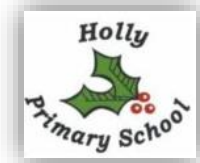


## Science Progression Map

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

Holly Primary School  
Progression map

**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:**

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

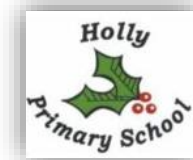
**Evaluating:**

**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.

Holly Primary School  
Progression map

**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

**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

Working Scientifically

Asking questions:

- ask relevant questions and use different types of scientific enquiries to answer them
- set up simple practical enquiries, comparative and fair tests

Measuring and recording:

- 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

Concluding:

- 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

Evaluating:

- use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions

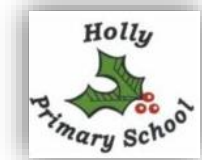
Vocabulary:

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.

**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.

<u>Working Scientifically</u>	
<p><b><u>Asking questions:</u></b></p> <ul style="list-style-type: none"> <li>• plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> </ul>	<p><b><u>Measuring and recording:</u></b></p> <ul style="list-style-type: none"> <li>• take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> <li>• record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> </ul>
<p><b><u>Concluding:</u></b></p> <ul style="list-style-type: none"> <li>• identify scientific evidence that has been used to support or refute ideas or arguments</li> <li>• 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</li> </ul>	<p><b><u>Evaluating:</u></b></p> <ul style="list-style-type: none"> <li>• use test results to make predictions to set up further comparative and fair tests</li> </ul>
<p><b><u>Vocabulary:</u></b> 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>	