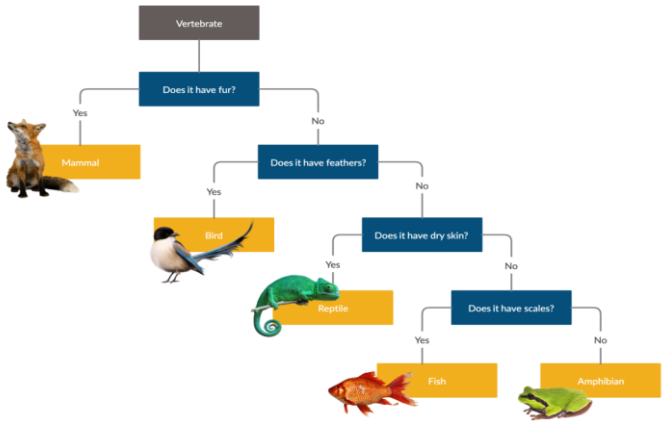
Living Things and Their Habitats (Classification) Knowledge Organiser – Year 6 - BIOLOGY

Sticky Knowledge

- ✓ The largest vertebrate to ever exist is the blue whale, which can grow to over 100 feet long and have a mass of 150,000kg!
- ✓ The smallest vertebrate is thought to be a tiny frog called the *Paedophryne amauensis*. It only grows to about 8mm long.
- ✓ Vertebrate animals can be either warm-blooded (endotherms) or cold-blooded (exotherms). A cold-blooded animal cannot maintain a constant body temperature. The temperature of their body is determined by the outside surroundings.
- ✓ 97% of all animal species are invertebrates.

Important facts to know by the end of the Classification topic:

- ➢ Be able to classify living things into broad groups according to observable characteristics and based on similarities and differences.
- ➢ Know how living things have been classified.
- ➢ Give reasons for classifying plants and animals based on specific characteristics.



A **classification key** (above) is a set of questions used to help you identify something or decide which group it belongs to. It looks like a flow chart and is also known as a branching diagram.

Big Idea

All living things can be grouped according to their characteristics. This means they share some features with other living things and therefore can be grouped together. Once they are grouped, they have been classified – this means they have joined a group.

Classification of Life:

KINGDOMS

Scientists have now divided living things into five larger groups called Kingdoms.

1.) **PLANTS**
2.) **ANIMALS**
3.) **FUNGUS** (mushrooms, yeast, mould, mildew)
4.) **PROTIST** (protozoans, amoeba, euglena)
5.) **PROKARYOTE** (blue-green algae, bacteria)

Carl Linnaeus

- Swedish botanist, physician and zoologist who lived from 1707 to 1778.
- Developed the binomial naming system for living things using two Latin words, one for its genus, the other for its species.
- Regarded as the father of taxonomy, the method of sorting living things based on their physical characteristics and how they are related to one another.

Seven Levels of Classification:	Mnemonic:	Example – Humans:
Kingdom	Keep	Animalia
Phylum	Plucking	Chordata
Class	Chickens	Mammalia
Order	Or	Primates
Family	Face	Hominidae
Genus	Getting	Homo
Species	Sacked	Homo sapiens

