Science Progression in Skills

Key subject areas	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Working Scientifically							
Observing Closely		Observe objects, materials and living things and describe what they see.	Observe something closely and describe changes over time.	Make decisions about what to observe during an investigation. careful observations.	Make systematic and careful observations.	Plan and carry out comparative and fair tests, making systematic and careful observations.	Make their own decisions about which observations to make, using test results and observations to make predictions or set up further comparative or fair tests
Performing Tests		Follow instructions to complete a simple test individually or in a group.	Do things in the correct order when performing a simple test and begin to recognise when something is unfair.	Discuss enquiry methods and describe a fair test.	Make decisions about different enquiries, including recognising when a fair test is necessary and begin to identify variables.	Plan a range of science enquiries, including comparative and fair tests.	Select and plan the most suitable line of enquiry, explaining which variables need to be controlled and why, in a variety of comparative and fair tests.
Identify and Classify		ort and group objects, materials and living things, with help, according to simple observational features.	Decide, with help, how to group materials, living things and objects, noticing changes over time and beginning to see patterns.	Talk about criteria for grouping, sorting and categorising, beginning to see patterns and relationships.	Identify similarities/differences/changes when talking about scientific processes. Use and begin to create simple keys.	Use and develop keys to identify, classify and describe living things and materials.	Identify and explain patterns seen in the natural environment.
Recording Findings		Begin to record simple data. Talk about their findings and explain what they have found out.	Gather data, record and talk about their findings, in a range of ways, using simple scientific vocabulary.	Record their findings using scientific language and present in note form, writing frames, diagrams, tables and charts.	Choose appropriate ways to record and present information, findings and conclusions for different audiences (e.g. displays, oral	Record data and results of increasing complexity using scientific diagrams, labels, classification keys, tables, bar and	Choose the most effective approach to record and report results, linking to mathematical knowledge.

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					or written explanations).	line graphs and models.	
Ask Questions		se everyday language/begin to use simple scientific words to ask or answer a scientific question.	Suggest ideas, ask simple questions and know that they can be answered/investigated in different ways including simple secondary sources, such as books and video clips	Use ideas to pose questions, independently, about the world around them.	Suggest relevant questions and know that they could be answered in a variety of ways, including using secondary sources such as ICT. Answer questions using straight forward scientific evidence.	Raise different types of scientific questions, and hypotheses.	Pose/select the most appropriate line of enquiry to investigate scientific questions.
Plants	Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes	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.	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. · Identify and name a variety of plants and animals in their habitats, including microhabitats. (Y2 - Living things and their habitats)	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. · Explore 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. · Investigate the way in which water is transported within plants. · Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.			

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Living things and their habitats	Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes		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 a		Recognise that living things can be grouped in a variety of ways. · Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. · Recognise that environments can change and that this can sometimes pose dangers to living things.	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	Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. · Give reasons for classifying plants and animals based on specific characteristics
Animals Including Humans	Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments	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	· 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	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	Describe the simple functions of the basic parts of the digestive system in humans. · Identify the different types of teeth in humans and their simple functions. · Construct and interpret a variety of food chains, identifying	Describe the changes as humans develop to old age	Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. · Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. · Describe the ways in which nutrients and

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	might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes.	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.	amounts of different types of food, and hygiene.	support, protection and movement	producers, predators and prey.		water are transported within animals, including humans
Evolution and Inheritance	Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes.						Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. · Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. · Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution

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Seasonal Change	Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes.	Observe changes across the four seasons. · Observe and describe weather associated with the seasons and how day length varies.					
Materials	Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments	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.	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		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).	Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. · Know that some materials will dissolve in liquid to form a solution, and describe	

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	might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes	· Compare and group together a variety of everyday materials on the basis of their simple physical properties.	squashing, bending, twisting and stretching		· Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature	how to recover a substance from a solution. · Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. · Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. · Demonstrate that dissolving, mixing and changes of state are reversible changes. · Explain that some changes result in the formation of new materials, an	
Rocks	Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and			Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. · Describe in simple terms how fossils are formed when things that have lived are trapped within rock.			

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	how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes			· Recognise that soils are made from rocks and organic matter			
Light	Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes.			ecognise that they need light in order to see things and that dark is the absence of light. · Notice that light is reflected from surfaces. · Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. · Recognise that shadows are formed when the light from a light source is blocked by an opaque object. · Find patterns in the way that the size of shadows change.			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 idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them

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Forces	Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes.			Compare how things move on different surfaces. · Notice that some forces need contact between two objects, but magnetic forces can act at a distance. · Observe how magnets attract or repel each other and attract some materials and not others. · 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 each other, depending on which poles are facing			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
Sound	Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their				Identify how sounds are made, associating some of them with something vibrating. · Recognise that vibrations from sounds travel through a medium to the ear.		

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	own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes.				· Find patterns between the pitch of a sound and features of the object that produced it. · Find patterns between the volume of a sound and the strength of the vibrations that produced it. · Recognise that sounds get fainter as the distance from the sound source increases		
Electricity	Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain				Identify common appliances that run on electricity. · Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. · Identify 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. · Recognise that a switch opens and closes a circuit and associate this with		Identify common appliances that run on electricity. · Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. · Identify 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. · Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp

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	why some things occur and talk about changes.				whether or not a lamp lights in a simple series circuit. · Recognise some common conductors and insulators, and associate metals with being good conductors.		lights in a simple series circuit. · Recognise some common conductors and insulators, and associate metals with being good conductors.
Earth and Space	Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes.					Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. · Describe the movement of the Moon relative to the Earth. · Describe the Sun, Earth and Moon as approximately spherical bodies. · Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky	