



# Science

## Progression of knowledge, skills and understanding: Key Stage 1

*\* Science in KS1 is taught on a rolling programme over two years. Other than, 'working scientifically', both classes teach the same units during year A and then both classes teach the same units during year B. \**

| Class 1  | Class 2  |
|--|--|
| <p><b>Working scientifically – to run through all units</b></p> <p><u>Observing and recording</u><br/>           Make observations using appropriate senses.<br/>           Record observations.<br/>           Communicate observations orally, in drawing, labelling, simple writing and using ICT.</p> <p><u>Planning communication and sources</u> Draw simple pictures.<br/>           Talk about what they see and do.<br/>           Use simple charts to communicate findings. Identify key features ask questions.</p> <p><u>Enquiring and Testing and Obtaining and Presenting Evidence:</u> Test ideas suggested to them say what they think will happen.<br/>           Use first-hand experiences to answer questions.<br/>           Begin to compare objects and living things.</p> | <p><b>Working scientifically – to run through all units</b></p> <p><u>Observing and recording</u><br/>           Respond to questions asked by the teacher.<br/>           Ask questions collect and record data (supported by the teacher). Suggest how they could collect data to answer questions.</p> <p>Begin to equipment from a limited range.</p> <p><u>Planning communication and sources</u><br/>           Describe their observations using some scientific vocabulary.<br/>           Use a range of simple texts to find information.<br/>           Suggest how to find things out.<br/>           Identify key features ask questions.</p> <p><u>Enquiring and Testing and Obtaining and Presenting Evidence:</u><br/>           Use simple equipment provided to aid observation.<br/>           Compare objects, living things or events.<br/>           Make observations relevant to their task.</p> |

Begin to recognise when a test or comparison is unfair. Use first-hand experiences to answer questions.

## YEAR A

### Autumn

#### Chemistry: Everyday materials (Y1)

Describe materials using their senses.

Describe materials using their senses, using specific scientific words.

Explain what material objects are made from.

Explain why a material might be useful for a specific job.

Name some different everyday materials - e.g. Wood, plastic, metal, water and rock.

Sort materials into groups by a given criteria.

Describe the simple physical properties of a variety of everyday materials.

Compare and group together a variety of materials based on their simple physical properties.

Describe the properties of different materials using words like, transparent or opaque, flexible, etc.

Sort materials into groups and say why they have sorted them in that way.

Say which materials are natural and which are man-made.

**VOCAB:** materials, wood, plastic, metal, magnetic, liquid, gas, stretch, rigid, flexible, waterproof, shiny, opaque, transparent, object

**Scientist – William Addis – Toothbrush Inventor**

### Spring 1

#### Biology: Plants (Y2)

Describe the parts of a plant (roots, stem, leaves, flowers).

Describe what plants need to survive.

Observe and describe how seeds and bulbs grow into mature plants.

Find out & describe how plants need water, light and a suitable temperature to grow and stay healthy. Describe what plants need to survive and link it to where they are found. Explain that plants grow and reproduce in different ways.

**VOCAB:** buds, **bulbs**, deciduous, evergreen, **trunk**, vegetable, fruit, wild plants, environment, blossom, petals, **branches**

**Scientist – Alan Titchmarsh** – Botanist and gardener

## **Spring 2**

### **Biology: Seasonal Change (Y1)**

Observe changes across the four seasons.

Name the four seasons in order.

Observe and describe weather associated with the seasons.

Observe and describe how day length varies.

Observe features in the environment and explain that these are related to a specific season.

Observe and talk about changes in the weather.

Talk about weather variation in different parts of the world.

**VOCAB:** **autumn, spring, summer, winter**, weather, temperature, thermometer, weather symbol

**Scientist – Holly Green** - Meteorologist

## **Summer**

### **Biology: Animals, including humans (Y1)**

Point out some of the differences between different animals.

Sort photographs of living things and non-living things.

Identify and name a variety of common animals - (birds, fish, amphibians, reptiles, mammals, invertebrates).

Describe how an animal is suited to its environment.

Identify and name a variety of common animals that are carnivores, herbivores and omnivores. Name the parts of the human body that they can see.

Draw & label basic parts of the human body.

Identify the main parts of the human body and link them to their senses.

Name the parts of an animal's body.

Name a range of domestic animals.

Classify animals by what they eat - (carnivore, herbivore, omnivore).

**VOCAB:** fish, amphibians, insects, reptiles, birds, mammals, carnivore, herbivore, omnivore, tame, nocturnal

**Scientist – Chris Packham – Conservationist**

## **YEAR B**

### **Autumn**

#### **Chemistry: Use of everyday materials (Y2)**

Explain how solid shapes can be changed by squashing, bending, twisting and stretching.

Explore how the shapes of solid objects can be changed - (squashing, bending, twisting, stretching).

Find out about people who developed useful new materials - (John Dunlop, Charles Macintosh, John McAdam).

Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper, cardboard for particular uses.

Explain how things move on different surfaces.

Explain how materials are changed by heating and cooling.

Explain how materials are changed by bending, twisting and stretching.

**VOCAB:** metal, plastic, wood, squash, bend, twist, stretch

**Scientist – Charles Macintosh – Waterproof material**

### **Spring 1**

#### **Biology: Plants (Y1)**

Name the petals, stem, leaf, bulb, flower, seed, stem and root of a plant.

Identify and name a range of common plants and trees.

Recognise deciduous and evergreen trees.

Name the trunk, branches and root of a tree.

**VOCAB:** roots, crown, deciduous, evergreen, blossom

**Scientist – Beatrix Potter - Botanist**

## Spring 2

**Biology: Animals, including humans (Y2)** (*carry into summer term if needed*) Describe what animals need to survive.

Explain that animals grow and reproduce.

Explain why animals have offspring which grow into adults.

Describe the life cycle of some living things - (e.g. Egg, chick, chicken).

Explain the basic needs of animals, including humans for survival - (water, food, air).

Describe why exercise, balanced diet and hygiene are important for humans. Explain that animals reproduce in different ways.

**VOCAB:** off-spring, survival, healthy, hygiene, exercise, nutrition, diet, proteins, carbohydrates, fats

**Scientist – Elizabeth Garrett** – First British female physician and surgeon

## Summer

**Biology: Living things and their habitats (Y2)**

Match certain living things to the habitats they are found in.

Explain the differences between living and non-living things.

Describe some of the life processes common to plants and animals, including humans.

Decide whether something is living, dead or non-living.

Describe how a habitat provides for the basic needs of things living there.

Describe a range of different habitats.

Describe how plants and animals are suited to their habitat.

Name some characteristics of an animal that help it to live in a particular habitat.

Describe how animals obtain their food from plants and other animals, using a simple food chain. Identify and name different sources of food.

**VOCAB:** dinosaur, indigenous, rivers, woodland, ponds, sea, rainforest, desert, species, microhabitats, food chain

**Scientist – Liz Bonnin** – Conservationist

