

National Curriculum Objectives for Science – Lower Key Stage Two

1. Working Scientifically

- 1a asking relevant questions and using different types of scientific enquiries to answer them
- 1b setting up simple practical enquiries, comparative and fair tests
- 1c making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- 1d gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- 1e recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- 1f reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- 1g using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- 1h identifying differences, similarities or changes related to simple scientific ideas and processes
- 1i using straightforward scientific evidence to answer questions or to support their findings

2. Plants

- 2a identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
- 2b explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant
- 2c investigate the way in which water is transported within plants
- 2d explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal

3./ 8. Animals including humans

Yr 3

- 3a Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat
- 3b identify that humans and some other animals have skeletons and muscles for support, protection and movement

Yr 4

- 8a describe the simple functions of the basic parts of the digestive system in humans
- 8b identify the different types of teeth in humans and their simple functions
- 8c construct and interpret a variety of food chains, identifying producers, predators and prey

4. Rocks

- 4a compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
- 4b describe in simple terms how fossils are formed when things that have lived are trapped within rock
- 4c recognise that soils are made from rocks and organic matter

5. Light

- 5a recognise that they need light in order to see things and that dark is the absence of light
- 5b notice that light is reflected from surfaces
- 5c recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- 5d recognise that shadows are formed when the light from a light source is blocked by a solid object
- 5e find patterns in the way that the size of shadows change

6. Forces and Magnets

- 6a compare how things move on different surfaces
- 6b notice that some forces need contact between 2 objects, but magnetic forces can act at a distance
- 6c observe how magnets attract or repel each other and attract some materials and not others
- 6d compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials
- 6e describe magnets as having 2 poles
- 6f predict whether 2 magnets will attract or repel each other, depending on which poles are facing

7. Living things and their habitats

- 7a recognise that living things can be grouped in a variety of ways
- 7b explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
- 7c recognise that environments can change and that this can sometimes pose dangers to living things

9. States of Matter

- 9a compare and group materials together, according to whether they are solids, liquids or gases
- 9b 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)
- 9c identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature

10. Sound

- 10a identify how sounds are made, associating some of them with something vibrating
- 10b recognise that vibrations from sounds travel through a medium to the ear
- 10c find patterns between the pitch of a sound and features of the object that produced it
- 10d find patterns between the volume of a sound and the strength of the vibrations that produced it
- 10e recognise that sounds get fainter as the distance from the sound source increase

11. Electricity

- 11a identify common appliances that run on electricity
- 11b construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- 11c 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
- 11d recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- 11e recognise some common conductors and insulators, and associate metals with being good conductors

