Curriculum Progression Map - Science

Year group	Term	Knowledge	Key skills	Key vocabulary
Reception	Autumn 1 Ourselves (Animals including humans)	Working Scientifically refer to Cumbria Hub Document (attached) Seasonal changes (Ongoing throughout) To know that some trees change in the four seasons To know some signs of each season(leaves on the ground, cold weather, daffodils growing and sunny weather) To know that the weather changes throughout the year To know and compare weather types(rain, sun, snow, wind) To know the importance of exercise and hygiene for humans. (washing hands/germs). Baseline To identify, name and label basic parts of the human body (practically) To know the life cycle of a human. To know the names of familiar animals To know that animals need food Seasonal changes	Asking questions about the natural world with support. Beginning to share ideas and suggestions about what to do when working practically. Beginning to make guesses about what might happen. Commenting on what they see and hear in the natural world. Recognising that information can be found in books or online. Recognising that tables can be used to record information. Grouping plants, animals, objects with support. Describing their discoveries when working practically.	words for parts of the body of humans and other animals: (external), head, neck, elbow, knee, face, ears, eyes, eyebrow, eyelash, hair, mouth, lips, teeth, tongue, skin, hand, fingers, nostril, nose, cheek, chin, feet, toes, shoulder, fingernails, leg, Autumn Winter Cold,freeze,ice,snow Bay, toddler, child, teenager, adult

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Year 1	Autumn 1 Seasonal changes	Assessment quiz - seasonal changes To know the name and order of the four seasons: Spring, Summer, Autumn, Winter To identify how the weather changes across the four seasons and how it changes in the UK To identify, events and activities that take place in different seasons To know that it is unsafe to look directly at the Sun To know how trees change across the four seasons To recognize that daylight hours change and vary across the four seasons Working scientifically: To record data in a pictogram Observing over time - working scientifically: To gather and record data about seasons change over time Assessment quiz - Seasonal changes To plan and carry out a report	• To raise questions about observations To predict an outcome using their own experiences • To observe and gather data and to make comparisons between seasons • To begin to understand how measurements can be taken, i·e· using a thermometer • To begin to draw pictograms	Conclusion, deciduous tree, pictogram, record, sunrise, symbol, thermometer, data, evergreen tree, predict season, sunset temperature, weather
Year 2	Autumn 1 Habitats	Assessment quiz - Habitats To identify some of the characteristics of living things To begin to understand some of the life processes, including movement, reproduction, sensitivity, growth, excretion and nutrition· To recognise the difference between things that are alive, were once alive or have been alive using some of the life processes Working scientifically : To classify objects into groups To identify plants and animals in different habitats	• To ask simple questions, recognizing that they can be answered in different ways • To classify objects into groups • To gather and record data in a simple table To carry out research to find answers to questions	Alive, analyse, camouflage carnivore, classify, coastal, dead, depend, diet, energy, excretion, food, chain ,

		To know a variety of habitats, including woodland, ocean, rainforest and coastal To identify how a habitat provides animals and plants with what they need to survive Working scientifically: To carry out research to find answers to questions To recognise how animals and plants depend on each other (e.g. food, shelter) Assessment quiz - Habitats To recall how animals get their food from plants and other animals To understand that a food chain can be used to show how animals obtain food from eating either plants and/or other animals		
Reception	Autumn 2 Ourselves (Animals including humans)	Seasonal changes To know the importance of exercise and hygiene for humans. (washing hands/germs). To investigate how to make shadows. To know that shadows are created when something blocks the light To know that day is light because the sun is in the sky To know that night is dark because the sun is not in the sky Tasting-	Asking questions about the natural world with support. Beginning to share ideas and suggestions about what to do when working practically. Beginning to make guesses about what might happen. Commenting on what they see and hear in the natural world. Using non-standard units to measure. Recognising that information can be found in books or online. Recognising that tables can be used to record information. Grouping plants, animals, objects with support. Describing their discoveries when working practically.	shadows, light, dark, sun, day, night sweet, sour, Winter, cold, Ice freeze, temperature

