



Science Disciplinary and Substantive Knowledge Progression -Year 1

Vocabulary: **Red text indicates vocabulary from the statutory requirements.**

Revisited vocabulary from prior learning is indicated in BOLD.

Plain text indicates vocabulary included in the non-statutory guidance.

National Curriculum objectives: In this unit, children will be taught to:

DISCIPLINARY KNOWLEDGE	SUBSTANTIVE KNOWLEDGE
<p>KS1 Working Scientifically Pupils will be taught to use the following practical scientific methods, processes and skills:</p> <ul style="list-style-type: none"> • WS1 asking simple questions and recognising that they can be answered in different ways • WS2 observing closely, using simple equipment and measurement • WS3 performing simple tests • WS4 identifying and classifying • WS5 using their observations and ideas to suggest answers to questions • WS6 gathering, recording and communicating data and findings to help in answering questions. • WS7 use scientific language and read and spell age-appropriate scientific vocabulary • WS8 begin to notice patterns and relationships. 	<p>Plants</p> <ul style="list-style-type: none"> • P1 identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • P2 identify and describe the basic structure of a variety of common flowering plants, including trees. <p>Vocabulary: Identify, Name, Wild plants, Garden plants, Deciduous, Flowering plants, Trees, Leaves, Flowers, Blossom, Petals, Fruit, Roots, Bulb, Seed, Trunk, Branches, Stem</p> <p>Animals, including humans</p> <ul style="list-style-type: none"> • AH1 identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals • AH2 identify and name a variety of common animals that are carnivores, herbivores and omnivores • AH3 describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) • AH4 identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

Vocabulary: Identify, Name, Animals, Fish, Amphibians, Reptiles, Birds, Mammals, Pets, Human body, Sense Care of animals, Habitat , Local environment , Head, Neck, Arms, Elbow, Legs, Knees, Ears, Face, Eyes Hair, Mouth, Teeth

Everyday Materials

- EM1 distinguish between an object and the material from which it is made
- EM2 identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
- EM3 describe the simple physical properties of a variety of everyday materials
 - EM4 compare and group together a variety of everyday materials on the basis of their simple physical properties.

Vocabulary: wood, plastic, glass, metal, water, rock, hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy, not bendy, waterproof, not waterproof, absorbent, not absorbent, opaque, transparent

Seasonal Changes

- SC1 observe changes across the four seasons
- SC2 observe and describe weather associated with the seasons and how day length varies.

Vocabulary: Observe, Changes, Four seasons, Weather, Day length



Science Disciplinary and Substantive Knowledge Progression -Year 2

Vocabulary: **Red text indicates vocabulary from the statutory requirements.**

Revisited vocabulary from prior learning is indicated in **BOLD**.

Plain text indicates vocabulary included in the non-statutory guidance.

National Curriculum objectives: In this unit, children will be taught to:

DISCIPLINARY KNOWLEDGE	SUBSTANTIVE KNOWLEDGE
<p>KS1 Working Scientifically Pupils will be taught to use the following practical scientific methods, processes and skills:</p> <ul style="list-style-type: none"> • WS1 asking simple questions and recognising that they can be answered in different ways • WS2 observing closely, using simple equipment and measurement • WS3 performing simple tests • WS4 identifying and classifying • WS5 using their observations and ideas to suggest answers to questions • WS6 gathering, recording and communicating data and findings to help in answering questions. • WS7 use scientific language and read and spell age-appropriate scientific vocabulary • WS8 begin to notice patterns and relationships. 	<p>Living Things and their Habitats</p> <ul style="list-style-type: none"> • LH1 explore and compare the differences between things that are living, dead, and things that have never been alive • LH2 identify that most living things live in habitats to which they are suited • LH3 describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other • LH4 identify and name a variety of plants and animals in their habitats, including micro-habitats • LH5 describe how animals obtain their food from plants and other animals • LH6 understand a simple food chain, and identify and name different sources of food. <p>Vocabulary: Explore, Compare, Living, Dead, Never been alive, Habitats, Animals, Plants, Micro-habitats, Food chain, food, Characteristics, Alive, Healthy, Woodland, Ocean, Seashore, Rainforest, Food source</p> <p>Plants</p>

- P1 observe and describe how seeds and bulbs grow into mature plants
- P2 find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

Vocabulary:

Observe, Describe, Seeds, Bulbs, Mature plants, Plants, Water, Light, Suitable temperature, Healthy, Germination, Growth, Survival, Reproduction

Animals including Humans

- AH1 notice that animals, including humans, have offspring which grow into adults
- AH2 find out about and describe the basic needs of animals, including humans, for survival (water, food and air)
- AH3 describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

Vocabulary: Humans, Offspring, Grow, Adults, Animals, Survival, Water, Food, Air Exercise, Hygiene, Reproduction, Growth, Egg /chick/ chicken, egg/caterpillar/pupa/butterfly, Spawn/tadpole/frog, Lamb/sheep, Baby, Toddler, child, Teenager, Adult

Uses of Everyday Materials

- EM1 identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
- EM2 find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

Vocabulary: Wood, Plastic, Glass, Metal, water, Rock, brick, paper, cardboard, squashing, Bending, twisting, Stretching, Suitable, Unsuitable, properties