



Aston-on-Trent Primary School Science Progression Map



Working Scientifically						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Answer ‘how’ and ‘why’ questions about my experiences and in response to stories or events.	I can ask simple scientific questions and recognise that they can be answered in different ways.		I can ask relevant scientific questions.		I can plan different types of scientific enquiry to answer questions.	
Make observations of animals and plants and explain why some things occur, and talk about changes.	I can use simple equipment to make observations.		I can use observations and knowledge to answer scientific questions.		I can recognise and control variables where necessary.	
	I can carry out simple tests.		I can set up a simple practical enquiry to explore a scientific question.		I can measure accurately and precisely using a range of equipment, taking repeat readings when appropriate.	
	I can identify and classify things.		I can set up a test to compare two things.		I can record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.	
	I can use observations to suggest answers to questions.		I can set up a fair test and explain why it is fair.		I can use the outcome of test results to make predictions and set up a further comparative fair test.	
I can talk about the features of my own immediate environment and how environments might vary from one another.	I can gather and record simple data to answer questions		I can make careful and accurate observations, including the use of standard units.		I can report findings from enquiries in a range of ways.	
			I can use equipment, including thermometers and data loggers to make measurements.		I can explain the conclusion from an enquiry.	
			I can gather, record, classify and present data in different ways to answer scientific questions.		I can explain causal relationships in an enquiry.	
I know about similarities and differences in relation to places, objects, materials and living things.			I can use diagrams, keys, bar charts and tables, using scientific language.			

		I can use findings to report in different ways, including oral and written explanations, presentation. I can use results to make simple conclusions and suggest improvements. I can make a prediction with a reason. I can identify differences, similarities and changes related to an enquiry.	I can relate the outcome from an enquiry to scientific knowledge to state whether evidence supports or refutes an argument or theory. I can read, spell and pronounce scientific vocabulary accurately.
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Plants

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
I can make observations of animals and plants and explain why some things occur, and talk about changes. I know about similarities and differences in relation to places, objects, materials and living things.	I can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. I can identify and describe the basic structure of a variety of common flowering plants and trees.	I can observe and describe how seeds and bulbs grow into plants. I can describe what plants need in order to grow and stay healthy (water, light & suitable temperature).	I can identify and describe the function of different parts of flowering plants and trees. I can explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) I can explore and describe how water is transported within plants.		I can explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. I can describe the process of reproduction in some plants.	

Animals- including Humans						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
I can make observations of animals and plants and explain why some things occur and talk about changes. I know about similarities and differences in relation to places, objects, materials and living things.	I can name a variety of common animals including fish, amphibians, reptiles, birds, and mammals. I can identify and name animals by what they eat (carnivore, herbivore, and omnivore). I can sort animals into categories (including fish, amphibians, reptiles, birds, and mammals). I can name the parts of the human body that I can see. I can link the correct part of the human body to each sense.	I can notice that animals, including humans, have offspring that grow into adults. I can find out and describe the basic needs of animals, including humans, for survival (water, food and air). I can describe the importance for humans to exercise, eat the right diet and for hygiene.	I can identify that animal. Including humans, need the right types and amount of nutrition, and they cannot make their own food; they get nutrition from what they eat. I can describe and explain the skeletal system of a human. I can describe and explain the muscular system of a human. I can describe the purpose of the skeleton in humans and animals.	I can identify and name the parts of the human digestive system. I can describe the functions of the organs in the human digestive system. I can identify and describe the different types of teeth in humans. I can describe the functions of different human teeth. I can use food chains to identify producers, predators, and prey. I can construct food chains to identify	I can create a timeline to indicate stages of growth in humans. I can describe the changes to humans as they develop to old age	I can identify and name the main parts of the human circulatory system. I can describe the function of the heart, blood vessels and blood. I can discuss the impact of diet, exercise, drugs and lifestyle on health. I can describe the ways in which nutrients and water are transported in animals, including humans.

				producers, predators, and prey.		
Living Things and their Habitats & Evolution and Inheritance						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
I can talk about the features of my own immediate environment and how environments might vary from one another.		I can identify things that are living, dead and never lived. I can describe how a specific habitat provides for the basic needs of things living there (plants and animals). I can identify and name plants and animals in a range of habitats. I can match living things to their habitat. I can describe how animals find their food.		I can group living things in different ways. I can use classification keys to group, identify and name living things. I can create classification keys to group, identify and name living things. I can describe how changes to an environment could endanger living things.	I can describe the process of reproduction in some plants	I can classify living things into broad groups according to observable characteristics and based on similarities & differences, including micro-organisms, plants and animals. <u>Evolution & inheritance</u> I recognise that living things have changed over time and that fossils provide information about living things that inhabited the earth millions of years ago.

