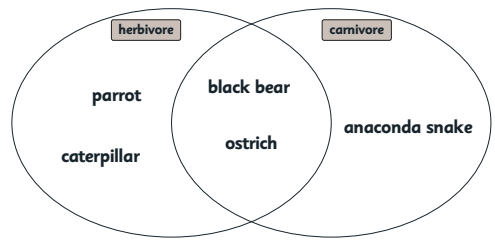


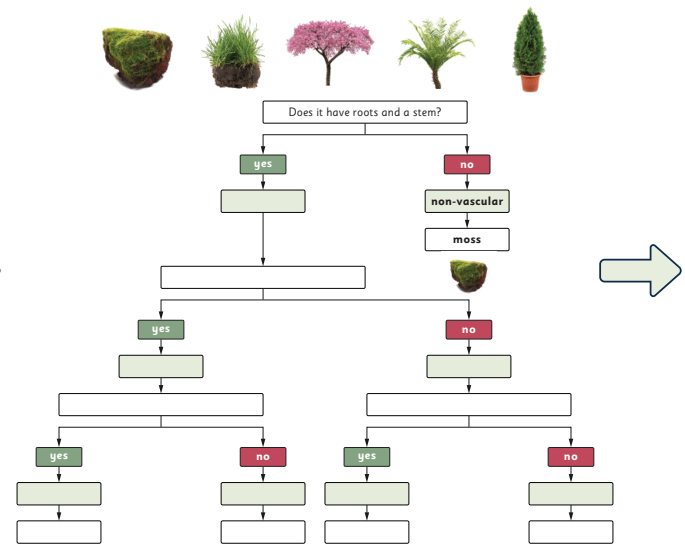
Living things & their habitats

What is classification?

Classification is when we **sort** things into groups. We can begin sorting using **criteria** to **group organisms** with **similar characteristics**:

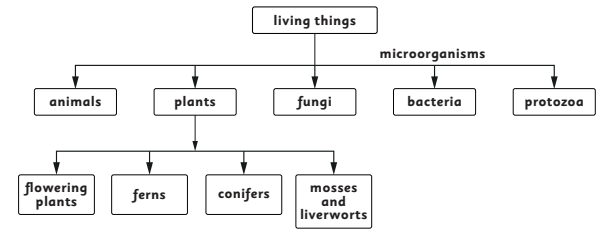


| | exoskeleton | soft body <small>(no exoskeleton)</small> |
|----------------|---------------|--|
| lives in water | crayfish | octopus jellyfish |
| lives on land | spider ant | slug |



We can create a **key** to help us to **identify organisms**.

All living organisms are **classified** using a **hierarchical set of criteria**. This is called **taxonomic classification**.



Vertebrates

Animals are split into two groups based on whether they have a **backbone or internal skeleton**. There are **five vertebrate groups** which have **different characteristics**. These include: mammals, birds, reptiles, amphibians and fish.



| mammals | birds | reptiles | amphibians | fish |
|--------------|-----------------------|-------------------------------------|-----------------------------------|-------------------|
| warm-blooded | warm-blooded | cold-blooded | cold-blooded | cold-blooded |
| lungs | lungs | lungs | lungs as adults | gills |
| live young | lay hard eggs on land | lay soft eggs on land or live birth | gills as juvenile | lay eggs in water |
| hair or fur | feathers | scales | lay soft jelly-like eggs in water | or live birth |
| milk | | | thin moist skin | scales and fins |



Some animals are tricky to classify!

Invertebrates

Invertebrates **do not have an internal skeleton**. They are grouped based on whether they have a **soft body or exoskeleton**. Some also have a **shell**.

Arthropods have an **exoskeleton and jointed legs**. They are grouped depending on the **number of legs**.



Worms have a **soft body and segments**.





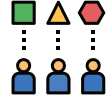









Snails are part of a group called **molluscs**.



