

Year 2 Science

ALL TOPICS will be taught using practical scientific methods

Humans and Other Animals - Basic Needs of life

Objectives	Notes and guidance	Activities/Experiments
<p>-Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</p> <p>-Notice that animals, including humans, have offspring which grow into adults.</p> <p>-Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</p> <p>-Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. (C/C - PHSE)</p>	<p>-Pupils should have plenty of opportunities to learn the names of the main body parts (including head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth) through games, actions, songs and rhymes.</p> <p>-Introduce the basic needs of animals for survival, as well as the importance of exercise and nutrition for humans. They should also be introduced to the process of reproduction and growth in animals. The focus at this stage should be on helping pupils to recognise growth; they should not be expected to understand how reproduction occurs. The following examples might be used: egg, chick, chicken; egg, caterpillar, pupa, butterfly; spawn, tadpole, frog; lamb, sheep. Growing into adults can include reference to baby, toddler, child, teenager, adult.</p>	<p>-Work scientifically by: observing, through video or first-hand observation and measurement, how different animals, including humans, grow; asking questions about what things animals need for survival and what humans need to stay healthy; and suggesting ways to find answers to their questions.</p>

All Living Things - Living and non-living

Objectives	Notes and guidance	Activities/Experiments
<p>-Explore and compare the differences between things that are living, dead, and things that have never been alive.</p>	<p>-Introduce the idea that all living things have certain characteristics that are essential for keeping them alive and healthy. They should become familiar with the life processes that are common to all living things.</p>	<p>-Work scientifically by: sorting and classifying things according to whether they are living, dead or were never alive, and recording their findings using charts. They should describe how they knew where to place things, exploring questions such as: 'Is a flame alive? Is a deciduous tree dead in winter?' and talk about ways of answering their questions.</p>

Habitats

Objectives	Notes and guidance	Activities/Experiments
<p>-Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.</p> <p>-Identify and name a variety of plants and animals in their habitats, including micro-habitats.</p> <p>-Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</p>	<p>-Introduce the terms 'habitat' (a natural environment or home of a variety of plants and animals) and 'micro-habitat' (a very small habitat, for example for woodlice under stones, logs or leaf litter). They should use the local environment to identify and study a variety of plants and animals within their habitat and observe how living things depend on each other, for example plants serving as a source of food and shelter for animals.</p> <p>-Compare animals in familiar habitats with animals found in less familiar habitats, for example, in the pond, in woodland, in the ocean, in the rainforest. (Link to Geog work from Yr 1)</p>	<p>-Work scientifically by: constructing a simple food chain that includes humans (e.g. grass, cow, human); describing the conditions in different habitats and micro-habitats (under log, on stony path, under bushes, in the pond); finding out how the conditions affect the number and type(s) of plants and animals that live there.</p>

Plants and their environment - Basic structure

Objectives	Notes and guidance	Activities/Experiments
<p>-Identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen.</p> <p>-Identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers.</p>	<p>-Use the local environment throughout the year to study plants growing in their habitat. Where possible, they should observe the growth of flowers and vegetables that they have planted.</p> <p>-They should become familiar with common names of flowers, examples of deciduous and evergreen trees, and plant structures (trees: trunk, roots, branches, leaves, fruit; garden and wild plants: flower, petals, stem, leaves, roots, fruit, bulb and seed).</p>	<p>-Work scientifically by: observing closely, using magnifying glasses, and comparing and contrasting familiar plants; describing how they were able to identify and group them, and drawing diagrams showing the parts of different plants and trees. Pupils might keep records of how plants have changed over time, for example the leaves falling off trees and buds opening; and compare and contrast how different plants change.</p>

Forces-Movement and speed

Objectives	Notes and guidance	Activities/Experiments
<p>-Notice and describe how things are moving, using simple comparisons such as faster and slower.</p> <p>-Compare how different things move.</p>	<p>-Pupils should observe closely some things moving. Pupils should discuss, describe and compare the movement of a variety of objects and, where appropriate, themselves, through actions such as sliding, rolling, falling, flying, walking and running. They can explore the movements through games, songs and rhymes, including work in physical education.</p>	<p>-Pupils might work scientifically by: asking questions about the movement of objects such as parachutes, toy cars and balloon rockets; comparing them, by measuring how far they go; ordering their findings and recording their observations and measurements, for example by constructing tables and charts, and drawing on their results to answer their questions. (Link to Toys and vehicles- C/C - History)</p>

Revision unit -Materials

Objectives	Notes and guidance	Activities/Experiments
<p>-Compare and group together a variety of everyday materials on the basis of their simple physical properties.</p> <p>-Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>	<p>Pupils should explore, name and discuss everyday materials so that they become familiar with the names of materials and properties such as: hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent. Pupils should explore and experiment with a wide variety of materials, not only those listed in the programme of study, but including for example: brick, paper, fabrics, elastic, foil.</p>	<p>-Quick recap of materials and their properties</p> <p>-Compare and group a variety of materials (open ended activity) Children to create their own criteria and give reasons.</p> <p>-Explore how solid objects can be altered. Why can some be altered and others not? How does this help us to decide which materials to use and when?</p>