Subject: Science
Progression of Knowledge and Skills

Strand	EYFS	Year 1	Year 2
Materials		I can describe materials using my senses (smell, taste, hearing, touch, sight) I can use scientific words to describe materials (hard, soft,stretchy, stiff, shiny, dull, rough, smooth, bendy, flexible, waterproof, transparent) I can name a variety of different materials (wood, plastic, metal, glass, fabric) I can name the material objects are made from(wood, plastic, metal, glass, fabric) I can explain why a material might be used for a specific job I can sort materials into groups when given criteria (hard/soft, shiny/dull, rough/smooth, flexible/stiff) I can describe things that are similar and different between materials	I can distinguish between an object and the material from which it is made I can identify and name a range of everyday materials (wood, metal, plastic, glass, fabric, rubber, ceramics, stone, brick, wool, leather, cotton) I can describe the simple physical properties of a variety of everyday materials (absorbent, opaque, translucent, brittle, rigid, elastic) I can compare and classify a variety of materials based on their simple physical properties (absorbent, opaque, translucent, brittle, rigid, elastic) I can sort materials into groups and say why they have sorted them in that way I can say which materials are natural and which are manufactured (natural - wood, wool, leather, sand, cotton. Manufactured - metal, plastic, glass, concrete) I can explore how the shapes of solid shapes can be changed (squashing, bending, twisting, stretching)

			I can find out about people who have developed useful new materials (John Boyd Dunlop, Charles Macintosh, John McAdams) I can identify and compare the uses of a range of everyday materials (leather, fabric, wood, plastic, glass, metal)
Vocabulary		properties, hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy, flexible, waterproof, transparent, solid shapes, changed,	properties, hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy, flexible, waterproof, absorbent, opaque, transparent, solid shapes, changed, squashing, bending, twisting, stretching natural, manufactured (man-made), suitable, suitability, unsuitable, solid, particular uses, sort, group
Animals	I can name a variety of animals (animals from a variety of habitats e.g. farm, garden, jungle, desert etc) I can talk about life cycles of different animals (frog/butterfly) I can talk about changes that occur. I can talk about how animals are similar/different.	I can identify some of the differences between different animals (whale, kangaroo) I can classify common animals (birds, fish, amphibians, reptiles, mammals, invertebrates) I can describe how an animal is suited to its environment I can name parts of an animal's body (tail, head, legs, fins, ears, nose) I can classify animals by what they eat (carnivore/herbivore/omnivore)	I can sort living things to their habitats they are found in (desert, polar, rainforest, ocean) I can explain the differences between living and non-living things (living things - eat, drink, breathe, move, grow, reproduce, get rid of waste) I can describe some of the life process common to plants and animals, including humans (7 life processes movement, reproduction, sensitivity, nutrition, excretion, respiration and growth)

		I can compare the bodies of different animals (birds, fish)	I can describe how a habitat provides for the basic needs of things living there (food, water, shelter) I can describe a range of different habitats (desert, arctic, rainforest,jungle woodland, ocean, pond, grasslands, garden) I can describe how plants and animals are suited to their habitat (camel, elephant, frog, polar bear, whale/arctic plants and desert plants) I can name some characteristics of an animal that help it to live in a particular habitat I can name and describe minibeasts and their habitats (butterfly, ant, bee, beetle, ladybird, snail, woodlouse, earwig, spider, caterpillar, worm, millipede/under stones, rocks and logs, grass, under leaves, in or on soil, in fallen leaves, in tall grass and flowers, tree stump) I can construct simple food chains (grass-rabbit-fox, plankton-salmon-seal-polar bear) I can describe what animals need to survive (food, water, shelter) I can explain that animals grow and reproduce

			I can match adult animals to their offspring (lamb - sheep, calf - cow, horse - foal, cat-kitten, dog-puppy, fish - fry, kangaroo - joey, goat - kid) I can describe the life cycle of some living things(chicken, human, fish) I can explain the basic needs of animals, including humans
Vocabulary	animals, life cycle, grow, develop, changes, similarities, differences, patterns	animals, life cycle, grow, develop, changes, similarities, differences, patterns fish, reptiles, mammals, birds, amphibians, herbivore, omnivore, carnivore, environment, classify, invertebrates, compare	animals, life cycle, grow, develop, changes, similarities, differences, patterns fish, reptiles, mammals, birds, amphibians, herbivore, omnivore, carnivore, environment, classify, invertebrates, compare Living, non-living, dead, alive, never alive, habitat, microhabitat, food chain, energy, predator, prey, suitable, characteristics, life processes, movement, reproduction, sensitivity nutrition, excretion, respiration, growth, environment Offspring, adults, grow, basic needs, survival, humans, living things, water, food, air, exercise, hygiene, nutrition, balanced diet, reproduction, reproduce, life cycles

