

New Science Curriculum - Year 4

Key: Biology 

Physics 

Chemistry 

Living things and their habitats

- I can recognise that living things can be grouped in a variety of ways
- I can explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
- I can recognise that environments can change and that this can sometimes pose dangers to living things.

Ideas for working scientifically:

Use and make simple guides or keys to explore and identify local plants and animals; raise & answer q's based on observations of animals & plan investigations to explore.

Animals, including humans

- I can describe the simple functions of the basic parts of the digestive system in humans
- I can identify the different types of teeth in humans and their simple functions
- I can construct and interpret a variety of food chains, identifying producers, predators and prey.

Ideas for working scientifically:

Compare teeth of carnivores and herbivores & suggest reasons for differences; find out what damages teeth and how to look after them; draw and discuss own ideas about digestive system & compare with models or images.

States of matter

- I can compare and group materials together, according to whether they are solids, liquids or gases
- I can 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)
- I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Ideas for working scientifically:

Group and classify variety of different materials; explore effect of temperature on substances such as chocolate, butter, cream (e.g. to make crispy cakes & ice-cream for a party); research temperature at which materials change state e.g. when iron melts or oxygen condenses into a liquid; observe & record evaporation over a period of time e.g. puddle in playground, washing on line; investigate effect of temperature on washing drying or snowmen melting.

Sound

- I can identify how sounds are made, associating some of them with something vibrating
- I can recognise that vibrations from sounds travel through a medium to the ear
- I can find patterns between the pitch of a sound and features of the object that produced it
- I can find patterns between the volume of a sound and the strength of the vibrations that produced it
- I can recognise that sounds get fainter as the distance from the sound source increases.

Ideas for working scientifically:

Find patterns in sounds made by different objects e.g. saucepan lids of different sizes or elastic bands of different thicknesses. Make earmuffs from different materials to investigate which makes best insulation against sound; make and play own instruments using what they've found out about pitch and volume.

Electricity

- I can identify common appliances that run on electricity
- I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- I can 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
- I can recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- I can recognise some common conductors and insulators, and associate metals with being good conductors.

Ideas for working scientifically:

Observe patterns e.g. that bulbs get brighter if more cells are added, that metals tend to be good conductors, that some materials can and some can't be used to connect across gap in circuit.