

Progression of Skills: Years 1 and 2

In Years 1 and 2, the children can...

Years 1 and 2 – Programme of Study:

Plants (Y1)

Key Vocabulary:

Deciduous, wild, garden, evergreen trees, leaf, leaves, flowers (blossom), petals, fruit, roots, bulb, bud, seed, trunk, branches, stem, vegetables

Plants (Y2)

Key Vocabulary:

Seeds, bulbs, water, light, temperature, growth, wild, garden, deciduous, evergreen, seed, germination, reproduction, mature, healthy

Animals including humans (Y1)

Key Vocabulary:

Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, support, protect, move, skull, ribs, spine, muscles, joints, Fish, Reptiles, Mammals, Birds, Amphibians (+ examples of each) Herbivore, Omnivore, Carnivore, Leg, Arm, Elbow, Head, Ear, Nose, Back, Wings, Beak, neck, knees, face, eyes, hair, mouth, teeth

Animals including humans (Y2)

Key Vocabulary:

Survival, water, air, food, adult, baby, offspring, kitten, calf, puppy, exercise, hygiene, grow, nutrition,

Materials (Y1)

Key Vocabulary:

Wood, plastic, glass, paper, water, metal, rock, hard, soft, bendy, rough, smooth

Materials (Y2)

Key Vocabulary:

Hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy, waterproof, absorbent, opaque, transparent brick, paper, fabrics, squashing, bending, twisting, stretching elastic, foil

Seasonal Changes (Y1)

Key Vocabulary:

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Summer, Spring, Autumn, Winter, Sun, Day, Moon, Night, Light, Dark

Living things and their habitats (Y2)

Key Vocabulary:

Living, alive, dead, never alive, habitat, energy, food chain, predator, prey, woodland, pond, desert

Working Scientifically

Asking questions:

- ask simple questions and recognise that they can be answered in different ways

Measuring and recording:

- observe closely, using simple equipment
- perform simple tests
- gather and record data to help in answering questions

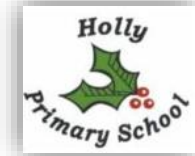
Concluding:

- identify and classify
- use their observations and ideas to suggest answers to questions

Evaluating:

Vocabulary:

Question, answer, observe, observing, equipment, identify, classify, sort, group, record, diagram, chart, map, data, compare, contrast, describe, biology, chemistry, physics



Progression of Skills: Years 3 and 4

In Years 3 and 4, the children can...

Years 3 and 4 – Programme of Study:

Plants (Y3)

Key Vocabulary:

Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal, wind dispersal, animal dispersal, water dispersal, nutrients, air, light, soil, room to grow, water

Animals including humans (Y3)

Key Vocabulary:

Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, support, protection, bones, muscles, support, protect, move, skull, brain, ribs, heart, lungs, spine, muscles, joints, movement, pull, contract, relax, diet

Animals including humans (Y4)

Key Vocabulary:

Human digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine (absorbs water), nutrients, large intestine (compacts), rectum, anus, teeth, incisor, canine, molar, premolar, herbivore, carnivore, omnivore, producer, predator, prey, food chain, transports, acids, enzymes, vitamins

Materials (Y3)

Key Vocabulary:

Rocks, stones, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb water, soil, fossil, marble, chalk, granite, sandstone, slate, soil, peat, sandy/chalk/clay soil.

Materials (Y4)

Key Vocabulary:

Solid, liquid, gas, state change, melting, freezing, melting point, boiling point, evaporate, evaporation, temperature, water cycle, condense, condensation, container, heat, heated, cool, cooled, degrees Celcius, thermometer

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Living things and their habitats (Y4)

Key Vocabulary:

Classification, classification key, environment, habitat, human impact, positive, negative, migration, hibernate.

Light (Y3)

Key Vocabulary:

Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous.

