Y1 Science Key Learning

'Working together to achieve success'



Objectives in bold are taken from the National Curriculum

- Plants: Common Names and Basic Structure
 Animals I

 Identify and name a variety of common wild and garden
 Identify, name
- plants, including deciduous and evergreen trees.Identify and describe the basic structure of a variety of
- common flowering plants, including trees.

Notes and Guidance (non-statutory):

Pupils should use the local environment throughout the year to explore and answer questions about 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 (including leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem).

Pupils might work scientifically by:

- Observing closely, perhaps using magnifying glasses.
- Comparing and contrasting familiar plants.
- Describing how they were able to identify and group them, and
- Drawing diagrams showing the parts of different plants including trees.
- Keeping records of how plants have changed over time, for example the leaves falling off trees and buds opening.
- Comparing and contrasting what they have found out about different plants.

'Use of the school grounds:

- Use the woods at Mossgate to identify trees using a simple identification chart.
- Look at the trees in the woods (look at deciduous in the Summer term) and talk about/label the parts. Talk about the roots being underground, look at some that have surfaced in places.
- Draw diagrams of plants they have found and label them.
- Take photographs of plants in the woods such as daffodils at different stages of development as the seasons change.
- Photograph/draw a tree at different times of the year, keeping a record of how it has changed over the year.

Vocabulary

Labelling features: plant, seedling, tree, leaf, flower, blossom, petals, fruit, root, bulb, seed, stem, branch, twig, trunk. Common names for plants: e.g. daisy, dandelion, oak tree, etc Categories of plants: e.g. deciduous, evergreen, wild plant, indoor plant, herb, weed, vegetable/fruit/salad crop, etc. Words related to working scientifically: Compare (same, different), observe, describe, record, group, name/identify, change

- Animals Humans

 Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.
- Recognise that humans are animals.
- Compare and describe differences in their own features (eve, hair, skin colour, etc.).
- Recognise that humans have many similarities.

Notes and Guidance (nonstatutory):

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.

Pupils might work scientifically

- by using their observations to:
 - Compare and contrast animals (humans) at first hand or through videos and photographs.
 - Using their senses to compare different textures, sounds and smells.

Vocabulary

Words linking to the senses: e.g. sense, eye, sight, see, ear, hearing, smell, nose, touch, feel Parts of the body for humans: arm, head, leg, body, etc. Comparative language: tall/taller/tallest, long/longer/longest, similar to,

- different from
- Describe, observe, compare
- Expressions making generalisations e.g. 'we all...'

Animals - Other Animals

- Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.
- Identify and name a variety of common animals that are carnivores, herbivores and omnivores.
- Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, and including pets).
- Find out and describe how animals look different to one another.
- Group together animals according to their different features.
- Recognise similarities between animals:
- Structure: head, body, way of moving, senses, body covering, tail.
- Animals have senses to explore the world around them and to help them to survive.
- Recognise that animals need to be treated with care and sensitivity to keep them alive and healthy.
- Animals are alive; they move, feed, grow, use their senses and reproduce.

Notes and Guidance (non-statutory):

Pupils should use the local environment throughout the year to explore and answer questions about animals in their habitat. They should understand how to take care of animals taken from their local environment and the need to return them safely after study. Pupils should become familiar with the common names of fish, amphibians, reptiles, birds and mammals, including those that are kept as pets.

Pupils might work scientifically by using their observations to:

- Compare and contrast animals at first hand or through videos and photographs.
- Describing how they identify and group them.
- Grouping animals according to what they eat.
- Using their senses.

Use of the school grounds:

- First hand opportunities to see animals are best where possible.
- Amphibians found in the UK are frogs, toads, newts.
- Reptiles found in the UK are
- snakes (such as slow worms and adders) and common lizards.
- Frogs can be found in the pond area but you are unlikely to find any repiles. Pictures/identification of these can be found at: <u>http://www.herpetofauna.co.uk/identification.asp.</u>
- The pond area can provide an opportunity to see frogspawn, and frogs are often found on the KS1 playground. All these provide opportunities for first hand observations and identification, although they would have to be compared with pictures of species not found in our area.
- There are several species of bird that can be seen on the school field particularly magpies, guls and crows.
 The children could set up bird feeders and observe and identify other birds that visit them.

Visiting the barrow and the promenade would provide opportunities to see other animals, particularly birds.

Vocabulary

Parts of the body for animals: head, leg, body, beak, wing, senses (eyes, ears, nose, mouth/mouth parts, hands/paws/claws/talons), Features linked to movement e.g. fly, swim, crawl, run, climb. Features linked to body covering e.g. feathers, fur, scales, colour, camouflage, Common animal types: mammal, bird, fish, amphibians, reptiles. Comparative language: tall/taller/tallest, long/longer/longest, similar to, different from. Describe, observe, compare, because. Expressions making generalisations e.g. 'most have...'

Y1 Science Key Learning

'Working together to achieve success'





Please Note: Much of the learning in Year 1 can be done throughout the year using the school and the local environment. For example plants can be observed to make a linked to seasonal change and weather at various different times. Materials could be linked to a different creative theme throughout the year. Key learning can also be covered as a blocked science unit in its own right to introduce or consolidate learning at other times.

Material Properties – Everyday Materials	Light and Astronomy – Seasonal Change
Distinguish between an object and the material from which it is made.	 Observe changes across the four seasons.
 Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. 	Observe and describe weather associated with the seasons and how day length varies.
Describe the simple physical properties of a variety of everyday materials.	Notes and Guidance (non-statutory):
 Compare and group together a variety of everyday materials on the basis of their simple physical properties. 	Pupils should observe and talk about changes in the weather and the seasons.
F. F	Note:
Notes and Guidance (non-statutory):	Pupils should be warned that it is not safe to look directly at the Sun, even when wearing dark glasses.
Pupils should explore, name, discuss and raise and answer questions about everyday materials so that	Pupils might work scientifically by:
they become familiar with the names of materials and properties such as: hard/soft; stretchy/stiff;	 Making tables and charts about the weather and
and transparent. 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	 Making displays of what happens in the world around them, including day length, as the seasons change.
	Additional suggestion from Lancashire for working scientifically opportunities which enhance learning and
Pupils might work scientifically by:	support using ICT across the curriculum
performing simple tests to explore questions, for example:	This unit provides an ideal opportunity for using data logging equipment to record temperatures
 'What is the best material for an umbrella?for lining a dog basket?for curtains?for a bookshelf? for a gymnast's leotard?' 	Use of the school grounds:
	 Observing plants/trees in the forest thoughout the seasons.
Vocabulary	 Going outside in all weathers to experience them will help the children describe them.
Common materials: e.g. metal, plastic, wood, paper, glass, clay, rock, brick, fabric, sand, papers, cork, shell, water, elastic, foil	 Record outside temperatures using dataloggers/record in tables at different times of the year and compare them (take several readings during each season as the temperatures may vary greatly)
Words used to describe materials and their properties e.g. hard/soft, rough/smooth, shiny/dull, bendy/not	Vocabulary
bendy, stretchy/stiff, waterproof/not waterproof, absorbent/not absorbent, magnetic, transparent, opaque,	Autumn, Winter, Spring, Summer, seasons
Tioat, wet, squasny, strong.	Change, different, temperatures, clothes, activities, record, collect, measure
roughest, etc.	Compare, describe, because
Group, sort, sorting rings, describe, compare, because	