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Year 1	Autumn 2 Everyday materials	Seasonal changes Assessment quiz - Everyday materials To know that objects are items or things. To know that a material is what an object is made from. To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock To know that property refers to how a material can be described. To describe the physical properties of a variety of everyday materials. Assessment quiz - Everyday materials To understand that materials can be grouped based on their physical properties	• Ask simple questions and recognise that they can be answered in different ways To observe closely, using simple equipment To perform simple tests • To identify and classify • To use their observations and ideas • To suggest answers to questions • To gather and record data to help in answering questions	names of materials: metal, plastic, wood, paper, glass, clay, rock, water, brick, paper, elastic, fabric (and individually named fabric e.g. cotton, wool, leather, linin, denim) foil, cardboard, tissue words used to describe materials: hard, soft, rough, smooth, shiny, dull, magnetic, transparent, bendy, not bendy, waterproof, not-waterproof, absorbent, not absorbent, strong, stretchy, stiff, opaque, transparent

Curriculum Progression Map - Science

Year 2	Autumn 2 Microhabitats	Assessment quiz- Microhabitats To know that a habitat is the environment where an animal or plant lives/ grows, because it provides what they need to survive To map a local habitat and identify what is in it. To classify objects as those that are living, dead and those that have never been alive To know that a micro-habitat is a very small habitat (e.g. stones, logs and leaf litter). To identify minibeasts in their microhabitats Working scientifically: to classify minibeasts into groups Assessment quiz - Microhabitats Working scientifically: to record data in a pictogram	• Ask simple questions and recognise that they can be answered in different ways To observe closely, using simple equipment To perform simple tests • To identify and classify • To use their observations and ideas to suggest answers to questions • To gather and record data to help in answering questions	Food chain, microhabitat, minibeast, research, results, test

Reception	Spring 1 Materials	Seasonal changes To know which part of the body is associated with each sense To know that animals including humans use their senses to explore the world To know the main body parts of common animals(legs, wings, fur, tail) Senses investigation (feely bag, smell test, tasting, listening walk, kaleidoscope) The types of materials To know similarities and differences between the natural world around them and contrasting environments (e.g. materials for houses, clothes etc.)	Asking questions about the natural world with support. Beginning to share ideas and suggestions about what to do when working practically. Beginning to make guesses about what might happen. Commenting on what they see and hear in the natural world. Using non-standard units to measure. Recognising that information can be found in books or online. Drawing and labelling pictures off animals and plants. Recognising that tables can be used to record information. Grouping plants, animals, objects with support. Describing their discoveries when working practically.	Smell, sight, hearing, touch, taste, names of materials: metal, plastic, wood, paper, glass, clay, rock, fabric, sand, water, brick, paper, elastic, fabric (and individually named fabric e.g. cotton, wool, leather, polyester, linin, denim) foil, cardboard, tissue paper,

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Year 1	Spring 1 Animals, including Humans	Seasonal changes Assessment quiz - Sensitive bodies To know key parts of the human body (including head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth). To identify, name and label the functions of human body parts. To say which part of the body is associated with each sense. To know that eyes are used for sight, the nose is used for smell, ears are used for hearing, the tongue and mouth are used for taste and the skin is used for touch Investigation with 5 senses. Assessment quiz - Sensitive bodies To describe the importance of humans of exercise, eating the right amounts of food and hygiene.	• Ask simple questions and recognise that they can be answered in different ways To observe closely, using simple equipment To perform simple tests To use their observations and ideas to suggest answers to questions • To gather and record data to help in answering questions	sense, eye, sight, see, ear, hearing, hear, scent, smell, nose, skin, touch, feel, texture, taste, tongue.
Year 2	Spring 1 Uses of Everyday Materials	Assessment quiz - Uses of everyday materials To identify and compare the suitability of a variety of everyday materials including wood, metal, plastic, glass, brick, rock, paper and cardboard with particular uses. (sort) To know that different materials can be used for the same purpose (and to give examples.) To know why certain materials are unsuitable for particular objects.	• Ask simple questions and recognise that they can be answered in different ways • To observe closely, using simple equipment • To perform simple tests • To identify and classify • To use their observations and ideas to suggest answers to questions	Words relating to describing materials: reflective, non-reflective, transparent, opaque, rigid, flexible, strong, weak.

