Science Progression of Knowledge, Skills and Vocabulary

Plants

	Reception	Year 1	Year 2
Knowledge		NC Ref: Pupils should: Pupils should be taught to: ● 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.	NC Ref: Pupils should: Pupils should be taught to: ● Observe and describe how seeds and bulbs grow into mature plants ● Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.
Skills	●Make observations of plants. ●Explain why some things occur and talk about changes	●Label and describe the basic plant structure ●Name a variety of common plants including trees. ●Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.	● Identify and name a variety of plants and animals in a range of habitats and microhabitats. ● Observe and describe how seeds and bulbs grow into mature plants. ● Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.
Key Vocabulary	Plant, Seed, Grow, Flower, Leaf	Deciduous, Evergreen, Plant , Leaf/leaves Flowers, Blossom, Petals, Fruit, Roots Bulb, Seed, Trunk, Branches, Stem Trees, Stalk, Soil, Berry , Food	rockpools ks1

Science Progression of Knowledge, Skills and Vocabulary

Animals

	Reception	Year 1	Year 2
Knowledge		NC Ref: Animals Including Humans Pupils should be taught to: ● identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals ● identify and name a variety of common animals that are carnivores, herbivores and omnivores ● describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	NC Ref: Animals Including Humans Pupils should be taught to: ● notice that animals, including humans, have offspring which grow into adults find out about and describe the basic needs of animals, including humans, for survival (water, food and air) ● describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.
Skills	Make observations of animals. Explain why some things occur and talk about changes.	● Label and describe the basic structures of a variety of common animals, including fish, amphibians, reptiles, birds and mammals. ● Group and sort a variety of common animals based on the foods they eat. ● Draw and label the main parts of the human body and say which body part is associated with which sense. ● Describe, following observation, how plants and animals change over time.	● Describe the basic life cycles of some familiar animals (egg, caterpillar, pupa, butterfly; egg, chick, chicken; spawn, tadpole, froglet, frog). ● Describe how animals obtain their food from plants and other animals using the idea of a simple food chain.

Science Progression of Knowledge, Skills and Vocabulary

Key Vocabulary	Alive, Animal, Food, Unwell, Smell Touch, Hear, Taste, See, Senses	Common animals, Fish, Amphibians Reptiles, Birds, Mammals, Head, Neck Arms,Elbows, Legs, Knee, Face, Ears Eyes, Hair, Mouth, Teeth, Herbivore, Omnivore Carnivore, Wings, Beak, Feather, wild Baby, Nest, Family,Egg, Wing, Claw , Tail Beak, Fur, Feather, Fin, Scales	Exercise, Nutrition, Health, Survival Water, Food, Air, Offspring, Adult, Baby Balance, diet, Carbohydrates, Dairy Fruits and vegetables, protein, Sleep, Hygiene Elderly, Toddler, Adult, Young, Toddler, Child, Teenager, Heart rate, Balanced diet

Science Progression of Knowledge, Skills and Vocabulary

Living Things and Their Habitats

	Reception	Year 1	Year 2
Knowledge			<u>Living Things and Their Habitats</u> Pupils should be taught to: ● explore and compare the differences between things that are living, dead, and things that have never been alive ● identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other identify and name a variety of plants and animals in their habitats, including microhabitats ● describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.
Skills			● Identify and name different sources of food ● Describe how living things depend on each other as a source of food. ● Explain how animals, including humans, need water, food, air and shelter to survive. ● Identify that most living things live in habitats to which they are suited. ● Explore and compare the differences between things that are living, dead and things that have never been alive.

Science Progression of Knowledge, Skills and Vocabulary

Key Vocabulary			Living, Dead, Never lived, Energy Food chain, Predator, Prey, Woodland Pond, Desert, Micro habitat, Survival Reproduce, Environment, Surroundings Life cycle, Food chain, Food source Variety, Produce, Reproduce, Adapt/Adapted

Science Progression of Knowledge, Skills and Vocabulary

Materials

	Reception	Year 1	Year 2
Knowledge		NC Ref: <u>Everyday Materials</u> Pupils should be taught to: ● 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 the basis of their simple physical properties.	NC Ref: <u>Use of Everyday Materials</u> Pupils should be taught to: ● identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses ● find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.
Skills	● Know about similarities and differences in relation to materials and objects.	● Compare and group materials in a variety of ways, such as based on their physical properties; being natural or man-made and being recyclable or non-recyclable. ● Identify and name what an object is made from, including wood, plastic, glass, metal, water and rock. ● Investigate and describe the simple physical properties of some everyday materials, such as hard or soft; stretchy or stiff; rough or smooth; opaque or transparent; bendy or rigid; waterproof or not waterproof and magnetic or non-magnetic.	● Compare the suitability of a range of everyday materials for particular uses, including wood, metal, plastic, glass, brick, rock, paper and cardboard ● Describe how some objects and materials can be changed and how these changes can be desirable or undesirable. These ideas are explored through testing materials to see if they are appropriate for particular jobs.

Science Progression of Knowledge, Skills and Vocabulary

Key Vocabulary	Touch, Shiny, Hard, Rough	Property, Hard, Soft, Stretchy, Stiff, Shiny Dull, Rough, Smooth, Bendy, Waterproof Absorbent, Opaque, Transparent, Wood Plastic, Glass, Paper, Water, Metal, Rock	Purpose, Stretchy, stiff, Dull, Absorbent Opaque, Transparent, Brick, Fabrics Squashing, Bending, Twisting, Stretching Elastic

Science Progression of Knowledge, Skills and Vocabulary

Seasonal Changes

	Reception	Year 1	Year 2
Knowledge		NC Ref: Pupils should be taught to: ● observe changes across the four seasons. ● observe and describe weather associated with the seasons and how day length varies.	
Skills	● Talk about the features of their own immediate environment and how environments might vary from one another. ● Talk about changes.	● Compare shadows made by different objects and materials. ● Observe changes across the four seasons. ● Observe and describe different types of weather associated with the seasons. ● Investigate weather using toys, models or simple equipment.	
Key Vocabulary	Weather Seasons	Sun, Weather, Season, Spring Summer, Autumn, Winter, Day, Night, Length, Shadows, Cold, Hot, Snow, Rain, Wind, Hot, Warm	

Working Scientifically

	Reception	Year 1	Year 2

Science Progression of Knowledge, Skills and Vocabulary

Knowledge	● Finding ways to solve problems. ● Making predictions Testing their ideas. ● Developing ideas of grouping, sequences, cause and effect. ● Planning, making decisions about how to approach a task, solve a problem and reach a goal. ● Checking how well their activities are going. ● Changing strategy as needed. ● Reviewing how well the approach worked.	● 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. ● 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 Identifying and classifying. ● Using their observations and ideas to suggest answers to questions. ● Gathering and recording data to help in answering questions.
Vocabulary	Science, Experiment, Fair, Find out, Explain Reason, Why, Change	Question, Answer, Test, Compare, Observe Group, Measure, Record, Results, Equipment Identify, Classify, Data	Question, Answer, Test, Compare, Observe Group, Measure, Record, Results, Equipment Identify, Classify, Data, Gather, Collect, Notice