

Year 4 Science Overview

Living Things and Their Habitat

- recognise that living things can be grouped in a variety of ways
- explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
- recognise that environments can change and that this can sometimes pose dangers to living things
- explore possible ways of grouping a wide selection of living things that include animals and flowering plants and non-flowering plants
- begin to put vertebrate animals into groups such as fish, amphibians, reptiles, birds, and mammals; and invertebrates into snails and slugs, worms, spiders, and insects.

Animals, inc Humans

- describe the simple functions of the basic parts of the digestive system in humans
- identify the different types of teeth in humans and their simple functions
- construct and interpret a variety of food chains, identifying producers, predators and prey
- be introduced to the main body parts associated with the digestive system, for example, mouth, tongue, teeth, oesophagus, stomach and small and large intestine and explore questions that help them to understand their special functions

States of Matter

- compare and group materials together, according to whether they are solids, liquids or gases
- observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)
- identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature
- explore a variety of everyday materials and develop simple descriptions of the states of matter (solids hold their shape; liquids form a pool not a pile; gases escape from an unsealed container)
- observe water as a solid, a liquid and a gas and should note the changes to water when it is heated or cooled

Sound

- identify how sounds are made, associating some of them with something vibrating
- recognise that vibrations from sounds travel through a medium to the ear
- find patterns between the pitch of a sound and features of the object that produced it
- find patterns between the volume of a sound and the strength of the vibrations that produced it
- recognise that sounds get fainter as the distance from the sound source increases
- explore and identify the way sound is made through vibration in a range of different musical instruments from around the world; and find out how the pitch and volume of sounds can be changed in a variety of ways

English Links:

- Fact files and report writing – research into various areas of the science curriculum e.g. animals and their habitats
- Persuasive writing e.g. understanding how some animals are under threat due to environmental changes and writing to persuade people to help.
- Explanation writing – e.g. how the digestive system works, or how the water cycle works.

Electricity

- identify common appliances that run on electricity
- construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
- recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- recognise some common conductors and insulators, and associate metals with being good conductors
- construct simple series circuits, trying different components, for example, bulbs, buzzers and motors, and including switches, and use their circuits to create simple devices
- draw the circuit as a pictorial representation

Maths Links:

- Number and place value: Order and compare numbers, including negative numbers e.g. temperature scales.
- Measure: convert between different units of measure .
- Measure: Measure with increasing accuracy, using appropriate equipment.
- Measure: Estimate, compare and calculate different measures.
- Statistics: interpret and present discrete and continuous data using appropriate graphical methods.
- Statistics: analyse data collected and presented to draw conclusions and pose further questions.