasons on the natural world around them **ELGs** I know some important processes and changes in the natural world around them, including the seasons and changing states of matter.	Changes across the four seasons. Describe weather associated with the seasons and how day length varies.	To know how seeds and bulbs grow into mature plants. To know plants need water, light and a suitable temperature to grow and stay healthy.	Know the functions of different parts of flowering plants: roots; stem/trunk; leaves; and flowers. Know 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. Know the way in which water is transported within plants. Know the part that flowers	Know that living things can be grouped in a variety of ways. Use classification keys to group, identify and name a variety of living things in their local and wider environment. Know that environments can change and that this can sometimes pose dangers to living things.	Understand the movement of the Earth, and other planets, relative to the Sun in the solar system. Understand the movement of the Moon relative to the Earth. Know the Sun, Earth and Moon are approximately spherical bodies. Know why we have day and night and why the Sun appears to move across the sky.	Know how living things are classified into broad groups based on observable characteristics, similarities and differences, including micro-organisms, plants and animals. Knows reasons for classifying plants and animals based on specific characteristics.

Subject: Progression Map

	Plant seeds and care for growing plants				play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.			
Skills	Repeats actions that have an effect. Use our sense in hands on exploration. Explore materials with similar properties. Talk about what they see using a wide vocabulary	**Reception:** Explore the natural world around them **ELGs:** I know how to ask questions about the world the world through using my senses - feeling, hearing, seeing	identifying and classifying ask simple questions and recognising that they can be answered in different ways using their observations and ideas to suggest answers to questions observe closely, using simple equipment	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 their observations and ideas to suggest answers to questions	Set up simple practical enquiries, comparative and fair tests gather, record, classify and present data in a variety of ways to help in answering questions record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables report on findings from	gather, record, classify and present data in a variety of ways to help in answering questions identify differences, similarities or changes related to simple scientific ideas and processes use straightforward scientific evidence to answer questions or to support their findings.	record data and results of increasing complexity use scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs identify scientific evidence that has been used to support or refute ideas or arguments.	plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate record data and results of increasing complexity using

Subject: Progression Map

				gathering and recording data to help in answering questions.	enquiries, including oral and written explanations, displays or presentations of results and conclusions identify differences, similarities or changes related to simple scientific ideas and processes			scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs use test results to make predictions to set up further comparative and fair tests 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
Vocabulary		autumn, winter, spring, summer, change, leaf, fall, lose, night,	Weather, sunny, rainy, windy, snowy Seasons, winter,	Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch,	Photosynthesis, pollen, insect/wind pollination, seed formation,	Classification, classification keys, environment, habitat, human	Earth, Sun, Moon, (Mercury, Jupiter, Saturn, Venus, Mars,	Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates,

Subject: Progression Map

		day, ice, water, melt, freeze,	summer, spring, autumn, Sun, sunrise, sunset, day length	stem, bark, stalk, bud, light, shade, sun, warm, cool, water, grow, healthy	seed dispersal (wind dispersal, animal dispersal, water dispersal)	impact, positive, negative, migrate, hibernate	Uranus, Neptune), spherical, solar system, rotates, star, orbit, planets	insects, spiders, snails, worms, flowering, non-flowering

Subject: Progression Map

Term: Autumn 2	Nursery	EY	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Topic:	We are one	Changes of state	Humans: body parts, senses	Animals including humans: offspring, basic needs, exercise and diet	Rocks: group, compare, properties, fossils, soil	Sound: vibrations, pitch, volume	Animals including humans: Changes in humans, SRE	Evolution and inheritance: Fossils, adaptation
Knowledge	**3-4 years** To understand that people have similarities and differences. To begin to make sense of our own life story and family history.	**Reception:** Explore the natural world around them. Understand the effect of changing seasons on the natural world around them. **ELGs:** I know some important processes and changes in the natural world around them, including	I know the basic parts of the human body and say which part of the body is associated with each sense	I know that animals, including humans, have offspring which grow into adults. I know the basic needs of animals, including humans, for survival (water, food and air). I know the importance for humans of exercise, eating the right amounts of different types of food, and hygiene	I know how to compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. I know in simple terms how fossils are formed when things that have lived are trapped within rock. I know soils are made from rocks and organic matter.	I know how sounds are made, associating some of them with something vibrating. I know vibrations from sounds travel through a medium to the ear. I know how to find patterns between the pitch of a sound and features of the object that produced it. I know how to find patterns between the volume of a sound and the strength of the vibrations that produced it. I know sounds get fainter as the distance from the sound source increases.	Describe the changes as humans develop to old age.	I know living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. I know living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. I know how to identify animals and plants are adapted to suit their environment

