

Science – Living things and their habitats (Biology)
Essential Question: What is meant by The Kingdom of Life ?



What I should already know: The children have touched upon classification in their oceans topic and know that classification means sorting into groups according to different features. They know about different habitats and that some fungi live in oceans. They know that a vertebrate is an animal with a backbone and a mammal is an animal that gives birth to live young.

Enquiry Questions:

What is meant by the kingdoms of life?

What did Carl Linnaeus contribute to Science?

Is there only one type of vertebrate?

What lives in the soil?

What is the role of fungi?

Key Vocabulary

Amphibian - A cold-blooded vertebrate, like frogs and toads, the larvae being typically aquatic, breathing by gills.

Carbon dioxide - A greenhouse gas found in the atmosphere.

Cell - The smallest structural and functional unit of an organism.

Classify - Arrange into classes or categories according to shared qualities or characteristics.

Classification - The action or process of classifying something.

Ecosystem - A community of interacting organisms and their environment.

Fungi - A simple organism, or living thing, that is neither a plant nor an animal eg yeast/mould/mushrooms

Fungi are their own kingdom as they gain energy from dead plants and animals, not the sun.

Genus - A class, kind, or group marked by common characteristics or by one common characteristic

Habitat - The place a plant or animal lives

Hyphae - The name for fungal cells

Invertebrates - Animals without a backbone or bony skeleton.

Kingdom - A category grouping together all forms of life, having certain characteristics in common.

The six living kingdoms are: animals, plants, fungi, bacteria, protists and archaea.

Mammal - A class of vertebrates including humans, that produce milk to feed their babies.

Microorganism - A tiny, microscopic organism such as bacteria, virus or fungus.

Multicellular - An organism which consists of more than one cell

Mushrooms - The fruiting body of the fungus. Some are edible, but some are poisonous.

Mycelium - A collection of fungal cells that look a bit like roots.

Organisms - A term for any living thing

Oxygen - Colourless gas found in the atmosphere.

Prokaryote - A cellular organism which has no nuclear membrane.

Reptile - Cold-blooded vertebrate like snakes, lizards with scales.

Species - The smallest class of organisms

Spores - Seed-like cells that help some kinds of plants and bacteria to reproduce.

Taxonomy - the science of investigating which groups different organisms belong in.

Unicellular - an organism which consists of one cell

Vertebrates - an animal with a backbone/ Invertebrate - an animal with no back bone (eg jellyfish)

Yeasts - a single-celled fungi.

Zoologist - somebody who studies animals.

Science Skills

Pupils will:

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.

Give reasons for classifying plants and animals based on specific characteristics.

Find out about the significance of the work of scientists such as Carl Linnaeus, a pioneer of classification.

Classify animals into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrates (fish, amphibians, reptiles, birds and mammals).

Use the local environment throughout the year to explore and answer questions about animals in their habitat.

Scientific Enquiry

Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, and bar and line graphs.

Planning different types of enquiries to answer questions including recognising and controlling variables where necessary

Identifying scientific evidence that has been used to support or refute ideas or arguments

Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays or other presentations, identifying scientific evidence that has been used to support or refute ideas

Grouping and classifying.