Vocabulary

Vertebrates: Animals which have backbones (mammals, fish, birds, reptiles and amphibians).
Fish: Aquatic scaly animals whose limbs are fins and breathe using gills. Examples: sharks, goldfish.
Amphibians: Vertebrates who lay eggs and spend at least some part of their life cycle living in water. They usually undergo metamorphosis. Examples: frogs, toads, newts.
Reptiles: Egg-laying, scaled animals who shed their skins. Examples: snakes, tortoises, lizards.
Birds: Egg-laying, warm-blooded, feathered animals with beaks. Most, but not all species can fly. Example: blackbird, robin, penguin.
Mammals: Fur-covered, warm-blooded animals who (mainly give birth to live young and lactate (produce milk). Examples: humans, dogs, whales, dolphins.
Invertebrates: Animals without backbones. These include insects, spiders (arachnids), worms and crustaceans such as crabs.
Spiders: (Arachnids) Eight-legged animals with exoskeletons and two body sections (head and abdomen). They cannot fly and often spin silk webs.
Insects: Six-legged, three body segmented creatures with exoskeletons.
Snails: Molluscs with shells. They move via a mucus (slime) covered muscular foot. They have hydrostatic skeletons.
Worms: Segmented, limbless animals with hydrostatic (water pressure) skeletons.
Flowering Plants: Plants which reproduce using pollination via flowers.
Non-Flowering Plants: Plants which reproduce using other means such as runners. They no not have flowers.
Environment: The place and its surroundings where living things live.
Animals: Multi-cellular living things which cannot create their own food and can move.
Classify / Classification Key: The process of using 'Yes' / 'No' answered questions to sort living things.
Micro-organism: Micro-organisms are tiny. They are so small they can only be seen with a microscope.
Species: This is the grouping together of similar species of plant, animal and other organisms.
Fungi: Fungi are a group of living organisms which are classified in their own kingdom. This means they are not animals, plants, or bacteria.
Monera: The whole organism is made up of just one cell. The cell is more basic than cells of other organisms.
Bacteria: Bacteria are tiny, single-celled organisms that are everywhere around us.
Protista: Protists are not animals, plants, fungi, or bacteria. Many protists are so small that people can see them only through a microscope.
Plant: Living things which are producers, using photosynthesis to create sugars.

Micro-organism

Species

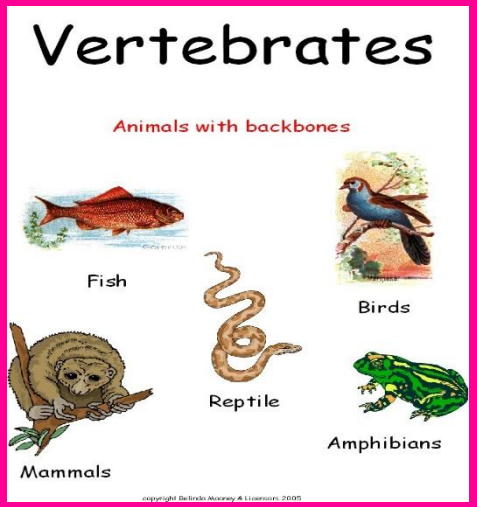
Fungi

Bacteria

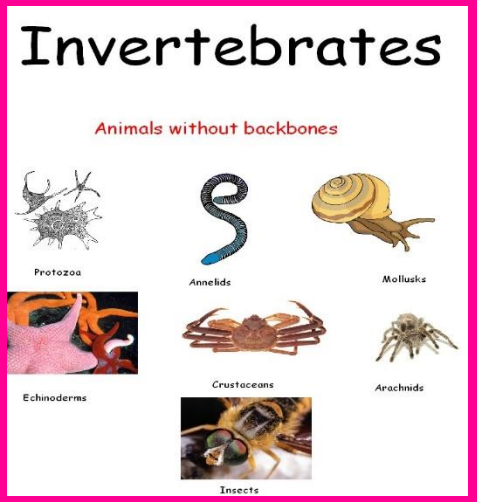
Monera

Protista

Vertebrates



Invertebrates

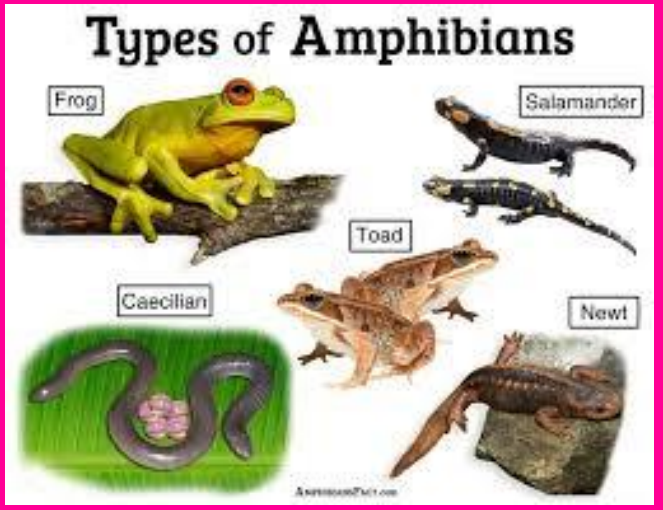


Fish

Birds

Mammals

Amphibians



Reptiles

Insects

Spiders (Arachnids)

