

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
<ul style="list-style-type: none">- Notice that animals, including humans, have offspring which grow into adults.- Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).- Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. (C/C – PHSE)	<ul style="list-style-type: none">- 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.	<ul style="list-style-type: none">- 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.

All Living Things – Living and Non-living

Objectives	Notes and guidance	Activities/Experiments
<ul style="list-style-type: none">- Explore and compare the differences between things that are living, dead, and things that have never been alive.	<ul style="list-style-type: none">- 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.	<ul style="list-style-type: none">- 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.

Habitats

Objectives	Notes and guidance	Activities/Experiments
<ul style="list-style-type: none">- 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.- Identify and name a variety of plants and animals in their habitats, including micro-habitats.- 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.	<ul style="list-style-type: none">- 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.- 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).	<ul style="list-style-type: none">- 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.

Plants and their Environment – Basic Structure

Objectives	Notes and guidance	Activities/Experiments
<ul style="list-style-type: none">- Identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen.- Identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers.	<ul style="list-style-type: none">- 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.- 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).	<ul style="list-style-type: none">- 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.

Plants and their environment – Life Cycles

Objectives	Notes and guidance	Activities/Experiments
<ul style="list-style-type: none">- Observe and describe how seeds and bulbs grow into mature plants.- Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	<ul style="list-style-type: none">- Pupils will use the local environment throughout the year to observe how plants grow (including seeds, bulbs, fruit and vegetables, deciduous and evergreen bushes and trees).- Introduce the requirements of plants for growth and survival, as well as the process of reproduction and growth in plants. <p>Note: Seeds and bulbs need water to grow but do not need light: seeds and bulbs have a store of food inside them.</p>	<ul style="list-style-type: none">- Work scientifically by: observing and recording, with some accuracy, the growth of a variety of plants as they change over time from a seed or bulb, or observing similar plants at different stages of growth; setting up a comparative test to show that plants need light and water to stay healthy.