Plants	I know that a plant has different parts. I can name some parts of a plant (stem, petal, flower, roots, leaf) I can make observations of growing plants and discuss what I can see (sunflowers) I can talk about what plants need to grow (water, soil and sunlight).	I can name the petals, stem, leaf, flower and root of a plant. I can describe the parts of a plant (roots, stem, leaves, flowers, petal) I can identify and name a range of common plants and trees (fuchsia, clematis, heather, bluebell, lily, snowdrop, daisy/maple, fir tree, ash, horse chestnut, holly) I can recognise and name deciduous and evergreen trees (evergreen - fir tree, larch, holly, blue spruce/deciduous - ash, oak, lime, chestnut) I can describe how a plant changes over time (beans)	I can describe what plants need to survive (water, soil and sunlight) I can observe and describe how seeds and bulbs grow into plants I can describe what a plant needs to grow and stay healthy (cress experiment) I can explain that plants grow and reproduce in different ways (seed dispersal - wind, shakers, bursting, water, catching a ride, seeds as food, drop and roll)
Vocabulary	plant, growing, identify, observe, changes, compare, environment, similarities, differences, healthy, how, why, petal, stem, leaf, root, flower, water, sunlight, soil, nutrients	plant, growing, identify, observe, changes, compare, environment, similarities, differences, healthy, how, why, petal, stem, leaf, root, flower, water, sunlight, soil, nutrients deciduous, evergreen, leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, braches, stem, temperature, root, leaf, stem, grow, changes	plant, growing, identify, observe, changes, compare, environment, similarities, differences, healthy, how, why, petal, stem, leaf, root, flower, water, sunlight, soil, nutrients deciduous, evergreen, leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, braches, stem, temperature, root, leaf, stem, grow, changes Seed, bulb, conditions, healthy, survival, mature, water, light, temperature, grow, reproduce, environment, germination, life cycle, seed dispersal

Seasons	I can name the different seasons(Spring, Summer, Autumn, Winter) I can talk about the seasons changing around me.	I can observe changes across the four seasons (Spring, Summer, Autumn, Winter) I can observe and describe weather associated with the four seasons. I can describe how that day length varies across the four seasons.	
Vocabulary	season, weather, daylight, night, changes, Spring, Summer, Autumn Winter, moon, sun, light, dark, cloudy, sunny, windy, foggy, misty, rainy,	season, weather, daylight, night, changes, Spring, Summer, Autumn Winter, moon, sun, light, dark, cloudy, sunny, windy, foggy, misty, rainy, season, weather, length of day, daylight, night, changes, Spring, Summer, Autumn Winter, moon, sun, light, dark	
Health/Human body	I can talk about ways to keep my body healthy (healthy food, drink water, sleep, exercise - relate to healthy mind 'SMILERS')	I can name the parts of the human body that I can see (head, arms, chest, shoulders, elbow, legs, knees, ankles, thigh, foot, toes, heel, neck, stomach, bottom, shin) I can link the main parts of the human body to my senses (sight, touch, smell, taste, hearing)	I can describe why exercise, hygiene and a balanced diet are important for humans
Vocabulary	Body, healthy, fitness, exercise, balanced diet, healthy food,	Body, healthy, fitness, exercise, balanced diet, healthy food, human, body, parts, head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth, senses	Body, healthy, fitness, exercise, balanced diet, healthy food, human, body, parts, head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth, senses

			healthy, exercise, fitness, hygiene, balanced diet, Eatwell Plate, portions, carbohydrates, proteins, dairy, fatty, sugar, fruit, vegetables, nutrition, vitamins