Snails (Molluscs)

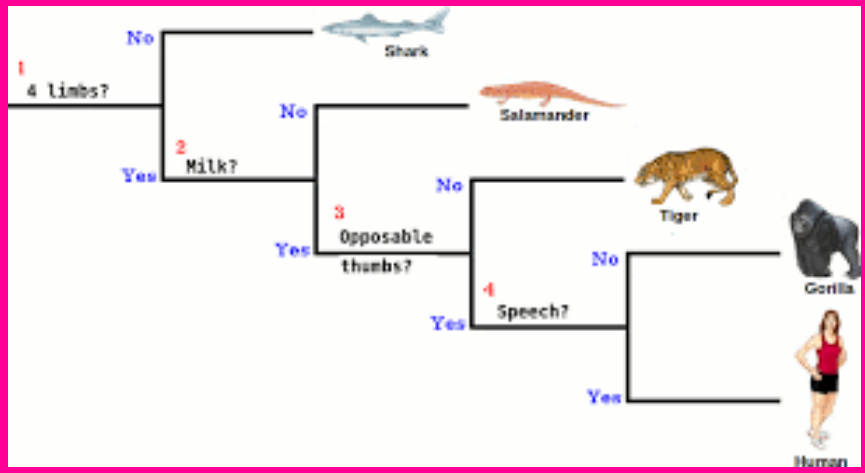
Worms

Flowering plants

Non-flowering plants

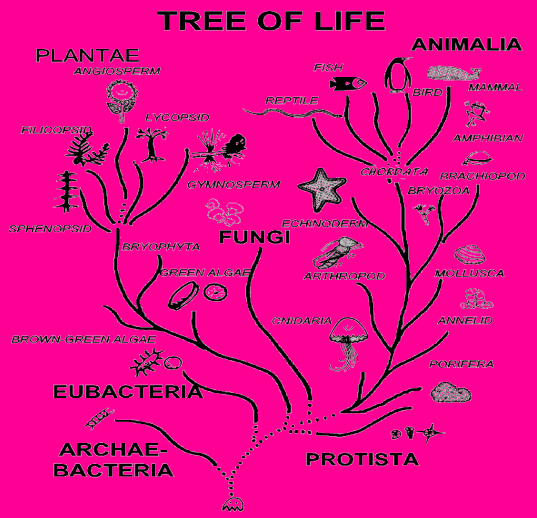
Plants

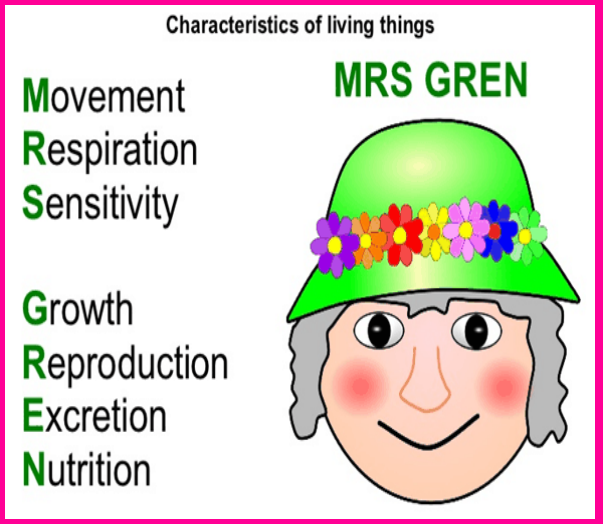
Classify / Classification Key



Environment

Living Things





Animals