



# Year 6 – Living things and their Habitats – Summer Term



## 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).

<b>Mammals</b> -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.	<b>Snails</b> -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.
<b>Reptiles</b> -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.	<b>Slugs</b> -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.
<b>Amphibians</b> -Amphibians are cold-blooded animals. -They have moist, scaleless skin. It is often permeable. -Amphibians lay eggs.	Frogs, Salamanders, Toads, Newts, Tadpole.	<b>Worms</b> -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.
<b>Fish</b> -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.	<b>Spiders</b> -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.
<b>Birds</b> -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.	<b>Insects</b> -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.

## 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

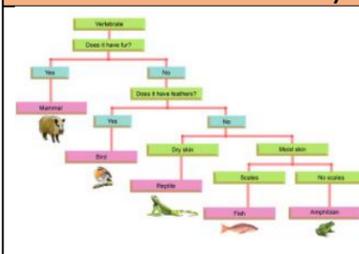


# Living things and their Habitats – Vocabulary



adaptation	a change in structure or function that improves the chance of survival for an animal or plant within a given environment
carnivore	an animal that eats meat
characteristics	the qualities or features that belong to them and make them recognisable
classification key	a system which divides things into groups or types
criteria	a factor on which something is judged
energy	the ability and strength to do physical things
environment	all the circumstances, people, things, and events around them that influence their life
evolution	a process of change that takes place over many generations, during which species of animals, plants, or insects slowly change some of their physical characteristics
food chain	a series of living things which are linked to each other because each thing feeds on the one next to it in the series
habitat	the natural environment in which an animal or plant normally lives or grows
herbivore	an animal that only eats plants
invertebrate	a creature that does not have a spine, for example an insect, a worm, or an octopus
microhabitat	a small part of the environment that supports a habitat, such as a fallen log in a forest
microorganism	a very small living thing which you can only see if you use a microscope
mini-beast	a small invertebrate animal such as an insect or spider
omnivore	person or animal that eats all kinds of food, including both meat and plants
organism	a living thing
predator	an animal that kills and eats other animals
prey	an animal hunted or captured by another for food
species	a class of plants or animals whose members have the same main characteristics and are able to breed with each other
vertebrate	a creature which has a spine

## Classification Keys



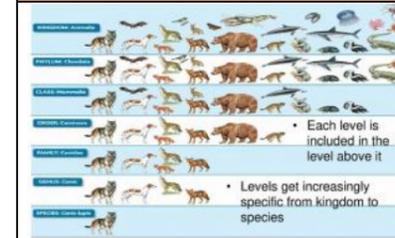
A classification key is a tool that is used to group living things to help us identify them using recognizable characteristics.

## Microorganisms

Microorganisms are very tiny organisms where a microscope has to be used to see them.

- Examples of microorganisms include dust mites, bacteria and fungi, such as mould.
- Some microorganisms can be helpful in certain situations. Others can be harmful, and their spread needs to be controlled or contained.

## Linnaean system



The Linnaean system, named after Carl Linnaeus, has different levels where the number of living things in each group gets smaller and smaller, until there will just be one type of animal in the species group.

- Each level is included in the level above it
- Levels get increasingly specific from kingdom to species