Scientist Study		**Our world and outer space** ● Isaac Newton (scientist) – studied light and how colours in rainbow are formed, and how gravity works (lived in Lincolnshire) ● Galileo Galilei (Scientist) – first person to study the sky with a telescope – discovered Jupiter's moons, rings of Saturn **Animals, including humans** ● Mary Anning (scientist) – famous English fossil hunter – she found the first plesiosaur (swimming reptile) and an early pterosaur (flying reptile) **Scientists/Inventors who have had a huge impact on how we live today -** ● Thomas Edison – (inventor) – American – invented the first working lightbulb ● Alexander Graham Bell (inventor) – Scottish born U.S inventor – invented the telephone	**Uses of Everyday Materials** – ● John Dunlop – rubber tyres/Charles Macintosh – waterproof fabric/John McAdam – tarmac (inventors) **Living things and their habitats** ● Charles Darwin(scientist) – English naturalist – showed how animals can change over generations to form new species – process called evolution ● Jane Goodall (scientist) – famous for her studies of chimpanzees – observed their behaviour discovering that they are omnivores and can make tools **Animals, including humans** (healthy living) – ● Marie Curie – (scientist and inventor) Polish physicist – discovered radioactivity - pioneered its medical use in x-rays ● Alexander Fleming (scientist) – discovered the antibiotic penicillin Scientist, inventor, famous, discoveries

Vocabulary		Scientist, inventor, famous, discoveries	Scientist, inventor, famous, discoveries impact, influence, influential, awareness, events, achievements

Scientific Enquiry	I can talk about changes over time. I can make observations and talk about what I have seen. I can make predictions. I can explore and draw conclusions about objects that float and sink.	<u>Ask simple questions –</u> ● I can ask simple questions using How? What if? and Why? <u>Observe closely, using simple equipment –</u> ● I can make observations ● I can use simple equipment to help me make observations <u>Perform simple tests –</u> ● I can perform a simple test ● I can make simple predictions about what might happen ● I can tell others about what I have done <u>Identify and classify –</u> ● I can identify and classify things I observe ● I can think of questions, provide answers and give simple reasons for my answers ● I can talk about similarities and differences <u>Use observations and ideas to suggest answers to questions</u> ● With support, I can use observations and ideas to give a conclusion to suggest 'why'	<u>Ask simple questions</u> – ● I can ask questions, and attempt to provide simple answers/explanations using own knowledge and experience <u>Observe closely, using simple equipment</u> – ● I can make close observations and use some scientific words to describe that I have seen or measured ● I can make comparisons between by observations <u>Perform simple tests</u> – ● I can carry out a simple fair test ● I can make predictions and explain why I think this ● I can make suggestions about how we can find something out ● I can say whether things happened as I expected and if not, why? ● I can draw conclusions from what I have found out <u>Identifying and classifying</u> – ● I can organise things into groups ● I can find simple patterns or associations ● I can identify things by specific criteria e.g. have legs or not, have feathers or not

		something has happened and to answer questions <u>Gather and record data to help in answering questions</u> – ● I can gather data, with some support ● I can show my work using pictures, labels and captions ● I can put information into a chart or table ● I can use this information to answer simple questions ● I can gather data from books, and simple online sources	● With help, I can suggest more than one way of grouping and explain my reasons <u>Use observations and ideas to suggest answers to questions</u> ● I can use observations and ideas to suggest answers to questions <u>Gather and record data to help in answering questions –</u> ● I can gather data/observations, and record it using drawing, tables, charts, graphs ● I can use this information to answer questions ● I can use information from books and from online sources, to find things out
Vocabulary	Observe, changes, observations, predict, predictions, explore, conclusions, results, why?, How?, what if?, sort, grouping, record, table, diagram	Observe, changes, observations, predict, predictions, explore, conclusions, results, why?, How?, what if?, sort, grouping, record, table, diagram questions, why?, what if?, how?, observe, observing, observations, equipment, measure, measurement, identify, classify, test, fair test, record, data, explore, discover, compare, changes, patterns, relationships, predictions, conclusion, results, identify, similarities, differences,	Observe, changes, observations, predict, predictions, explore, conclusions, results, why?, How?, what if?, sort, grouping, record, table, diagram questions, why?, what if?, how?, observe, observing, observations, equipment, measure, measurement, identify, classify, test, fair test, record, data, explore, discover, compare, changes, patterns, relationships, predictions, conclusion, results, identify, similarities, differences,

		captions, charts, tables, graphs, criteria, grouping	captions, charts, tables, graphs, criteria, grouping Explanations, knowledge, experience, suggest, expected, draw conclusions, organise, grouping, explain reasons, questions, why?, what if?, how?, observe, observing, observations, equipment, measure, measurement, identify, classify, test, fair test, record, data, explore, discover, compare, comparisons, changes, patterns, relationships, predictions, conclusion, results, identify, similarities, differences, captions, charts, tables, graphs, criteria