



St Joseph's Catholic Primary School

Science Medium Term Plan Overview

Year 1

PLANTS:

Statutory Requirements:

1. 1a 1 Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
2. 1a 2 Identify and describe the basic structure of a variety of common flowering plants, including trees

Knowledge & Understanding:

1. 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 they have planted.
2. They should become familiar with the common names of flowers, examples of deciduous and evergreen trees, and plant structures (including leaves, flowers, (blossom), petals, fruits, roots, bulb, seed, trunk, branches, stem).
3. Pupils will work scientifically by: observing closely (perhaps by using magnifying glasses) and comparing and contrasting familiar plant; describing how they were able to identify and group them, and drawing diagrams showing the parts of different plants including trees. Pupils might keep a record of how plants have changed over time e.g the leaves falling off trees and buds opening; and compare and contrast what they have found out about different plants.

Lessons:

- 1) Learn that bulbs and seeds can grow into mature plants. Match bulbs and seeds to fully grown trees or plants. Identify whether it's a bulb or seed 1a1
- 2) Identifying and name a variety of common garden plants . Group and consider if seen them before.
- 3) Identifying and name a variety of common wild and garden plants, including deciduous and evergreen trees. Think about whether they have seen them before
- 4) Identifying and name common trees with reference to their shape, leaves, fruit and seeds, whether tree loses its leaves in the autumn and if they are familiar.
- 5) Investigate plants in the local area. Use a tally chart to collect data and present (handle this data) in the form of a pictogram. Analyse data by considering which plant is the most common.
- 6) Labelling the four main parts of a plant: flower, stem, leaf, roots. Discuss function of these parts.
- 7) Label the four main parts of a daisy (flowering plant) and explain their function.



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- 8) Label the different parts of a range of plants using: petals, roots, stem, leaves, trunk , branch, seed, flower, fruit and bulb.

Working scientifically:

- 1) Ask simple questions and recognise they can be answered in different ways.
- 2) Observing closely, using simple equipment
- 3) Performing simple tests
- 4) Identifying and classifying
- 5) Using their observations and ideas to suggest answers to questions
- 6) Gathering and recording data to help in answering questions

New Vocabulary

Deciduous and evergreen trees,
leaves, flowers, (blossom), petals, fruits, roots, bulb, seed, trunk, branches, stem,
wild, common, autumn , produce, pictogram, investigate, data

YEAR 1

ANIMALS INCLUDING HUMANS

Statutory Requirements:

1b1: Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals

1b2: Identify and name a variety of common animals that are carnivores, herbivores and omnivores

1b3: Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)

1b4: Identify, name, draw and label the basic parts of the human body and say what part of the body is associated with which sense

Knowledge and Understanding

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 some fish, amphibians, reptiles, birds and mammals, including those that are kept as pets.

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.



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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; and using their senses to compare different textures

WORKING SCIENTIFICALLY:

ks1w1: asking simple questions and recognising that they can be answered in different ways

ks1w2: observing closely, using simple equipment

ks1w3: performing simple tests

ks1w4: identifying and classifying

ks1w5: using their observations and ideas to suggest answers to questions

ks1w6: gathering and recording data to help in answering questions

Lessons:

- 1) Grouping animals by their body type. Group animals according to properties such as 'animals with a skeleton on the inside', 'animals with feathers'.
- 2) Identifying mammals – know that mammals give birth to live young. Consider what else mammals have in common.
- 3) Learn about and sort animals according to the following groups: fish, amphibian, bird, reptile and mammal.
- 4) Identify and sort animals by what they eat – explore patterns, such as animals eating the same type of food.
- 5) Identify carnivores, herbivores and omnivores.
- 6) Label main parts of animal bodies e.g beak, head, tail, leg and wing
- 7) Label the main parts of the human body – head, arm, neck, elbow, leg, knee, face, ear, mouth, teeth and hair.
- 8) To explain which part of the body is to do with which sense – sight, hearing, taste, smell and touch (which is associated with the whole body rather than one particular organ).

VOCABULARY:

fish, amphibian, bird, reptile and mammal.

carnivores, herbivores and omnivores

body parts: beak, head, tail, leg and wing, neck, arms, elbows, face, knees, ears, eyes, mouth, teeth, hair

sight, hearing, taste, smell and touch, body part (organ)

YEAR 1 EVERYDAY MATERIALS



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Knowledge and Understanding

Statutory Requirements

1c1: Distinguish between an object and the material from which it is made

1c2: Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock

1c3: Describe the simple physical properties of a variety of materials

1c4: Compare and group together a variety of everyday materials on the basis of their simple physical properties

Knowledge and Understanding

Pupils should explore, name, discuss and raise and answer questions about 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; opaque/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 and foil.

Pupils might work scientifically by: performing simple tests to explore questions, for example: What is the best material for an umbrella? ...for lining a dog basket? ...for curtains? ...for a bookshelf? ...for a gymnast's leotard?