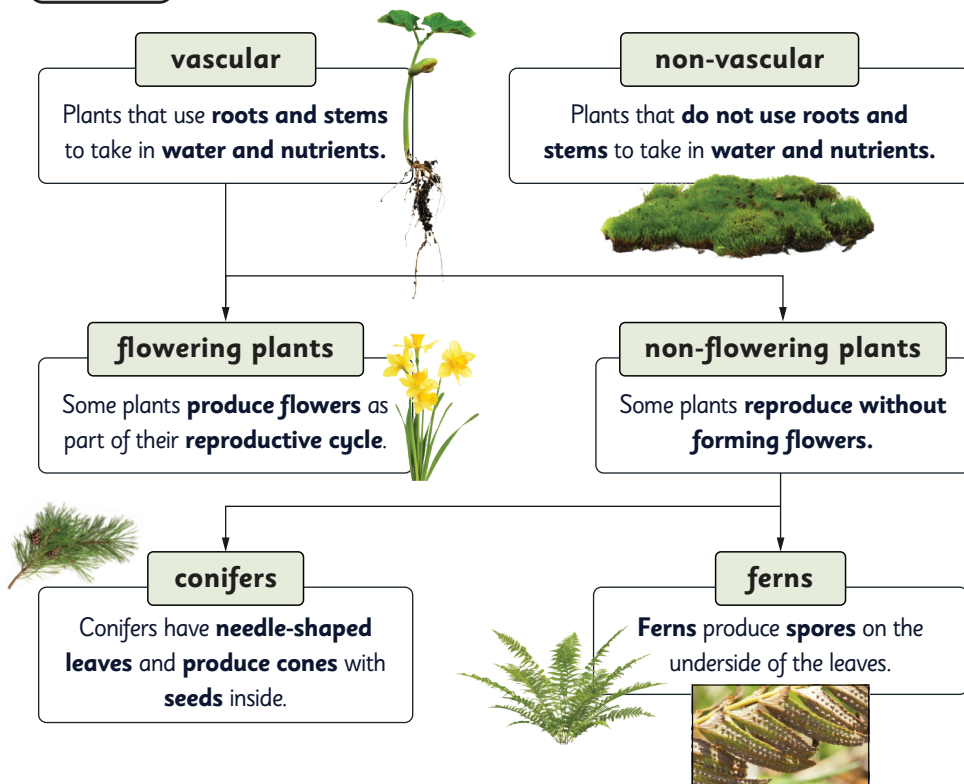
Characteristics of living things

| | |
|----------------------|---|
| M ovement | Sometimes it is difficult to tell just from looking at an organism if it is alive . |
| R espiration | We need to consider all the life processes . |
| S ensitivity |  <p>We might need to test to see if it respires.</p> |
| G rowth | |
| R eproduction |  <p>We might need to observe for a long time to see if it reproduces.</p> |
| E xcretion | |
| N utrition | |

Key vocabulary

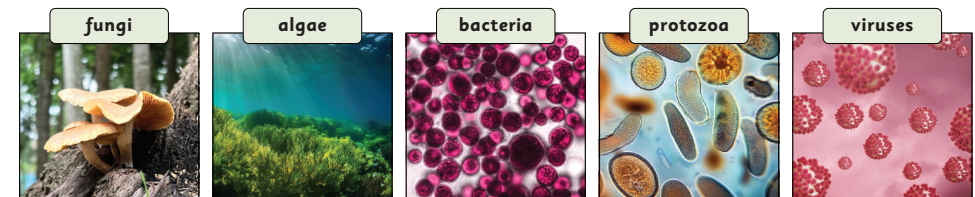
| | | | |
|---|---|---|---|
|  classify |  identify |  characteristic |  observe |
|  majority |  infectious |  disease |  inflate |
|  virus |  dormant |  criteria |  appearance |

Plants



Microorganisms

Microorganisms (microbes) are **tiny living things**. They are everywhere! There are **five main groups of microorganisms**.



good microbes

- gut bacteria
- probiotics
- penicillin
- vaccines
- food production



bad microbes (pathogens)

- bacterial infections
- sore throat
- tummy upset
- viruses
- contaminated water

