Curriculum Coherence – Year 1 Science

Term 1

Prior Learning/Starting Points - ELG – Understanding The world: Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one to another. Children know some of the things that make them unique and can talk about some of the similarities and differences in relation to friends or family. They can look closely at similarities, differences, patterns and change and can make observations of animals and plants and explain why some things occur and talk about changes.

INTENT

KNOWLEDGE /NC objectives

Identify, name, draw and label the basic parts of the human body.

Say which part of the body is associated with each sense.

Observe changes across the 4 seasons focussing on the change from AUTUMN to WINTER.

Observe and describe weather associated with the seasons and how day length varies.

IMPLEMENTATION

ACTIVITIES

Observe and describe changes in the seasons and days from Autumn to Winter.

Games and songs associated with naming the body parts.

Exploration of the skeleton and body, creating a labelled model of the human body.

IMPACT

OUTCOMES

I can name the parts of the human body.

I can observe the 4 seasons and compare the differences between Autumn and Winter.

I can make observations of the weather.

I understand how the weather changes within the seasons.

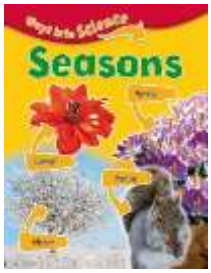
VOCABULARY

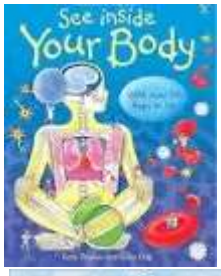
Observation, Season, Autumn, Winter,

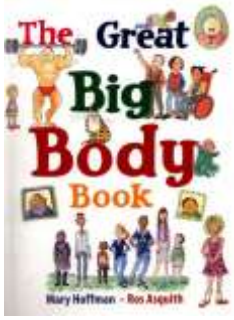
Head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth, skeleton, skull, rib cage, arm bone, leg bone.

Touch, Smell, Taste, Hear, See

READING OPPORTUNITIES







NEXT STEPS IN LEARNING

Year 2

- describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene

Year 3

- identify that humans and some other animals have skeletons and muscles for support, protection and movement

Year 4

- describe the simple functions of the basic parts of the digestive system in humans
- identify the different types of teeth in humans and their simple functions

SKILLS

Working Scientifically is always at the forefront of science teaching with these key areas:

• Asking simple questions and recognising that they can be answered in different ways.
• Observing closely, using simple equipment
• Performing simple tests.

Key Questions

How do we know it's Autumn?

What is the difference between Autumn and Winter? What is the same?

Why are our bodies special?

What does the skeleton do?

• Identifying and classifying. • Using their observations and ideas to suggest answers to questions. • Gathering and recording data to help in answering questions.		**How can we stay healthy and strong?** **What are my senses and how do they work?**

Further NC Links to other subjects
Life learning – Health and Wellbeing
Maths – Measurement - measure and begin to record the following height, length. Compare and describe length and height.

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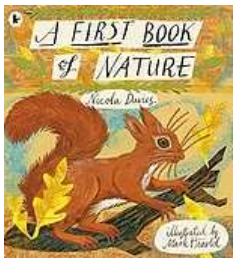
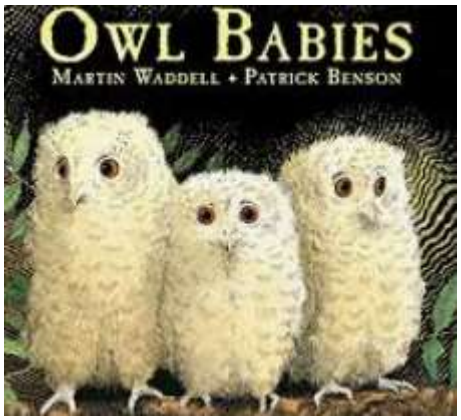
Term 2

Prior Learning/Starting Points – Seasonal Changes – Chn have discussed and described the changes in season from Autumn to Winter. Chn have learnt about the different senses used to identify seasonal changes. Chn have begun to classify and group according to a set of criteria and start to ask questions about a scientific process. ELG – Understanding the World – Shows care and concern for living things and the environment.
Children can talk about some of the things they have observed such as plants, animals, natural and found objects and can comment and ask questions about aspects of their familiar world such as the place where they live or the natural world.