Subject: Progression Map

		the seasons and changing states of matter.						in different ways and that adaptation may lead to evolution
Skills	I can explore different materials freely. I can understand why questions.	**Reception:** Describe what they see, hear and feel whilst they are outside. **ELGs:** I know how to ask questions about the world the world through using my senses - feeling, hearing, seeing	observing closely, using simple equipment performing simple tests gathering and recording data to help in answering questions	asking simple questions and recognising that they can be answered in different ways observing closely, using simple equipment performing simple tests gathering and recording data to help in answering questions	gathering, recording, classifying and presenting data in a variety of ways to help in answering questions asking relevant questions and using different types of scientific enquiries to answer them making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including	gathering, recording, classifying and presenting data in a variety of ways to help in answering questions making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers asking relevant questions and using different types of scientific enquiries to answer them recording findings using simple scientific language, drawings, labelled diagrams,	reporting and presenting 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 Identifying scientific evidence that has been used to support or refute ideas or arguments. recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter, graphs, bar and line graphs	reporting and presenting 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 identifying scientific evidence that has been used to support or refute ideas or arguments recording data and results of

Subject: Progression Map

					thermometers and data loggers identifying differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings	keys, bar charts, and tables		increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
Vocabulary		autumn, winter, spring, summer, change, leaf, fall, lose, night, day, ice, water, melt, freeze,	Parts of the body including those linked to PSHE teaching (see joint document produced by the ASE and PSHE Association) • Senses – touch, see, smell, taste, hear, fingers (skin), eyes,	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)	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	Sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation		Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils

Subject: Progression Map

			nose, ear and tongue 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					
Term: Spring 1	Nursery	EY	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Topic:	We all matter	Space: forces (gravity), push and pull (toys), habitats (farm), lifecycles, growing plants	Animals: identify common animals, describe and compare	Living things and their habitats: living, dead, never been alive, habitats, food chains	Forces and magnets: push, pull, friction, magnets	Electricity: simple circuits, bulbs, switches, conductors and insulators	Properties and changes of materials: Compare hardness, solubility, transparency, conductivity and response to magnets	Electricity: Voltage, brightness of bulbs, symbols
Knowledge	**3-4 years** I know how to plant	Reception: Explore and talk	I know a variety of common	I know the differences between things that are living,	I know how things move on	I know common appliances that run on electricity.	Compare and group together everyday materials on the	I know the brightness of a lamp or the

Subject: Progression Map

	seeds and how to care for growing plants.	about forces they can feel **ELGs:** Understand some important processes in the natural world around them (forces)	animals including fish, amphibians, reptiles, birds and mammals. I know a variety of common animals that are carnivores, herbivores and omnivores. I know the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).	dead, and things that have never been alive I know 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 I know a variety of plants and animals in their habitats, including micro-habitats I know 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	different surfaces. I know some forces need contact between two objects, but magnetic forces can act at a distance. I know how magnets attract or repel each other and attract some materials and not others. I know how to 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	I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. I know 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. I know a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. I know some common conductors and insulators, and associate metals with being good conductors.	basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. • Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating	volume of a buzzer with the number and voltage of cells used in the circuit. I know reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. I know the symbols when representing a simple circuit in a diagram.