KS1 - Working Scientifically

ks1w1: asking simple questions and recognising that they can be answered in different ways

ks1w2: observing closely, using simple equipment

ks1w3: performing simple tests

ks1w4: identifying and classifying

ks1w5: using their observations and ideas to suggest answers to questions

ks1w6: gathering and recording data to help in answering questions

Lessons:

1. Tell the difference between an object and a material – identify an object and the material it is made from
2. Name some everyday materials
3. Identify the material that some objects are made from
4. Explain the properties of some objects and materials – sort them according to their properties e.g bendy/not bendy, hard/soft, transparent/opaque
5. To investigate whether an object floats or sinks – carry out an investigation and record their results on a simple table
6. Group objects and materials by their properties
7. Choose a good material for a purpose –draw a picture of an object, identify the material its made of and its desirable properties.



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8. Investigate the best material for a purpose. Eg. carry out an investigation to find out which is the most absorbent of 4 materials. Use a table to order the results and answer the question.

Vocabulary:

Material, object, wood, metal, plastic, paper, glass, metal, water, rock, fabric, elastic foil
bendy/not bendy, hard/soft, transparent/opaque

Stretchy/stiff

Shiny/dull

Rough/smooth

Waterproof/not waterproof absorbent/not absorbent

YEAR 1 SEASONAL CHANGES

Knowledge and Understanding

1d1: Observe changes across the four seasons

1d2: Observe and describe weather associated with the seasons and how day length varies

Knowledge and Understanding

Pupils should observe and talk about changes in the weather and the seasons.

Note: Pupils should be warned that it is not safe to look directly at the Sun, even when wearing dark glasses.

Pupils might work scientifically by: making tables and charts about the weather; and making displays of what happens in the world around them, including day length, as the seasons change.

KS1 - Working Scientifically

Statutory Requirements

ks1w1: asking simple questions and recognising that they can be answered in different ways

ks1w2: observing closely, using simple equipment

ks1w3: performing simple tests

ks1w4: identifying and classifying

ks1w5: using their observations and ideas to suggest answers to questions

ks1w6: gathering and recording data to help in answering questions

Lessons:

1. Create a pictogram of the number of hours of daylight in the different seasons
2. Place the months and seasons in order.
3. Match different events to different seasons.



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4. Explain why we need to wear different clothes in different seasons
5. Describe plants in different seasons
6. Describe different types of weather
7. Explain what the weather is like in different seasons
8. Explain how much daylight we get in different seasons.

VOCABULARY

Seasons, autumn, winter, spring, summer, daylight, clothing, weather types (rain, sun, wind, snow, sleet etc).

YEAR 2 : LIVING THINGS AND THEIR HABITATS

Knowledge and Understanding

2a1: explore and compare the differences between things that are living, dead, and things that have never been alive

2a2: 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

2a3: identify and name a variety of plants and animals in their habitats, including micro-habitats

2a4: 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.

Knowledge and Understanding

Pupils should be introduced to the idea that all living things have certain characteristics that are essential for keeping them alive and healthy. They should raise and answer questions that help them to become familiar with the life processes that are common to all living things. Pupils should be introduced to 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 raise and answer questions about the local environment that help them 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. Pupils should compare animals in familiar habitats with animals found in less familiar habitats, for example, on the seashore, in woodland, in the ocean, in the rainforest.

Pupils might 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 decided where to place things, exploring questions for example: Is a flame alive? Is a deciduous tree dead in winter? Talk about ways of answering their questions. They could construct a simple food chain that includes humans (e.g. grass, cow, human). They could describe the conditions in different habitats and micro-habitats (under log, on stony path, under bushes) and find out how the conditions affect the number and type(s) of plants and animals that live there.



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KS1 - Working Scientifically

ks1w1: asking simple questions and recognising that they can be answered in different ways

ks1w2: observing closely, using simple equipment

ks1w3: performing simple tests

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ks1w5: using their observations and ideas to suggest answers to questions

ks1w6: gathering and recording data to help in answering questions

Lessons:

- 1) To match animals to their habitats – also explain things that the habitats provide the animals with
- 2) Group things according to whether they are living or non-living.
- 3) Group things according to whether they are alive, dead or have never been alive – classify them.
- 4) Explain how some animals are adapted to their habitats – give 2 adaptations which enable them to survive in their habitat
- 5) Name common animals and plants – think about ways to group them
- 6) Identify and name some plants and animals in the local area (micro- habitat) – carry out an investigation into three local micro-habitats. Predict what they might see, draw what they do see, and after the investigation compare and contrast the 3 micro-habitats.
- 7) Create and describe a food chain – create 4 food chains each containing 3 organisms
- 8) Use a food chain to show different sources of food

Vocabulary

Habitats, living /non living ,adaptions, micro-habitats food chain, consume, consumer, produce, producer, organism.