

How can we sort living things by their size, and what does this tell us about how they survive and grow in different environments?

Expected Outcomes

Pupils will be able to:

- Define the term 'organism' and name the seven life processes of all living things.
- Describe the work of Carl Linnaeus.
- Define the term 'vertebrate' and name the vertebrate groups.
- Describe the characteristics of fish, amphibians, reptiles, birds and mammals.
- Compare the characteristics of the vertebrate groups.
- Define the term 'invertebrate'.
- Describe the characteristics of worms, snails, spiders and insects.
- Compare the characteristics of the invertebrate groups.
- Name the plant groups.
- Describe the characteristics of flowering plants, ferns, mosses and conifers.
- Define the term 'micro-organism' and name some examples.

Developmental Focus Opportunities

- Define the term '**organism**' using real-life examples from different kingdoms.
- Introduce and explore the **seven life processes (MRS GREN)** with mnemonics and interactive games.
- Use sorting activities to classify **living vs. non-living** things based on life processes.
- Research and present the work of **Carl Linnaeus** through timelines, role-play, or fact files.
- Create a **classification tree** using Linnaean principles to sort familiar organisms.
- Define the term '**vertebrate**' using skeleton models or diagrams.
- Group animals into **vertebrate categories**: fish, amphibians, reptiles, birds, mammals.
- Investigate and describe the **characteristics** of each vertebrate group using observation and media.
- Compare vertebrate groups using **Venn diagrams**, tables, or sorting cards.
- Define the term '**invertebrate**' and contrast with vertebrates using models or visuals.
- Explore the characteristics of **worms, snails, spiders, and insects** through magnification or live specimens.
- Compare invertebrate groups using **classification keys** or storytelling techniques.
- Name the **main plant groups**: flowering plants, ferns, mosses, conifers.
- Describe the **characteristics** of each plant group using leaf rubbings, seed sorting, or microscope work.
- Define the term '**micro-organism**' and explore examples like bacteria, fungi, and algae.

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- Compare micro-organisms by function (e.g., helpful vs. harmful) using diagrams or digital tools.

Key Learning Points	Powerful Knowledge
• Understand the meaning of the term ‘organism’ and identify the seven life processes (MRS GREN). • Recognise the contribution of Carl Linnaeus to the classification of living things. • Define ‘vertebrate’ and identify the five vertebrate groups: fish, amphibians, reptiles, birds, and mammals. • Describe the key characteristics of each vertebrate group. • Compare and contrast the features and adaptations of vertebrate groups. • Define ‘invertebrate’ and understand how they differ from vertebrates. • Describe the characteristics of common invertebrate groups: worms, snails, spiders, and insects. • Compare the features and body structures of invertebrate groups. • Identify the main plant groups: flowering plants, ferns, mosses, and conifers. • Describe the characteristics and reproduction methods of each plant group. • Define the term ‘micro-organism’ and give examples such as bacteria, fungi, and algae.	Pupils will gain a deep understanding of how living things are classified based on shared characteristics, from the smallest micro-organisms to the largest vertebrates. They will explore the seven life processes that define all organisms and learn how scientific pioneers like Carl Linnaeus shaped our understanding of biodiversity. Through detailed comparisons of animal and plant groups, pupils will develop the ability to observe, describe, and categorise life forms with precision. This foundational biological knowledge empowers them to make sense of the natural world, recognise the complexity of life, and appreciate the systems that support health, growth, and survival across species.
Subject-Specific Vocabulary	Reading Opportunities
classification key (LKS2) classify (LKS2) cold-blooded conifer exoskeleton fern life processes micro-organism	Science magazines like Whizz Pop Bang or National Geographic Kids featuring classification and animal features What is Evolution? by Louise Spilsbury See Inside Your Body (Usborne) or The Human Body Factory by Dan Green

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moss organism warm-blooded	
Possible Misconceptions	Cross-Curricular Links
• Bigger animals are always more complex or more important than smaller ones. • Small organisms (like insects or micro-organisms) aren't "real" animals or living things. • All small living things are invertebrates; all big ones are vertebrates. • Size determines classification (e.g. whales are fish because they live in water). • Plants don't count as living things because they don't move. • Micro-organisms aren't alive because we can't see them. • All animals grow at the same rate or reach similar sizes. • Classification is based on appearance alone, not shared characteristics or life processes.	British values: mutual respect. Art: clay sculpture. English: writing.