# Year 6 Science Knowledge Organiser: Classification

## Key vocabulary

| | |
|---|---|
| **classification** | a way of grouping things based on similar characteristics. |
| **classification key** | a series of questions about the organism's physical characteristics. |
| **living** | alive now or once was alive. Has all of the 7 characteristics from MRS GREN. |
| **non-Living** | not alive now and never was alive. Does not possess all of the 7 MRS GREN characteristics e.g. fire. |
| **vertebrate** | living things with a backbone e.g. dogs, fish and humans. |
| **invertebrate** | living things without a backbone e.g. fly, spider, jellyfish. |
| **amphibian** | cold-blooded vertebrate animals (e.g. frogs and toads) that have gills and live in water as young but breathe air as adults. |
| **bird** | **w**arm-blooded, egg-laying animals that have vertebrae, or a backbone. They are different from mammals because they lay hard-shelled eggs and have feathers. A **bird** has four limbs—two thatare wings—along with a beak and no teeth. |
| **fish** | an animal that lives in water and has fins for swimming and gills for breathing. **Fish** are cold-blooded animals with skeletons inside their bodies. Most **fish** have scales on their skin. |
| **mammal** | an animal that breathes air, has a backbone, and grows hair at some point during its life. In addition, all female **mammals** have glands that can produce milk. **Mammals** include a wide variety of animals, from cats to humans to whales. |
| **reptile** | a cold-blooded animal (as a snake, lizard, turtle, or alligator) that breathes air and usually has the skin covered with scales or bony plates. |
| **environment** | all of the conditions that affect a living thing. |
| **organism** | a living thing made up of one or more cells and able to carry on the activities of life (e.g. using energy, growing, or reproducing). |

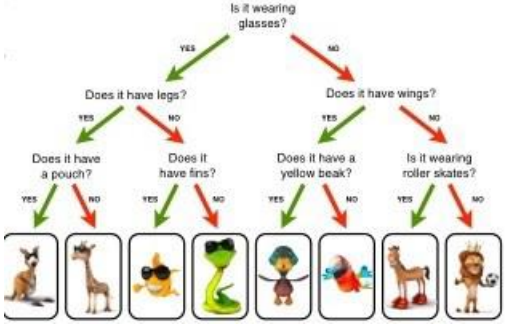
## Focus scientists

**Carl Linnaeus** (1707-1778) was a botanist, zoologist and physician. He's most famous for simplifying the naming system scientists use to describe the millions of species on Earth. An adapted version of this system is still used today: The Linnaeus System.

Agnes Arber (1879-1960) was a botanist and the first woman to become a fellow of the Royal Society who studied aquatic flowering plants and monocots, a group of flowering plants)

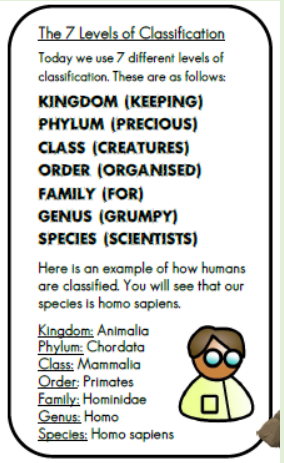
### What is a classification key?

A classification key is a tool that uses yes/no questions to group living Parts of the eye




## Key Knowledge

Classification means to group living things based on similar characteristics.




**What are Kingdoms?** Scientists have organised living things into 5 broad groups called kingdoms: plants, animals, fungi, protest and prokaryote. Each group allows scientists to observe and understand the **characteristics** of living things more clearly. They group similar things together then split the groups again and again based on their differences.

**Microorganisms** are viruses, **bacteria**, moulds and yeast. Some animals (dust mites) and plants (phytoplankton) are also **microorganisms**.

| Helpful Microbes | Harmful Microbes |
|---|---|
| Bacteria – cheese | Bacteria – salmonella is a bacterium that can lead to food poisoning |
| Yeast – wine | Virus – chicken pox and flu are examples of viral diseases |
| Bacteria – yoghurt | Fungi – athlete's foot |
| Yeast – bread dough | Bacteria – plaque |
| Penicillium fungi - antibiotics | Fungi - mould |