Record scientific data using diagrams

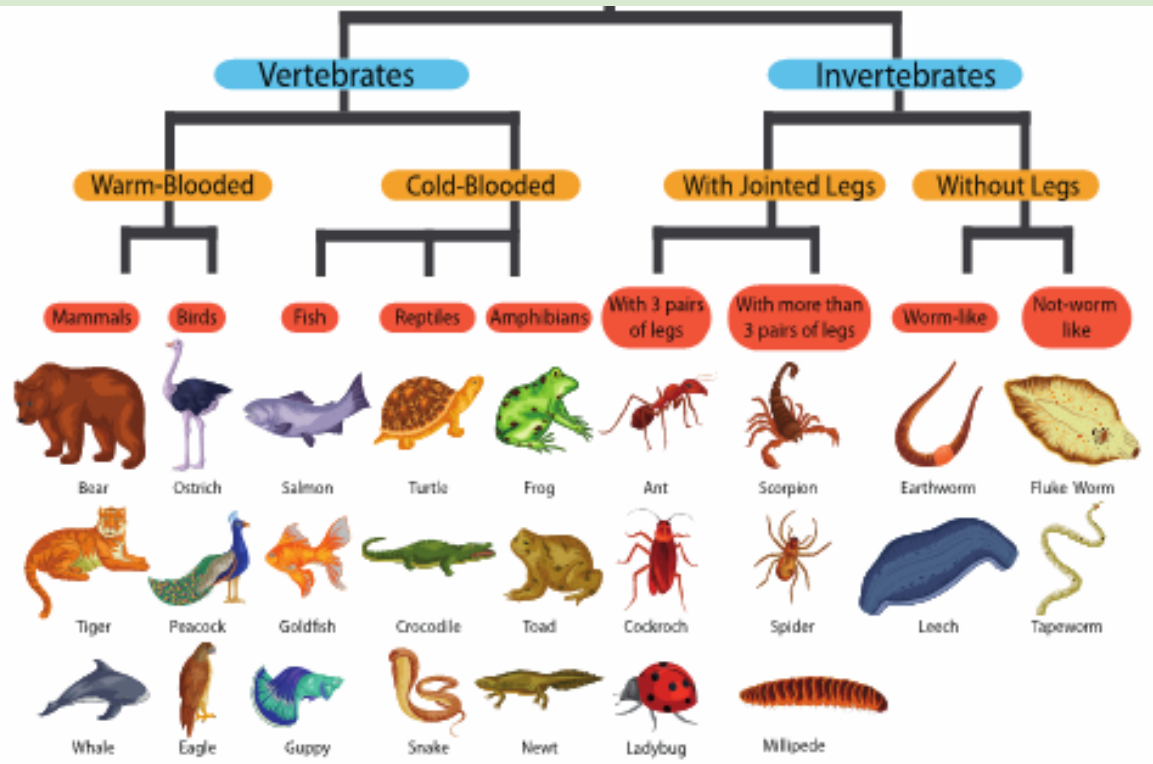
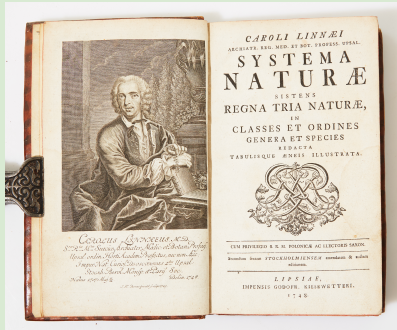
Use test results to make predictions to set up further comparative and fair tests.

Carl Linnaeus

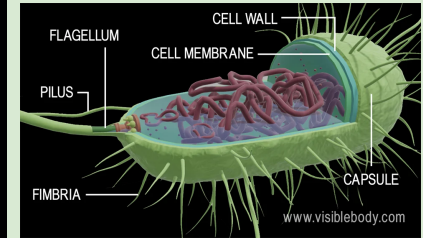
Carl Linnaeus was a Swedish naturalist. He created two scientific systems: the system for classifying plants and animals and the system for naming all living things.



Carl Linnaeus' book called 'Systema Naturae' laid out the classification of living things.



PROKARYOTE CELL

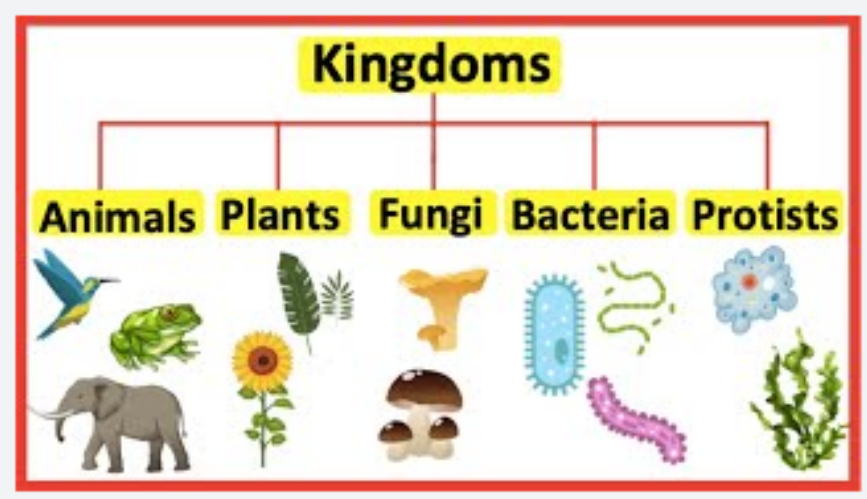


Characteristics of Living Things

Characteristics of living things

MRS GREN

- Movement
- Respiration
- Sensitivity
- Growth
- Reproduction
- Excretion
- Nutrition



Links to other curriculum areas: History - significant scientists of the past. Maths - sorting into groups.