



LKS2 SCIENTISTS

DURING LKS2 CHILDREN'S LEARNING IN SCIENCE SHOULD INCLUDE THE FOLLOWING:

- ✓ Exploring talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments.
- ✓ Asking questions about what they observe and making some decisions about which types of fair testing and scientific enquiry are likely to be the best ways of answering them.
 - ✓ Noticing simple patterns and drawing simple conclusions with increasing use of scientific language.
- ✓ Reading and spelling scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge.

BY THE END OF LKS2 A CHILD ATTAINING TYPICALLY WILL BE ABLE TO:

ASK relevant questions and use different types of scientific enquiries to answer them.

Set up simple practical enquiries, comparative and fair tests.

Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.

Gather, record, classify and present data in a variety of ways to help in answering questions.

Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.

Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.

Identify differences, similarities or changes related to simple scientific ideas and processes.

Use straightforward scientific evidence to answer questions or to support their findings.

Plants

Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.

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.

Investigate the way in which water is transported within plants.

Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

Animals, including humans

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.

Describe the simple functions of the basic parts of the digestive system in humans.

Construct and interpret a variety of food chains, identifying the producers, predators and prey.

Identify that humans and some other animals have skeletons and muscles for support, protection and movement.

Identify the different types of teeth in humans and their simple functions.

Rocks

Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.

Describe in simple terms how fossils are formed when things that have lived are trapped within rock.

Recognise that soils are made from rocks and organic matter.

Light

Recognise that they need light in order to see things and that dark is the absence of light.

Notice that light is reflected from surfaces.

Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.

Recognise that shadows are formed when the light from a light source is blocked by an opaque object.

Find patterns in the way that the size of shadows change.

Forces and magnets

Compare how things move on different surfaces.

Notice that some forces need contact between two objects, but magnetic forces can act at a distance.

Observe how magnets attract or repel each other and attract some materials and not others.

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.

Describe magnets as having two poles.

Predict whether two magnets will attract or repel each other, depending on which poles are facing.

Living things and their habitats

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.

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.

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.

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 and predict 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.

BY THE END OF LKS2 A CHILD ATTAINING TYPICALLY WILL BE ABLE TO UNDERSTAND AND USE THE FOLLOWING VOCABULARY:

Plants

**roots stem trunk leaves flowers requirements transport/transportation
life cycle pollination seed formation seed dispersal**

Animals, including humans

nutrition skeletons muscles support protect move functions
digestive system incisors canines molars food chains producers
predators prey

Rocks

physical properties fossils organic matter

Light

Light source light dark absence reflect, reflected shadows opaque

Forces and Magnets

contact attract repel poles magnetic

Living things and their habitats

classification keys local environment wider environment

States of Matter

solids liquids gases change in state heat, heated cool, cooled temperature
Celsius evaporate, evaporation condense, condensation water cycle

Sound

sound source vibrate, vibrating, vibrations pitch volume fainter

Electricity

appliances circuit cells battery wires bulbs switches
buzzers conduct, conductors insulate, insulators

