Knowledge and Skills Progression for Science and Working Scientifically

Plants	Seasons	Living things and their habitats	Animals incl humans	Materials

Biology	Chemistry	Physics

Working Scientifically Skills	EYFS	Year 1	Year 2
Asking simple questions and recognising that they can be answered in different ways	Respond to what they hear with relevant questions, comments during whole class discussions and small group interactions. Ask questions to clarify their understanding. Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduce vocabulary They talk about the features of their own immediate environment and how environments might vary from one another. Physics	Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) Biology Describe the simple physical properties of a variety of everyday materials. Physics	While exploring the world, the children develop their ability to ask questions (such as what something is, how things are similar and different, the ways things work, which alternative is better, how things change and how they happen). Where appropriate, they answer these questions. • The children answer questions developed with the teacher often through a scenario. • The children are involved in planning how to use resources provided to answer the questions using different types of enquiry, helping them to recognise that there are different ways in which questions can be answered. 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. Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. Biology

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Observing closely, using simple equipment	Use a range of small tools, *mark making for tallies, large hand held magnifiers and bug pots. Cloches and animal habitats – bug house/ wormery/pond nets* Explore the natural world around them, making observations and drawing pictures of animals and plants. Biology	Observe changes across the four seasons. Chemistry Observe and describe weather associated with the seasons and how day length varies. Physics Describe the simple physical properties of a variety of everyday materials. Physics	Children explore the world around them. They make careful observations to support identification, comparison and noticing change. They use appropriate senses, aided by equipment such as magnifying glasses or digital microscopes, to make their observations. • They begin to take measurements, initially by comparisons, then using non-standard units. Observe and describe how seeds and bulbs grow into mature plants. Biology Chemistry
Performing simple tests	Understand some important processes and changes in the natural world around them, including the seasons and the changing states of matter. Chemistry	Compare and group together a variety of everyday materials on the basis of their simple physical properties Physics	The children use practical resources provided to gather evidence to answer questions generated by themselves or the teacher. They carry out: tests to classify; comparative tests; pattern seeking enquiries; and make observations over time. 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. Biology Chemistry 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

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			changed by squashing, bending, twisting and stretching.Physics
Identifying and classifying	Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class Children know about similarities and differences in relation to places, objects, materials and living things Biology Physics	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. Biology Chemistry 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.Biology 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.Chemistry Physics	Children use their observations and testing to compare objects, materials and living things. They sort and group these things, identifying their own criteria for sorting. • They use simple secondary sources (such as identification sheets) to name living things. They describe the characteristics they used to identify a living thing. Explore and compare the differences between things that are living, dead, and things that have never been alive. Identify and name a variety of plants and animals in their habitats, including microhabitats. Notice that animals, including humans, have offspring which grow into adults. Biology
Gathering and recording data to help in answering questions	Comparison of objects – using appropriate ARE vocabulary Draw pictures of plants and animals Biology	Identify and describe the basic structure of a variety of common flowering plants, including trees. Biology Compare and group together a variety of everyday materials on the basis of their simple physical properties. Chemistry Physics	The children record their observations e.g. using photographs, videos, drawings, labelled diagrams or in writing. • They record their measurements e.g. using prepared tables, pictograms, tally charts and block graphs. • They classify using simple prepared tables and sorting rings. Describe how animals obtain their food from plants and other animals, using the

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			idea of a simple food chain, and identify and name different sources of food.Biol Biology
Using their observations and ideas to suggest answers to questions	Have an understanding of cardinality of number. Recognise when one quantity is greater than, less than (fewer)or the same as the other quantity. Use words of comparative measure. They make observations of animals and plants and explain why some things occur and talk about changes. Biology	Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. Biology Describe the simple physical properties of a variety of everyday materials. Physics	Children use their experiences of the world around them to suggest appropriate answers to questions. They are supported to relate these to their evidence e.g. observations they have made, measurements they have taken or information they have gained from secondary sources. The children recognise 'biggest and smallest', 'best and worst' etc. from their data. 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. 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. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)

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			Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. Biology