Science Curriculum – Year 1

Plants

Learning Objectives

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

Challenge:

- I can identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers.
- I can 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.

Investigation ideas

- How does a daffodil grow? Plant daffodil bulbs and monitor growth over the term.
- Investigate factors affecting growth of cress seeds. (Which is the best compost? How important is light for plants?)
- How can we group leaves? Observe, compare and group leaves.
- Which tree is the oldest? Carry out a tree survey in the local park measure circumference using string.
- Grow beans – monitor growth using photos and measurements. Keep a bean diary.
- What trees and plants grow in our local area? Use books and the internet to identify common plants.
- What have all flowers got in common? Compare flowers.
- To investigate fruit and vegetables.
- Grow carrot tops and measure growth.
- Use microscopes and magnifying glasses to make close up observations of plants.

Resources you may need:

- www.saps.org.uk/primary
- www.bbc.co.uk/schools/scienceclips/ages/5_6/growing_plants.shtml
- www.opalexplorenature.org/education-packs-trees-plants
- www.edinatrust.org.uk/GardeningResources.html
- Planting area
- Seeds
- Gardening Tools
- Compost
- Tape measures
- Bulbs
- Reference Books
- Clipboards
- Magnifying glasses
- Cress Seeds
- Petri dishes
- Plastic cups
- Variety of plant samples and leaves for sorting (set up a nature table

Animals and Humans

Learning Objectives

- I can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
- I can identify and name a variety of common animals that are carnivores, herbivores and omnivores
- I can describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)
- I can identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense

Challenge:

- I can name and describe the job of some organs.

Investigation ideas:

- What sorts of birds live in our local area? Set up a bird table and make observations.
- Minibeasts Spiders Investigation – Web hunt, Spider observations
- Investigating Bees – Making models to show key features of bees, observing how bees fly, local area walk – what sort of flowers attract bees?
- How do frogs change over their lifetime?
- Where do different minibeasts prefer to live?
- Investigating sizes of hands and feet.
- Investigating balancing
- How high can I jump?
- Do we get taller as we get older? Class life graphing investigation – Month of birth and heights.
- Is my hearing better with my eyes closed?

Resources you may need:

Pond dipping/Minibeast search in local area.
www.rspca.org.uk – teacher's resources has a superb wealth of activities.
Clipboards
Magnifying glasses
Specimen jars
Tank for frog spawn
Animal bones
Images of animals and their skeletons
Selection of reference books to identify animals
Model human body / skeleton
Blind folds – senses work.
Stop watches
Height measure /Tape measures/metre rulers
Stand on scales

Everyday materials

Learning Objectives	Investigation ideas:	Resources you may need:
• I can distinguish between an object and the material from which it is made • I can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock • I can describe the simple physical properties of a variety of everyday materials • I can compare and group together a variety of everyday materials on the basis of their simple physical properties. **Challenge:** • I can explain why certain materials are used for particular jobs. • I can compare the strength of different structures.	• To compare shiny/dull materials with smooth/rough materials. • Which materials are waterproof? • What materials are used in our local community for buildings, paths and roads? • Which kitchen roll is most absorbent? • Which materials are opaque and transparent? Challenge – How many layers of a material do you need to make it opaque? • Investigating stretchy toys	Variety of materials Different types of kitchen roll Pipettes Scales Torches Water

Seasonal Changes

Learning Objectives:	Investigation ideas:	Resources you may need:
• I can observe changes across the four seasons • I can observe and describe weather associated with the seasons and how day length varies. **Challenge:** • I can compare seasons in different parts of the world. • I can describe the relationship between the length of daytime and the season.	• How does the Sun move? Solar Observations – Children Record the position of the Sun in the Sky at different times of the day. • How does our local environment change over the seasons? Photography project over the year. • How does the length of the day change? • How does my shadow change over the day?	Data loggers Shadow sticks Globe Nature table – kept in season Bottles to make rainfall measuring devices Images of different seasons Weather station and notice board

Working scientifically (Skills objectives across all units):

- I can ask simple questions about the world around me.
- I can observe closely, using simple equipment.
- I can perform simple tests.
- I can identify and classify.
- I can use my observations and ideas to suggest answers to questions

I can gather and record date to help in answering questions