



Lowerhouse Junior School

Science Overview Sheet



Year 6 – Classification



Rationale: Teaching classification in Year 6 science helps students understand how to organize and categorize living and non-living things. It fosters critical thinking, enhances observation skills, and lays the foundation for more complex scientific concepts. This knowledge is essential for understanding biodiversity and the relationships between different organisms.

Substantive Knowledge:

- Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals
- Give reasons for classifying plants and animals based on specific characteristics.

Disciplinary Knowledge:

- Researching
- Classifying

Overview:

Lesson 1: How can organisms be grouped?

Lesson 2: What characteristics can we observe to sort by?

Lesson 3: How can we distinguish between organisms with similar characteristics?

Lesson 4: How can we classify plants by characteristics?

Lesson 5: How can micro-organisms be grouped?

Lesson 6: Who is Carl Linnaeus?

Lesson 7: How can we present our findings on vertebrates/invertebrates/animals/plants/microorganisms?

Key Vocabulary:

Vertebrates: Animals with a backbone or spinal column.

Fish: Aquatic vertebrates that have gills, fins, and typically scales.

Amphibians: Cold-blooded vertebrates that live both in water and on land, such as frogs and salamanders.

Reptiles: Cold-blooded vertebrates with scaly skin, such as snakes, lizards, and turtles.

Birds: Warm-blooded vertebrates with feathers, wings, and beaks, such as sparrows and eagles.

Mammals: Warm-blooded vertebrates with hair or fur, and females produce milk to feed their young, such as humans, dogs, and whales.

Warm-blooded: Animals that can regulate their body temperature internally, such as birds and mammals.

Cold-blooded: Animals whose body temperature changes with the environment, such as reptiles and amphibians.

Invertebrates: Animals without a backbone, such as insects, spiders, and worms.

Insects: Small invertebrates with a three-part body (head, thorax, abdomen), six legs, and usually wings, such as ants and butterflies.

Spiders: Arachnids with eight legs and two body segments, known for spinning webs.

Snails: Molluscs with a coiled shell, a muscular foot, and tentacles on their head.

Worms: Elongated, soft-bodied invertebrates, such as earthworms and flatworms.

Flowering: Plants that produce flowers and seeds, such as roses and sunflowers.

Non-flowering: Plants that do not produce flowers, such as ferns and mosses.

Mosses: Small, non-flowering plants that typically grow in dense green clumps or mats in damp or shady locations.

	<p>Ferns: Non-flowering plants with feathery leaves, reproducing via spores.</p> <p>Conifers: Cone-bearing trees and shrubs, such as pines and firs, that usually have needle-like leaves.</p>
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Impact/Assessment

Most Children will be able to: • 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 • use classification materials to identify unknown plants and animals • create classification keys for plants and animals • give a number of characteristics that explain why an animal belongs to a particular group