		To know that a force must be applied to change the shape of a solid object To know that solid objects can be squashed, bent, twisted or stretched. Assessment quiz – Uses of everyday materials To know that different solid objects may take a different amount of force to change shape.	• To gather and record data to help in answering questions	Words relating to materials uses: suitable, unsuitable, property, properties, best, purpose, job. object, change, squash, squashing, bend, bending, twist, twisting, stretch stretching.
Reception	Spring 2 Materials	The uses of materials To know that objects float or sink To know that some objects move when pushed or pulled To know that some objects freeze or melt. To understand some important processes and changes in the natural world around them, including changing states of matter (e.g. ice turning to water, chocolate melting, skittles dissolving etc.)	Asking questions about the natural world with support. Beginning to share ideas and suggestions about what to do when working practically. Beginning to make guesses about what might happen. Commenting on what they see and hear in the natural world. Using non-standard units to measure. Recognising that information can be found in books or online. Drawing and labelling pictures off animals and plants. Recognising that tables can be used to record information. Grouping plants, animals, objects with support. Describing their discoveries when working practically.	words used to describe materials: hard, soft, rough, smooth, shiny, dull, magnetic, transparent, bendy, not bendy, waterproof, not waterproof, not-absorbent, strong, stretchy, stiff,

Year 1	Spring 2 Animals, including Humans	Seasonal changes Assessment quiz – Comparing animals. To identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals including pets. To describe and compare the structure of a variety of common animals including fish, amphibians, reptiles, birds and mammals including pets. (arms, legs, wings, tails, fins, head, trunk, horns/tusks, shell) To know that a carnivore is an animal that eats other animals and to give some examples. To know that a herbivore is an animal that eats only plants and to give some examples. To know that an omnivore is an animal that eats both animals and plants, and to give some examples. Assessment quiz – Comparing animals. To find out about and describe the basic needs of animals including humans for survival (water, food, air).	• To identify and classify • To gather and record data to help in answering questions	Fish, amphibian, reptile, bird, mammal, human, animal, pet, habitat, environment, carnivore, herbivore, omnivore,

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Year 2	Spring 2 Animals, including Humans	Assessment quiz - Life cycles and health To identify, name and label the functions of human body parts. To understand how living things change, and that animals have offspring that grow into adults. To know which offspring comes from which parent animal To know the stages in some animal life cycles. To know that animals, including humans, need water, food and air to survive. Assessment quiz - Life cycles and health To understand the importance of exercise, a balanced diet and hygiene for humans	• Ask simple questions and recognise that they can be answered in different ways To observe closely, using simple equipment To identify and classify • To use their observations and ideas to suggest answers to questions • To gather and record data to help in answering questions	words relating to humans/animals (life cycle): offspring, baby, toddler, child, teenager, adult, elderly person, young, old, grow, growth. examples of animal life cycles including but not exclusively: Egg, chick, chicken; egg, caterpillar, pupa, butterfly; spawn, tadpole, frog; lamb, sheep, kitten, cat: puppy, dog; calf, cow; foal, horse. words relating to humans/animals (basic needs): exercise, health, healthy, hygiene, clean, wash, water, food, air, right amounts (of foods). Fruits, vegetables, meat, fish, eggs, beans, dairy, milk, fat, oil, sugar, balance.

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Reception	Summer 1 Plants	To explore the natural world around them by making observational drawings of drawing pictures of plants. To know the name for the basic plant parts(leaves, root, flowers, stem) To know the names of some familiar flowering plants(e.g. daisy, sunflower, daffodil, bluebell) To know plants are alive To know that seeds need water to grow To know that seeds grow into plants if taken care of.	Asking questions about the natural world with support. Beginning to share ideas and suggestions about what to do when working practically. Beginning to make guesses about what might happen. Commenting on what they see and hear in the natural world. Using non-standard units to measure. Recognising that information can be found in books or online. Drawing and labelling pictures off animals and plants. Recognising that tables can be used to record information. Grouping plants, animals, objects with support. Describing their discoveries when working practically.	words relating to plants: branch, flower, root, stem, (stalk), seeds, bulb, seedlings, plants, leaf, leaves, weed, garden, wild, part, grow, growth, vegetable, tree, grass, plant (verb), blossom,, fruit, seed, trunk, bud, opening

