

# Science Progression of Knowledge and Enquiry Skills

## Areas of study:

- Plants
- Animals, including humans
- Everyday materials
- Seasonal changes

**Working scientifically is integrated into each block of science knowledge and is visited in different contexts throughout Year One and Year Two.**

## Working scientifically progression of Enquiry Skills:

### Key Stage 1

- Explore the world around them and raise their own simple questions
- Ask people questions and use simple secondary sources to find answers
- Experience different types of science enquiries, including practical activities
- Begin to recognise different ways in which they might answer scientific questions
- Carry out simple tests
- Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them
- Observe closely using simple equipment / with help, observe changes over time
- With guidance, they should begin to notice patterns and relationships
- Use simple measurements and equipment (e.g. hand lenses, egg timers) to gather data
- Record simple data
- Use their own observations and ideas to suggest answers to questions talk about what they have found out and how they found it out
- With help, they should record and communicate their findings in a range of ways and begin to use simple scientific language.

# Year One Areas of Study Progression

Animals including Humans – Aut 1, Sum 2	Plants - Spr 2, Sum 1	Seasonal Changes – Aut 1, Aut 2, Spr 1, Spr 2, Sum 1, Sum 2	Materials – Aut 2, Spr 1
<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals;</li> <li>• identify and name a variety of common animals that are carnivores, herbivores and omnivores;</li> <li>• describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets);</li> <li>• identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• identify and name a variety of common wild and garden plants, including deciduous and evergreen trees;</li> <li>• identify and describe the basic structure of a variety of common flowering plants, including trees.</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• observe changes across the 4 seasons;</li> <li>• observe and describe weather associated with the seasons and how day length varies.</li> </ul>	<p>Everyday Materials</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• distinguish between an object and the material from which it is made;</li> <li>• identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock;</li> <li>• describe the simple physical properties of a variety of everyday materials;</li> <li>• compare and group together a variety of everyday materials on the basis of their simple physical properties.</li> </ul>
<p>Vocabulary Progression</p> <ul style="list-style-type: none"> <li>• Names of animal groups: fish, amphibians, reptiles, birds, mammals.</li> <li>• Animal diets: carnivore, herbivore, omnivore.</li> <li>• Human and animal body parts: e.g. body, head, neck, arms, elbows, legs, knees, face, ears, eyes, nose, hair, mouth, teeth, hands, feet, tail, wings, feathers, fur, beak, fins, gills.</li> <li>• Human senses: sight, hearing, touch, smell, taste.</li> <li>• Exploring senses: loud, quiet, soft, rough.</li> <li>• Other: human, animal, pet.</li> </ul>	<p>Vocabulary Progression</p> <ul style="list-style-type: none"> <li>• Names of common plants: wild plant, garden plant, evergreen tree, deciduous tree, common flowering plant, weed, grass.</li> <li>• Name some features of plants: e.g. flower, vegetable, fruit, berry, leaf/leaves, blossom, petal, stem, trunk, branch, root, seed, bulb, soil.</li> <li>• Name some common types of plant e.g. sunflower, daffodil.</li> </ul>	<p>Vocabulary Progression</p> <ul style="list-style-type: none"> <li>• Seasons: spring, summer, autumn, winter, seasonal change.</li> <li>• Weather: e.g. sun, rain, snow, sleet, frost, ice, fog, cloud, hot/warm, cold, storm, wind, thunder, weather forecast.</li> <li>• Measuring weather: temperature, rainfall, wind direction, thermometer, rain gauge.</li> <li>• Day length: night, day, daylight.</li> </ul>	<p>Vocabulary Progression</p> <ul style="list-style-type: none"> <li>• Names of materials: wood, plastic, glass, metal, water, rock, paper, cardboard, rubber, fabric.</li> <li>• Properties of materials: hard, soft, shiny, dull, stretchy, rough, smooth, bendy, not bendy, transparent, opaque, waterproof, not waterproof, absorbent, not absorbent, sharp, stiff.</li> <li>• Other: object.</li> </ul>

# Year Two Areas of Study Progression

Animals including Humans	Plants – Spr 2	Living Things and Their Habitats – Spr 1	Materials
<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>notice that animals, including humans, have offspring which grow into adults;</li> <li>find out about and describe the basic needs of animals, including humans, for survival (water, food and air);</li> <li>describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>observe and describe how seeds and bulbs grow into mature plants;</li> <li>find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>explore and compare the differences between things that are living, dead, and things that have never been alive;</li> <li>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;</li> <li>identify and name a variety of plants and animals in their habitats, including microhabitats;</li> <li>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.</li> </ul>	<p>Everyday Materials</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses;</li> <li>find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> </ul>
<p>Vocabulary Progression</p> <ul style="list-style-type: none"> <li>Being born and growing: Young, offspring, live young, grow, develop, change, hatch, lay, fly, crawl, talk.</li> <li>Young and adult names: e.g. lamb and sheep, kitten and cat, duckling and duck.</li> <li>Life cycle stages: e.g. baby, toddler, child, teenager, adult; frogspawn, tadpole, froglet, frog.</li> <li>Survival and staying healthy: basic needs, survive, food, air, exercise, diet, nutrition, healthy, balanced diet, hygiene, germs.</li> <li>Food groups: fruit and vegetables, proteins, dairy and alternatives, carbohydrates, oil and spreads, fat, salt, sugar.</li> </ul> <p>Previously introduced vocabulary: water.</p>	<p>Vocabulary Progression</p> <ul style="list-style-type: none"> <li>Growth of plants: germination, shoot, seed dispersal, grow, food store, life cycle, die, wilt, seedling, sapling.</li> <li>Needs of plants: sunlight, nutrition, light, healthy, space, air.</li> <li>Name different types of plant: e.g. bean plant, cactus.</li> <li>Names of different habitats: e.g. rainforest, desert.</li> </ul> <p>Previously introduced vocabulary: water, temperature, warm, hot, cold, habitat.</p>	<p>Vocabulary Progression</p> <p>Living or dead: living, dead, never living, not living, alive, never been alive, healthy.</p> <p>Habitats including microhabitats: depend, shelter, safety, survive, suited, space, minibeast, air.</p> <p>Life processes: movement, sensitivity, growth, reproduction, nutrition, excretion, respiration.</p> <p>Food chains: food sources, food, producer, consumer, predator, prey.</p> <p>Names of habitats and microhabitats: e.g. under leaves, woodland, rainforest, sea shore, ocean, urban, local habitat.</p> <p>Previously introduced vocabulary: senses, carnivore, herbivore, omnivore, seed, water, names of materials.</p>	<p>Vocabulary Progression</p> <ul style="list-style-type: none"> <li>Changing shape: squash, bend, twist, stretch.</li> <li>Properties of materials: e.g. strong, flexible, light, hard-wearing, elastic.</li> <li>Other: suitability, recycle, pollution.</li> </ul>

# WORKING SCIENTIFICALLY POSTER FOR KEY STAGE ONE