		I can name some different sources of food for animals. I can explain a simple food chain.				I recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. To identify how animals and plants are adapted to suit their environment in different ways and that adaptations may lead to evolution.
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Materials						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
I know about similarities and differences in relation to places, objects, materials and living things.	I can distinguish between an object and the material it is made from. I can explain the materials that an object is made from. I can name wood, plastic, glass, metal, water, and rock. I can describe the properties of everyday materials. I can group objects based on the materials they are made from.	I can identify and name a range of materials, including wood, metal, plastic, glass, brick, rock, paper, and cardboard. I can suggest why a material might or might not be used for a specific job. I can explore how shapes can be changed by squashing, bending, twisting, and stretching.	<u>Rocks</u> I can compare and group rocks based on their appearance and physical properties, giving a reason. I can describe how fossils are formed. I can describe how soil is made. I can describe and explain the difference between sedimentary and igneous rock	<u>States of matter</u> I can group materials based on their state of matter (solid, liquid, gas). I can describe how some materials can change their state. I can explore how materials change state. I can measure the temperature at which materials change state. I can describe the water cycle. I can explain the part played by evaporation and	I can compare and group materials based on their properties (e.g., hardness, solubility, transparency, conductivity, [electrical & thermal], and response to magnets). I can describe how a material dissolves to form a solution, explaining the process of dissolving. I can describe and show how to recover a substance from a solution. I can describe how some materials can be separated. I can demonstrate how materials can be separated (e.g., through filtering, sieving and evaporating).	

				condensation in the water cycle.	I know and can demonstrate that some changes are reversible, and some are not. I can explain how some changes result in the formation of a new material and that this is usually irreversible. I can discuss reversible and irreversible changes. I can give evidenced reasons why materials should be used for specific purposes.	
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Light and Sound						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Light and Dark	<u>Seasonal changes</u> I can observe and describe weather associated with the seasons and how day length varies.		<u>Light</u> I can describe what dark is (the absence of light).	<u>Sound</u> I can describe how sound is made.	<u>Earth and space</u> I can describe and explain the movement of the Earth and other planets relative to the Sun.	<u>Light</u> I can explain how light travels. I can explain and demonstrate how we see objects.

	I can observe changes across the four seasons		I can explain that light is needed in order to see. I can explain that light is reflected from a surface. I can explain and demonstrate how a shadow is formed. I can explore shadow size and explain. I can explain the danger of direct sunlight and describe how to keep protected	I can explain how sound travels from a source to our ears. I can explain the place of vibration in hearing. I can explore the correlation between pitch and the object producing a sound. I can explore the correlation between the volume of a sound and the strength of the vibrations that produced it. I can describe what happens to a sound as it travels away from its source.	I can describe and explain the movement of the Moon relative to the Earth. I can explain and demonstrate how night and day are created. I can describe the Sun, Earth and Moon (using the term spherical).	I can explain why shadows have the same shape as the object that casts them. I can explain how simple optical instruments work, e.g. periscope, telescope, binoculars, mirror, magnifying glass etc. I can refer to the work of Einstein.
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Forces, Magnets and Electricity						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

			<u>Forces and magnets</u> I can explore and describe how objects move on different surfaces. I can explain how some forces require contact and some do not, giving examples. I can explore and explain how objects attract and repel in relation to objects and other magnets. I can predict whether objects will be magnetic and carry out an enquiry to test this out. I can describe how magnets work. I can predict whether magnets will attract or repel and give a reason.	<u>Electricity</u> I can identify and name appliances that require electricity to function. I can construct a series circuit. I can identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers). I can draw a circuit diagram. I can predict and test whether a lamp will light within a circuit. I can describe the function of a switch in a circuit. I can describe the difference between a conductor and	<u>Forces</u> I can explain what gravity is and its impact on our lives. I can identify and explain the effect of air resistance. I can identify and explain the effect of water resistance. I can identify and explain the effect of friction. I can explain how levers, pulleys and gears allow a smaller force to have a greater effect.	<u>Electricity</u> I can explain how the number and voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer. I can compare and give reasons for why components work and do not work in a circuit. I can draw circuit diagrams using the correct symbols.
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				insulators; giving examples of each.		
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Sustainability in Science						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		I can identify and classify by sorting litter into recycling groups based on their materials. Suggest ways that waste can be reduced, reused and recycled. Consider how to persuade people to use less energy. Investigate how much water can be saved by turning off the tap whilst washing hands and cleaning teeth.		.		I can explain what climate change is and understand the causes and effects of climate change and how these effects can impact humans and the natural world. I can suggest ways in which humans can help prevent climate change. I can explain what biodiversity is and can identify the level biodiversity in my local area. I can suggest ways in

						which we can improve the biodiversity in our local area and make links to how this can impact climate change. I can explain the difference between renewable and non-renewable energy sources. I can suggest ways in which we can save energy in our homes and school.
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