INTENT	IMPLEMENTATION	IMPACT
KNOWLEDGE/ NC Objectives **Distinguish between an object and the material from which it is made.** **Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.** **Describe the simple physical properties of a variety of everyday materials.** **Compare and group together a variety of everyday materials on the basis of their simple physical properties.** **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, including pets).**	**ACTIVITIES** Observe and describe changes in the seasons and days from Winter to Spring. Investigating and categorising animals and discussing their similarities and differences. Why do they make great predators or vulnerable prey? Creating a fact file on one animal, to be added to throughout the term.	**OUTCOMES** I can observe the 4 seasons and compare their differences. I can make observations of the weather. I understand how the weather changes within the seasons. I can name a variety of everyday materials I can describe the properties of materials. I can compare and categorise objects to their materials. I can name and identify common animals. I can describe and compare the structure of animals. I can categorise animals into their food groups. I can name a variety of wild flowers and trees.
VOCABULARY Observation, prediction, investigation, designing, testing, concluding. Wood, plastic, metal, water, glass and rock. Soft, hard, dull, shiny, rough, smooth, absorbent, waterproof, stiff, bendy, stretchy.	**READING OPPORTUNITIES**	**NEXT STEPS IN LEARNING** Year 2 • identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses • find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

Carnivore, herbivore, omnivore, reptile, bird, animal, habitat.





- 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)

Year 3

- 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

Year 4

- recognise some common conductors and insulators, and associate metals with being good conductors
- 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

SKILLS

Working Scientifically is always at the forefront of science teaching with these key areas:

• Asking simple questions and recognising that they can be answered in different ways.
• Observing closely, using simple equipment
• Performing simple tests.
• Identifying and classifying.
• Using their observations and ideas to suggest answers to questions.
• Gathering and recording data to help in answering questions.

Key Questions

What makes objects different?

Why can some objects do things others can't?

What makes a great predator?

How does an animal's habitat help it survive?

What makes humans different from animals?

Further NC Links to other subjects

English – Spoken Language and Discussion/ non-fiction writing.
Maths – Measurement/Compare and describe/Measure and begin to record.
History – Changes in History- the changes in materials used for modes of transport.
Forest school – Types of trees and their basic structure.

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Term 3

Prior Learning/Starting Points – From early learning goals - Developing an understanding of growth, decay and changes over time.

- Looks closely at similarities, differences, patterns and change.
- Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world.
- Can talk about some of the things they have observed such as plants, animals, natural and found objects

INTENT

KNOWLEDGE/NC Objectives

Observe changes across the 4 seasons (this is observed and revisited every half term).
Observe and describe weather associated with the seasons and how day length varies.

Identify and describe the basic structure of a variety of common flowering plants, including trees.

Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees

Identify and describe the basic structure of a variety of common flowering plants, including trees

IMPLEMENTATION

ACTIVITIES

Observe and describe changes in the seasons and days from Spring to Summer.

The children will be planting their own plant (tomato plant) and watching it grow. This is an observational experiment and will require the children to observe their plants growing daily and keep their own diary to write down their findings.

IMPACT

OUTCOMES

I can observe the 4 seasons and compare their differences.

I can make observations of the weather.

I understand how the weather changes within the seasons.

I can describe the structure of plants. (Growing their own tomato plant).

VOCABULARY

Plant, observe, changes, findings, leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem.

SKILLS

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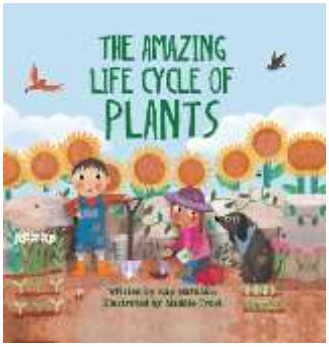
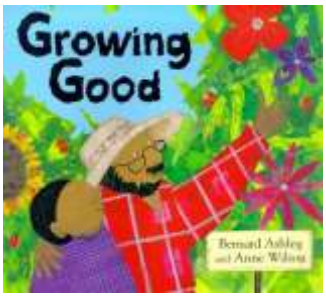
• Asking simple questions and recognising that they can be answered in different ways.
• Observing closely, using simple equipment
• Performing simple tests.
• Identifying and classifying.
• Using their observations and ideas to suggest answers to questions.
• Gathering and recording data to help in answering questions.

READING OPPORTUNITIES





NEXT STEPS IN LEARNING

Year 2

- 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

Year 3

- 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

LINKS

English – non-fiction, investigation into a plants growth.

Key Questions

How do plants go?
Do all plants grow in the same way?
Can plants grow all year round?
Can all plants survive in the same Season/habitat?