

# Year 4 Science Autumn 2 Unit

## Living Things and their Habitats

### Progression of Knowledge

Unit	YEAR 2	YEAR 4	YEAR 5	YEAR 6
Living things and their habitats	<p>Explore and compare the differences between things that are living, dead, and things that have never been alive</p> <p>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</p> <p>Identify and name a variety of plants and animals in their habitats, including microhabitats</p> <p>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</p>	<p>Recognise that living things can be grouped in a variety of ways</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things</p>	<p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>Describe the life process of reproduction in some plants and animals</p>	<p>Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals</p> <p>Give reasons for classifying plants and animals based on specific characteristics</p>

### Lesson Sequence

1. Explore different habitats
2. Research a habitat
3. Explore how animals can be classified
4. Create a classification key
5. Adaptations and classification within species
6. Explore and classify pond plants

### Rocket Words

adapted	changed to suit an environment
camouflage	a way of blending or hiding in your surroundings
coastal	at or near the coast, or beach
grassland	areas containing grass
classify	to arrange things in classes or groups according to shared qualities or characteristics
species	a grouping, or kinds of animals with similar characteristics
sub-group	a group within a larger group
classification key	a series of questions that help to identify a species
region	a large space or area
blubber	a layer of fat beneath the skin of sea mammals
ecosystem	a community of living things
oxygenised	contains oxygen

Key Scientific Skills	Year 4 Living things and their habitats
Ask relevant questions and using different types of scientific enquiries to answer them	
Set up simple practical enquiries, comparative and fair tests	
Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	
Gather, record, classify and present data in a variety of ways to help in answering questions	
Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	
Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	
Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	
Identify differences, similarities or changes related to simple scientific ideas and processes	
Use straightforward scientific evidence to answer questions or to support their findings	

### What is a Classification Key?

A classification key is a series of questions that determine an organism's physical characteristics. When you answer one question, it either branches off to another question or identifies the organism. Ultimately, they help to identify an unknown organism, or work out how to categorise groups of similar organisms.

### Classification

Classification of Vertebrates

- Warm-blooded
  - Mammals: Lion, Pig, Dog
  - Birds: Eagle, Owl
- Cold-blooded
  - Fish: Shark, Trout, Salmon
  - Reptiles: Snake, Lizard
  - Amphibians: Frog, Toad

### Venn Diagrams

Animals can be sorted, or classified, in a number of different ways. A 'branched' diagram or a Venn diagram, like those shown below, are just two examples.

### Classification Keys

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    graph TD
      Q1[Does the animal live on land?] -- yes --> Q2[Does the animal have scales?]
      Q1 -- no --> Q3[Does the animal lay eggs?]
      Q2 -- yes --> C1[Chicken]
      Q2 -- no --> C2[Donkey]
      Q3 -- yes --> C3[Turtle]
      Q3 -- no --> C4[Dolphin]
    
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