Subject: Progression Map

					each other, depending on which poles are facing.			
Skills	Exploring natural materials, indoors and outside. Exploring how things work.	Explore the natural world around them	asking simple questions and recognising that they can be answered in different ways observing closely, using simple equipment identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions.	observing closely, using simple equipment identifying and classifying using their observations and ideas to suggest answers to questions	asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and fair tests reporting and presenting 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 identifying scientific evidence that has	

Subject: Progression Map

					reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions		been used to support or refute ideas or arguments.	
Vocabulary			Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves • Names of animals experienced first-hand	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	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,	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,	Thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change, burning, rusting, new material	Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage

Subject: Progression Map

			from each vertebrate group		iron, steel, poles, north pole, south pole	metal, non-metal, symbol		

Subject: Progression Map

Term: Spring 2	Nursery	EY	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Topic:	Fairness	As Spring 1	Everyday materials: object and material, identify, describe, compare	Living things and their habitats: living, dead, never been alive, habitats, food chains	Light: light to see, reflection, sun, shadows	Animals including humans: digestive system, teeth, food chains	Properties and changes of materials: dissolving, changes of state	Animals including humans: Circulatory system
Knowledge	**0-3 years:** Experience natural phenomena such as rain **3-4 years:** Talk about what they see, using a wide vocabulary Use all their senses in hands-on exploration of natural materials		I know how to distinguish between an object and the material from which it is made. I know the name of a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. I know the simple physical properties of a variety of everyday materials. I know how to group together a variety of everyday	I know the differences between things that are living, dead, and things that have never been alive I know 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	I know how to recognise that they need light in order to see things, and that dark is the absence of light. I know light is reflected from surfaces. I know how to recognise that light from the sun can be dangerous and that there are ways to protect their eyes. I know how to recognise that shadows are formed when the light from a light source is blocked	I know the simple functions of the basic parts of the digestive system in humans. I know the different types of teeth in humans and their simple functions. I can construct and interpret a variety of food chains, identifying producers, predators and prey.	Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution. 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	I know the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. I know the impact of diet, exercise, drugs and lifestyle on the way their bodies function. I know the ways in which nutrients and water are transported within animals,

Subject: Progression Map

			materials on the basis of their simple physical properties.	animals and plants, and how they depend on each other I know a variety of plants and animals in their habitats, including micro-habitats I know 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	by an opaque object. I know how to find patterns in the way that the size of shadows change.		action of acid on bicarbonate of soda.	including humans.
Skills	Exploring and responding to some natural phenomena such as rain.		identifying and classifying	observing closely, using simple equipment	setting up simple practical enquiries, comparative and fair tests	identifying differences, similarities or changes related to simple	planning different types of scientific enquiries to answer questions, including recognising and	planning different types of scientific enquiries to answer

Subject: Progression Map

	Explore how things work – pulley toys, wind-up toys Understand why questions		performing simple tests using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions	identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions.	making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	scientific ideas and processes gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and fair tests	questions, including recognising and controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using test results to make

Subject: Progression Map

					reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions			predictions to set up further comparative and fair tests identifying scientific evidence that has been used to support or refute ideas or arguments.
Vocabulary			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	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.	Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous	Digestive system, digestion, mouth, teeth, saliva, esophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, predator, prey, food chain	Thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change, burning, rusting, new material	Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle

Term: Summer 1	Nursery	EY	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Topic: **Sub**	I am responsible	Materials: Floating and sinking, Growing: Life cycles and body parts, dinosaur investigation	Plants: identity common plants, basic structure including trees	Use of everyday materials: compare suitability, changing shape, STEM project	Animals including humans: nutrition, skeletons, muscles	Properties and changes of materials: solids, liquids, gases, change of state - heat	Living things and their habitats: life cycles of mammals, amphibian, insect and bird. Reproduction in plants and animals	Light: travels in straight lines, shadows
Knowledge	**0-3 years** Learn about the life-cycle of a butterfly. **3-4years:** Understand the key features of the life cycle of a plant and an animal	**Reception:** I know about life cycle of an human I know I need to respect and care for the natural environment and all living things. I know which dinosaurs are meat or plant eaters I know some similarities and differences in relation to materials **ELGs:**	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.	I know the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. I know how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	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.	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).	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.	I know light appears to travel in straight lines. I know light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. I know we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. I know the idea that light travels in