Forces (Y3)

Key Vocabulary:

Force, pull, push, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic, material, metal, iron, steel, poles, north pole, south pole

Sound (Y4)

Key Vocabulary:

Sound, source, vibrate, vibrations, travel, pitch (high, low), volume, faint, loud, insulation

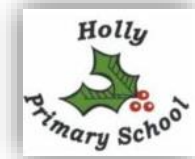
Electricity (Y4)

Key Vocabulary:

Electricity, electrical appliance/device, plug, mains, electrical circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol

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Science Progression map

<u>Working Scientifically</u>	
<u>Asking questions:</u> <ul style="list-style-type: none">• ask relevant questions and use different types of scientific enquiries to answer them• set up simple practical enquiries, comparative and fair tests	<u>Measuring and recording:</u> <ul style="list-style-type: none">• make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers• record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables• gather, record, classify and present data in a variety of ways to help in answering questions
<u>Concluding:</u> <ul style="list-style-type: none">• identify differences, similarities or changes related to simple scientific ideas and processes• report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions• use straightforward scientific evidence to answer questions or to support their findings	<u>Evaluating:</u> <ul style="list-style-type: none">• use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
<u>Vocabulary:</u> AS KS1 research, relevant questions, scientific enquiry, comparative and fair test, systematic, careful observations, accurate measurements, equipment, thermometer, data, gather, record, classify, present, drawings, labelled diagrams, keys, bar charts, tables, oral and written explanations, prediction, conclusion, differences, similarities, changes, evidence, improve, secondary sources, guides, keys, construct, interpret	



Progression of Skills: Years 5 and 6

In Year 5 and 6, the children can...

Years 5 and 6 – Programme of Study:

Animals including humans (Y5)

Key Vocabulary:

Foetus, embryo, womb, gestation, length, mass, baby, toddler, child, teenager, elderly, grow, growth, growing, human development, puberty

Animals including humans (Y6)

Key Vocabulary:

Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, oxygenated, deoxygenated, muscles, muscular, cycle, circulatory system, diet, exercise, drugs, alcohol, substance, lifestyle, liver, kidney, brain, skeleton, skeletal, impact, lifestyle, cells, red/white blood cells, plasma, platelets, artery, vein, capillary

Materials (Y5)

Key Vocabulary:

Thermal/electrical insulator/conductor, change of state, solid, liquid, gas, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/irreversible change, burning, rusting, melting, new material, hardness, solubility, transparency, response to magnets, separate, separating, filtering, sieving, evaporating

Living things and their habitats (Y5)

Key Vocabulary:

Life cycle, reproduce, sexual, sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runners, bulbs, cuttings.

Living things and their habitats (Y6)

Key Vocabulary:

Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering and non-flowering.

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Light (Y6)

Key Vocabulary:

Straight lines, light rays, light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous

Forces (Y5)

Key Vocabulary:

Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears

Electricity (Y6)

Key Vocabulary:

Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage, series circuit. electricity

Earth and Space (Y5)

Key Vocabulary:

Earth, Sun, Moon, Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune, spherical, solar system, rotates, star, orbit, planets

Evolution and Inheritance (Y6)

Key Vocabulary:

Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossil.

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Science Progression map

<u>Working Scientifically</u>	
<p><u>Asking questions:</u></p> <ul style="list-style-type: none">• plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	<p><u>Measuring and recording:</u></p> <ul style="list-style-type: none">• take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate• record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
<p><u>Concluding:</u></p> <ul style="list-style-type: none">• identify scientific evidence that has been used to support or refute ideas or arguments• report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations	<p><u>Evaluating:</u></p> <ul style="list-style-type: none">• use test results to make predictions to set up further comparative and fair tests
<p><u>Vocabulary:</u> AS KS1 and LKS2 plan, variables, measurements, accuracy, precision, repeat readings, report data, scientific diagrams, labels, classification keys, tables, scatter graphs, bar chart, line graph, prediction, further comparative and fair tests, report and present, conclusion, relationship, explanation, evidence, support, refute ideas or arguments, identify, classify describe, patterns, systematic, measurements, anomaly</p>	