



LIVING THINGS and their habitats KNOWLEDGE ORGANISER



What you should already know...



- Animals and plants can be classified into different groups based on their characteristics.
- Animals can be grouped into vertebrates (with a backbone) and invertebrates (without a backbone).
- They can then be subdivided into further groups, for example mammals, fish, reptiles etc. (vertebrates) or spiders, snails, worms etc. (invertebrates).
- Plants are commonly grouped into flowering plants and non-flowering plants. They too can be sub-divided beyond these broad classifications.

Linnaeus Classification

Carl Linnaeus

Carl Linnaeus was a Swedish scientist, botanist and zoologist who is known as the 'father of taxonomy.'

He created something called the binomial nomenclature, which was a way of classifying plants and animals (taxonomy).

He classified man among the primates, which brought him criticism at the time!

He was made a noble by the Swedish King. He lived from 1707-1778. Parts of his system are still used today.



Classification System

Linnaeus gave each organism a two part Latin scientific name, based on their genus and species. A genus is a group made up of several species.

For example, the genus 'Pan' is made up of the chimpanzee (*pan troglodytes*) and the bonobo (*pan paniscus*).



His scientific process involved observing, recording the information and making conclusions.

Classification of Animals

M-R-S G-R-E-N

You can remember the seven features of living things by using the acronym MRS GREN (Movement, Respiration, Sensitivity, Growth, Reproduction, Excretion and Nutrition).

Mammals

- Mammals are warm-blooded.
- They often have hair/fur on their bodies.
- Mammals give birth to live young.
- Mammals often drink milk from their mothers.

Bears, Lions, Dogs, Cats, Rabbits, Squirrels, Whales, Monkeys, Horses, Cows, Pigs, Sheep, Tigers, Humans.

Reptiles

- Reptiles are cold-blooded.
- They normally lay eggs (but some don't).
- Reptiles have scales or scutes.

Crocodiles, Lizards, Turtles, Chameleons, Snakes, Geckos, Iguanas, Dinosaurs.

Amphibians

- Amphibians are cold-blooded animals.
- They have moist, scaleless skin. It is often permeable.
- Amphibians lay eggs.

Frogs, Salamanders, Toads, Newts, Tadpole.

Fish

- Fish are cold-blooded animals.
- Fish can breathe underwater, using gills.
- Fish lay eggs.
- Fins help to propel fish through the water.

Sharks, Goldfish, Carp, Swordfish, Stingray, Clownfish, Pike, Salmon, Bass, Haddock, Tuna, Cod, Eel, Turbot.

Birds

- Birds are warm-blooded.
- Birds have feathers, wings and a beak.
- Birds lay eggs.

Parrot, Owl, Eel, Flamingo, Penguin, Puffin, Chicken, Toucan, Blackbird, Sparrow, Pigeon.

Snails

- Snails have shells.
- They have a large muscular foot, which secretes mucus.
- Their stomach is directly above their muscular foot.
- Most snails live underwater.

Garden Snail, Scutalus, Giant African Land Snail.

Slugs

- Slugs do not have shells.
- They have a large muscular foot, which secretes mucus.
- Their stomach is directly above their muscular foot.

Leopard Slug, Black Slug, Yellow Slug.

Worms

- Worms have long, narrow bodies.
- Worms do not have limbs (arms and legs).
- They are bilaterally symmetrical (both sides the same).

Flatworms, Round Worms, Segmented Worms

Spiders

- Spiders have eight legs.
- Spiders bodies are made of two main parts.
- Spiders create silk from their spinneret glands.
- Spiders lay eggs.

Tarantula, Wolf Spider, Huntsman Spider, Widow Spider.

Insects

- Insects have exoskeletons: hard shell-like coverings of their body. They also have three main body parts.
- They have antennae on the top of their heads.

Beetle, Ant, Fly, Flea, Butterfly, Mosquito, Bee, Cricket.

Classification in Local Habitats



Garden

Vertebrates: Mammals = cats, dogs, rabbits, foxes. Birds = sparrow, robin, crow. Amphibians = frogs, toads.

Invertebrates: Insects = bee, wasp, fly, Spiders, Worms = earthworm, Snails = garden snail, Crustaceans = woodlouse.

Seaside

Vertebrates: Mammals = Beach mice, Birds = seagulls, pigeons, Reptiles = sea turtles, Fish = cod, haddock.

Invertebrates: Crustaceans = crabs, lobsters, prawns, Echinoderms = starfish, sea cucumbers, sea urchins.

Forest

Vertebrates: Mammals = badger, deer, squirrel, boar, pine marten. Birds = woodpecker, owl, warbler. Reptiles: adder, lizard, slowworm.

Invertebrates: Spiders: harvestman, woodlouse spider, Insects: Ants, crickets, grasshoppers.

Human Classification – from vague to specific

Kingdom: Animals → Phylum: Chordates → Class: Mammals → Order: Primates → Family: Hominids → Genus: Homo → Species: Homo Sapiens