The Canons CE Primary School

Year 6 – Living Things and Their Habitats

Prior Learning

In Year 4 children will be taught to:

- use keys to identify living things in their local environment
- group plants into categories such as flowering plants and non-flowering plants
- group animals into vertebrates and invertebrates.

In Year 5 children will be taught to:

- compare the life cycles of plants in their local environment to different habitats around the world (such as in the rainforest or in the Arctic)
- describe the similarities and differences between the life cycles of different animals to include mammals, amphibians, insects and birds
- describe the similarities and differences between the life cycles of different plants.

In Year 6

In Year 6 children will be taught to:

- use their research of animals unknown to them in order to classify them
- describe the main features of particular groups such as vertebrates and invertebrates
- give reasons why living things can be classified into different groups.

Key Vocabulary

classify, compare, bacteria, characteristics, classification, microorganism, organism, vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering, non-flowering

Future Learning

In KS3 children will be taught about:

- differences between species.

Famous Scientists

- Carl Linnaeus (1707 – 1778)
- Libby Hyman – classification (invertebrates)
- Evelyn Cheesman (1881 – 1969)
- Sir Hans Sloane (1660 – 1753)
- Gilbert White (1720 – 1793)

Common Misconceptions

Some children may think:

- all micro-organisms are harmful
- mushrooms are plants.

Possible Evidence to be Secure

Children can:

- give examples of animals in the five vertebrate groups and some of the invertebrate groups
- give the key characteristics of the five vertebrate groups and some invertebrate groups
- compare the characteristics of animals in different groups
- give examples of flowering and non-flowering plants.

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Working Scientifically

National Curriculum Statutory Requirements

1. Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
2. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.
3. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
4. Use test results to make predictions to set up further comparative and fair tests.
5. Report and present findings from enquiries, including conclusions, casual relationships and explanations of result, in oral and written forms such as displays and other presentations.
6. Identifying scientific evidence that has been used to support or refute ideas or arguments.

Highlighted = main focus during this topic

Teaching Ideas – Different Types of Scientific Enquiry

Comparative and Fair Testing	Identifying and Classifying	Observation Over Time	Pattern Seeking	Research
Which is the most common invertebrate on our school playing field?	How would you make a classification key for vertebrates/invertebrates or microorganisms?	How do different animal embryos change?	Do all flowers have the same number of petals?	What do different types of microorganisms do? Are they always harmful?

Teaching Ideas – How Pupils Could Work Scientifically

(Bracketed Number = National Curriculum Statutory Requirement Link)

- Use secondary sources to learn about the formal classification system devised by Carl Linnaeus and why it is important. (6)
- Use first-hand observation to identify characteristics shared by the animals in a group. (2)
- Use secondary sources to research the characteristics of animals that belong to a group. (6)
- Use information about the characteristics of an unknown animal or plant to assign it to a group. (5, 6)
- Classify plants and animals, presenting this in a range of ways e.g. Venn diagrams, Carroll diagrams and keys. (3)
- Create an imaginary animal which has features from one or more groups. (6)
- Describe some organisms that may be difficult to classify (e.g. platypus) and explain why. (5, 6)
- Research unfamiliar organisms from a broad range of other habitats and decide where they belong in the classification system. (6)

Teaching Ideas – Possible Evidence to be Secure

Children can:

- use classification materials to identify unknown plants and animals (6)
- create classification keys for plants and animals (5, 6)
- give a number of characteristics that explain why an animal belongs to a particular group. (5, 6)