Subject: Progression Map

		Explore the natural world around them, making observations and drawing pictures of plants and animals						straight lines to explain why shadows have the same shape as the objects that cast them.
Skills	Observing the butterfly cycle. Exploring forces including magnets, floating and sinking. Ask and answer why questions. Make healthy food choices. Explore changes of state through use of cornflour.	I know why things happen and how things work I know some similarities, differences, patterns and change in relation to people	observing closely, using simple equipment asking simple questions and recognising that they can be answered in different ways using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions	observing closely, using simple equipment performing simple tests identifying and classifying	gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables using results to draw simple conclusions, make	asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs reporting and presenting 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	reporting and presenting 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 recording data and results of increasing complexity using scientific diagrams and labels,

Subject: Progression Map

					predictions for new values, suggest improvements and raise further questions using straightforward scientific evidence to answer questions or to support their findings. setting up simple practical enquiries, comparative and fair tests	recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	identifying scientific evidence that has been used to support or refute ideas or arguments.	classification keys, tables, scatter graphs, bar and line graphs Identify scientific evidence that has been used to support or refute ideas or arguments
Vocabulary		Science, experiment,	Leaf, flower, blossom, petal,	Names of materials – wood,	Nutrition, nutrients,	Solid, liquid, gas, state	Life cycle, reproduce, sexual,	As for Year 3 - Light, plus

Subject: Progression Map

		test, fair, why, senses, world, plants – leaf, stem, root, flower, animals, humans, materials - waterproof, natural, change, growth, decay, environment	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	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	carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine	change, melting, freezing, melting point, boiling point, evaporation, temperature, water cycle	sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runners, bulbs, cuttings	straight lines, light rays

Term: Summer 2	Nursery	EY	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Topic: **Sub**	Powerful world	Materials: Floating and sinking, Growing: Life cycles and body parts, dinosaur investigation	Materials (stem)	Use of everyday materials: compare suitability, changing shape, STEM project	STEM linked to school – data loggers (temperature / decibels/ light)	States of matter: evaporation, condensation, water cycle	Forces: gravity, air / water resistance/ friction. Levers, pulleys and gears	STEM project linked to electricity
Knowledge	**0-3 years:** To understand healthy food choices **3-4 years:** Make healthy choices about food, drink, activity and toothbrushing	**Reception:** I know about life cycle of an human I know I need to respect and care for the natural environment and all living things. I know which dinosaurs are meat or plant eaters I know some similarities and differences in relation to 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	. I know the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. I know how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	I know how to recognise that they need light in order to see things, and that dark is the absence of light. I know light is reflected from surfaces. I know how to recognise that light from the sun can be dangerous and that there are ways to protect their eyes. I know how to recognise that shadows are formed when the light from a	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.	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.	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

Subject: Progression Map

		ELGs: Understand some important processes in the natural world (floating and sinking) Explore the natural world around them making observations and drawing pictures	the basis of their simple physical properties		light source is blocked by an opaque object. I know how to find patterns in the way that the size of shadows change.			idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
Skills	To explore forces including magnets, floating and sinking To make healthy food choices To ask and answer why questions	I know why things happen and how things work I know some similarities, differences, patterns and change in relation to people	performing simple tests identify and classify using their observations and ideas suggest answers to questions	observing closely, using simple equipment performing simple tests identifying and classifying	asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests making systematic and careful	making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys,	reporting and presenting 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

Subject: Progression Map

					observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions identifying differences, similarities or changes related to simple scientific ideas and processes identifying differences, similarities or changes related to simple scientific ideas and processes	tables, scatter graphs, bar and line graphs reporting and presenting 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 identifying scientific evidence that has been used to support or refute ideas or arguments.	identifying scientific evidence that has been used to support or refute ideas or arguments.

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					reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions			
Vocabulary		Science, experiment, test, fair, why, senses, world, plants – leaf, stem, root, flower, animals, humans, materials - waterproof, natural, change,	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,	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-	Temperature – degrees Thermometer Light – lux Sound Decibels Data loggers	Solid, liquid, gas, state change, melting, freezing, melting point, boiling point, evaporation, temperature, water cycle	Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears	Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage

Subject: Progression Map

		growth, decay, environment	absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through	reflective, flexible, rigid Shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching				