

Science Curriculum Progression

Science – EYFS (3 and 4 year olds)

Science – EYFS (3 and 4 year olds)	
Communication and Language	Key Vocab
Understand 'why' questions, like: "Why do you think the caterpillar got so fat?"	
Personal, Social and Emotional Development	
Make healthy choices about food, drink, activity and toothbrushing.	
Understanding the World	
Use all their senses in hands-on exploration of natural materials.	
Explore collections of materials with similar and/or different properties.	
Talk about what they see, using a wide vocabulary.	
Begin to make sense of their own life-story and family's history.	
Explore how things work.	
Plant seeds and care for growing plants.	
Understand the key features of the life cycle of a plant and an animal.	
Begin to understand the need to respect and care for the natural environment and all living things.	
Explore and talk about different forces they can feel.	
Talk about the differences between materials and changes they notice.	

Science – EYFS (Reception)

Science – EYFS (Reception)	
Communication and Language	Key Vocab
Learn new vocabulary.	
Ask questions to find out more and to check what has been said to them.	
Articulate their ideas and thoughts in well-formed sentences.	
Describe events in some detail.	
Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.	
Use new vocabulary in different contexts.	
Personal, Social and Emotional Development	
Know and talk about the different factors that support their overall health and wellbeing: regular physical activity, healthy eating, toothbrushing, sensible amounts of 'screen time', having a good sleep routine, being a safe pedestrian	
Understanding the World	
Explore the natural world around them.	
Describe what they see, hear and feel while they are outside.	
Recognise some environments that are different to the one in which they live.	
Understand the effect of changing seasons on the natural world around them.	

Science – EYFS (ELG)

Science – EYFS (ELG)	
Communication and Language - Listening, Attention and Understanding	Key Vocab
Make comments about what they have heard and ask questions to clarify their understanding.	
Personal, Social and Emotional Development – Managing Self	
Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.	
Understanding the World – The Natural World	
Explore the natural world around them, making observations and drawing pictures of animals and plants.	
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.	
Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	

Science - Y1

Working Scientifically	Key Vocab
Ask simple questions and recognise they can be answered in different ways	
Observe closely and describe observations (e.g properties of materials – “it looks rough”)	
Perform simple tests suggested by an adult	
Group/sort objects into given properties	
Gather and record data to help in answering questions.	
To Understand Plants	
To identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.	leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, deciduous, evergreen names of trees in local area – oak, birch, sycamore, fir... names of garden and wild flowering plants in the local area – daisy, dandelion, buttercup, poppy, rose...
To identify and describe the basic structure of a variety of common flowering plants, including trees.	
Understanding animals and humans	
Identify and name a variety of common animals including birds, amphibians, fish, reptiles, and mammals	features - head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves parts of body – knee, ankle, shoulder, elbow... names of animals experienced first-hand from each vertebrate group birds, fish, (reptiles, mammals, amphibians) senses, touch, see, smell, taste, hear, fingers, skin, eyes, nose, ear, tongue herbivore, omnivore, carnivore
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.	
To Investigate Living Things	
Identify and name a variety of plants and animals in their habitats, including micro-habitats (log pile etc) (Taken from Year 2)	Need to get local habitat specific vocab.
To Investigate Materials	
Distinguish between an object and the material from which it is made	object, material, wood, plastic, glass, metal water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, properties - hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through
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	
Seasonal Changes	
Observe changes across the four seasons	weather - sunny, rainy, windy, snowy etc... seasons – winter, summer, spring, autumn sun, sunrise, sunset, day length, hours, minibeasts, seeds, plants, leaves, clothes
Name the four seasons in the correct order	
Observe and describe weather across the four seasons	
Observe and describe variation in day length	
To Investigate Sound and Hearing	
Observe and name a variety of sources of sound, noticing that we hear with our ears	sound, ear, vibration
To Understand Light and Seeing	
Observe and name a variety of sources of light, including electric lights, flames and the Sun, explaining that we see things because light travels from them to our eyes	light source – sun, candle, lightbulb travel, shadows, blocked
Recognise that shadows are formed when the light from a light source is blocked by a solid object (taken from Y3)	
To Understand Movements, Forces and Magnets	
Notice and describe how things move, using simple comparisons such as faster and slower	push, pull, move, slow down, speed up, ramp, force, magnet, faster, slower, spin
Compare how different things move	

Science – Y2

Working Scientifically	Key Vocab
Ask simple questions and recognise they can be answered in different ways	
Observe closely using simple equipment, such as magnifying glasses.	
Perform simple tests	
Identify and classify objects	
Understand what a fair test is.	
Use observation and ideas to suggest answers to questions	
To Understand Plants	
Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	seeds, bulbs, germinate, seedlings, plants, flowers, seeds, berries, fruits, suited, space
Observe and describe how seeds and bulbs grow into mature plants.	light, shade, sun, warm, cool, water, grow, healthy
Understanding animals and humans	
Notice that animals, including humans, have offspring which grow into adults.	offspring, reproduction, growth, child, young/old stages (e.g. chick/hen, baby/child/adult, caterpillar/butterfly), exercise, heartbeat, breathing, hygiene, germs, disease, food types (e.g. meat, fish, vegetables, bread, rice, pasta), healthy, survive,
Find out about and describe the basic needs of animals, including humans, for survival (food, water and air).	
Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene	
To Investigate Living Things and their habitat	
Explore and compare the differences between things that are living, dead, and things that have never been alive.	living – plants, seeds, animals dead - fossils, twigs, shells, fur, hair, leaves, feathers...
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.	never been alive – rock, metal, plastic habitats – pond, woodland, coast... micro-habitats – under logs, in bushes, rock pools...
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.	suited, suitable, basic needs, food, food chain, shelter, move, feed Need to get vocab specific to habitats that are being covered. Scientist - Mary Anning
To Understand Evolution and Inheritance	
Identify how humans resemble their parents in many features.	
To Investigate Materials	
Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	materials – wood, metal, plastic, glass, brick, rock, paper, cardboard (reviewed from Y1) properties – Y1 words + opaque, transparent, translucent, reflective, non-reflective, flexible, rigid.
Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick/rock, and paper/cardboard for particular uses	shape, pushing, pulling, twisting, squashing, bending, stretching suitability, use
<i>To be able to investigate and describe materials as transparent, translucent, or opaque.</i>	
To Understand Movements, Forces and Magnets	
Notice and describe how things move, using simple comparisons such as faster and slower	push, pull, move, slow down, speed up, ramp, force, magnet, faster, slower, spin
Compare how different things move	
To Understand Light and Seeing	

<i>Observe and name a variety of sources of light, including electric lights, flames and the Sun, explaining that we see things because light travels from them to our eyes</i>	light source – sun, candle, lightbulb travel, shadows, blocked
Recognise that shadows are formed when the light from a light source is blocked by a solid object (taken from Y3)	

Science – Y3 & Y4

Working Scientifically	Key Vocab
Ask relevant questions	
Set up simple, practical enquiries and comparative and fair tests	
Make accurate measurements using familiar equipment	
Gather, record, classify and present data in a variety of ways to help in answering questions	
Use results to draw simple conclusions and suggest improvements	
Identify differences, similarities or changes related to simple, scientific ideas and processes	
Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables	
Set up practical enquiries and comparative and fair tests using terms dependent and independent variable	
Make accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers	
Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	
Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests	
Use straightforward, scientific evidence to answer questions or to support their findings	
To Understand Plants	
Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers.	photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal (wind, animal, water dispersal), life cycle function roots, absorb, nutrients, anchor stem – transport sunlight, produce food flowers, reproduction pollen, male germination, growth
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 role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	
To Investigate Living Things	
Recognise that living things can be grouped in a variety of ways	
Explore and use classification keys	
Recognise that environments can change and that this can sometimes pose dangers to specific habitats	
To Understand Evolution and Inheritance	
<i>Identify how plants and animals, including humans, resemble their parents in many features</i>	
<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>	
To Understand Animals and Humans	
To understand animals, and humans, need the right types and amounts of nutrition and that they cannot make their own food.	nutrition, nutrients, balanced diet, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine
Identify that humans and some animals have skeletons and muscles for support, protection and movement	
Construct and interpret food chains, identifying producers, predators and prey.	
To understand and describe the digestive system in humans	
Identify the different types of teeth in humans and their simple functions	
To Understand Movement, Forces and Magnets	
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	
To Investigate Materials (Rocks and Soils)	
Compare and group together different kinds of rocks on the basis of their simple,	rock, stone, pebble, boulder, grain, crystals, layers,

physical properties	properties - hard, soft, texture, permeable/impermeable, rough, smooth, brittle soil – sandy/chalk/clay – ground down rock, plant/animal material (organic matter), peat. fossil – seabed, dissolving, minerals rock formation – igneous (granite), sedimentary (sandstone, chalk, clay), metamorphic (marble)
Relate the simple physical properties of some rocks to their formation (igneous or sedimentary)	
Describe how fossils are formed when things that have lived are trapped within sedimentary rock	
Recognise that soils are made from rocks and organic matter	
To Investigate Materials (States of Matter)	
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 the temperature at which this happens in degrees Celsius (°C), building on their teaching in mathematics	
Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature	
To Understand Light and Seeing	
Recognise that they need light in order to see things and that dark is the absence of light	light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, reflective, mirror, sunlight, dangerous, sunglasses
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 a solid object (covered in KSI)	
Find patterns in the way that the size of shadows change	
To Investigate Sound and Hearing	
Identify how sounds are made, associating some of them with something vibrating	
Recognise that vibrations from sounds travel through a medium to the ear.	
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	
To Understand Electrical Circuits	
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 lights in a simple series circuit.	
Recognise some common conductors and insulators, and associate metals with being good conductors	

Science – Y5 & Y6	
Working Scientifically	Key Vocab
Plan enquiries, including recognising and controlling variables where necessary	
Use appropriate techniques, apparatus, and materials in investigations.	
Take measurements, using a range of scientific equipment, with increasing accuracy and precision.	
Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar graphs.	
Present findings in written form, displays and other presentations	
Use test results to make predictions to set up further comparative and fair tests	
Report findings from enquiries, including oral and written explanations of results.	
Use appropriate techniques, apparatus, and materials in investigations	
Record data and results of increasing complexity choosing the appropriate presentation technique.	
Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions	
Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments	
To Understand animals and Humans	
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 importance of diet, exercise, drugs and lifestyle on the way the human body functions.	
Describe the ways in which nutrients and water are transported within animals, including humans.	
To Investigate 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	
Give reasons for classifying plants and animals based on specific characteristics	
To Investigate Materials	
Compare and group together everyday materials based on testing of their properties	
Understand how some materials will dissolve in liquid to form a solution and describe 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, and that this kind of change is not usually reversible, including changes associated with burning, oxidation and the action of acid on bicarbonate of soda	
To Understand Movement, Forces and Magnets	
Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.	
Identify the effect of drag forces, such as air resistance, water resistance and friction that act between moving surfaces.	

Describe, in terms of drag forces, why moving objects that are not driven tend to slow down	
Understand that force and motion can be transferred through mechanical devices such as gears, pulleys, levers and springs	
Understand that some mechanisms including levers, pulleys and gears, allow a smaller force to have a greater effect	
To Understand the Earth's Movement in Space	
Describe the movement of the Earth relative to the Sun in the solar system	
Describe the movement of the Moon relative to the Earth	
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	
To Understand Evolution and Inheritance	
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	
To Understand Light and Seeing	
Understand 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 eyes	
Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them, and to predict the size of shadows when the position of the light source changes	
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	
To understand electrical circuits	
Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit	
Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches	
Use recognised symbols when representing a simple circuit in a diagram	