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Year 2	Summer 1 Plants	Plant and observe growth Assessment quiz - To identify and name a variety of wild and garden plants including deciduous and evergreen trees. To know that seeds and bulbs grow into seedlings by producing roots and shoots. To know that seedlings grow into mature plants by developing parts, that may include stems/trunks, leaves, flowers and fruits. To know that seeds need water to germinate. To find out and describe how seed need water, light and temperature to stay healthy. Assessment quiz - Plant growth To observe and describe how seeds and bulbs grow into mature plants.	• Ask simple questions and recognise that they can be answered in different ways To observe closely, using simple equipment • To perform simple tests • To identify and classify • To use their observations and ideas to suggest answers to questions • To gather and record data to help in answering questions	words relating to plants: mature, germination, growth, survive, healthy, shoot, seedling words relating to growth: water, light, (suitable) temperature, warmth, grow, healthy, cold, dark, wither, dry, limp, dry, green, yellow.
Reception	Summer 2 Plants	Minibeasts- sort, examine, habitats, To know that animals and plants move, grow and feed. To know the difference between things that are living and things To know that some animals hibernate or store food in Winter To know that plants and animals live in a range of different places(land, sea, air)	Asking questions about the natural world with support. Beginning to share ideas and suggestions about what to do when working practically. Beginning to make guesses about what might happen. Commenting on what they see and hear in the natural world. Using non-standard units to measure. Recognising that information can be found in books or online.	Habitat, body, legs, wings, soil, dark, under, rock, damp, sea, river, garden

		To name some different places where animals live on the school site. To know some similarities and difference between the natural world around them and contrasting environments and what has been read in class through plants. To make observations of growing plants	Drawing and labelling pictures off animals and plants. Recognising that tables can be used to record information. Grouping plants, animals, objects with support. Describing their discoveries when working practically.	

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Year 1	Summer 2 Making connections	The basic structure, including leaves, flowers (blossom), fruit, roots, bulb, seed, trunk, branches and stem, of a variety of common plants, including flowering plants and trees. How plants grow and change over time. A variety of common animals (including fish, amphibians, reptiles, birds and animals). The main body parts of common animals (arms, legs, wings, tails, fins, head, trunk, horns/tusks and shell). The diets of carnivores, herbivores and omnivores and give examples. A variety of everyday materials, including wood, plastic, glass, metal, water and rock. Property refers to how a material can be described The physical properties of a variety of everyday materials. The name and order of the four seasons: spring, summer, autumn and winter. The weather associated with the four seasons and how it changes (in the UK). To know about a range of jobs and careers that use scientific knowledge and methods.	• To know about famous scientists throughout history. • To know about a range of jobs and careers that use scientific knowledge and methods. • To know about the work of modern day scientists. • To know about science in the news and recent discoveries. • To explore spiritual, moral, social and cultural links with Science. • Exploring the world around them and raising their own simple questions. • Recognising there are different types of enquiry (ways to answer a question). • Responding to suggestions on how to answer questions.	Difference, fish, group, herbivore, mammal, material, omnivore, object, pattern, retile, season, similarity, trunk, waterproof, weather

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Year 2	Summer 2 Making connections	Seeds and bulbs grow into seedlings by producing roots and shoots. Seeds need water and warmth to germinate. Plants need water, light and a suitable temperature for growth and health. Some of the life processes, including movement, reproduction, sensitivity, growth, excretion and nutrition. The difference between things that are living, dead and things that have Never been alive, using some of the life processes. Why objects are made from particular materials and to give examples of their suitability. One material can be used for a range of purposes (and to give examples.) Different materials can be used for the same purpose (and to give examples.) Why certain materials are unsuitable for particular objects. Solid objects can be squashed, bent, twisted or stretched. About famous scientists throughout history. About the work of modern-day scientists.	• To know about famous scientists throughout history. • To know about a range of jobs and careers that use scientific knowledge and methods. To know about the work of modern day scientists. • To know about science in the news and recent discoveries. • To explore spiritual, moral, social and cultural links with Science.	Alive, dead, flexible, germinate, growth, invention, life processes, property, result, suitable, test, waterproof,