



#### Aim

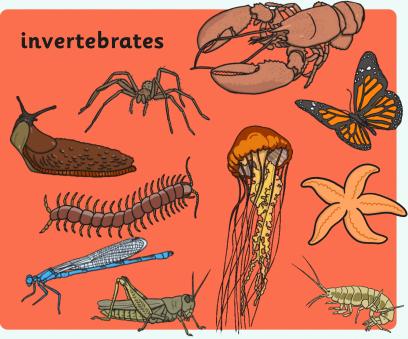
- I can use a key to identify invertebrates.
- I can use evidence to identify an invertebrate.

#### Success Criteria

- I can answer the questions in a key by looking closely at invertebrates.
- I can use a key to name the invertebrates I have found.
- I can identify invertebrates by looking at their characteristics.
- I can explain how I have used evidence to do this.

## Classifying Animals





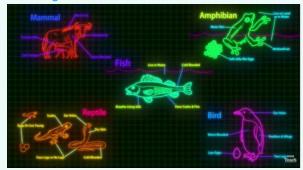
Last week learned that when looking at animals, scientists usually split them into two groups:

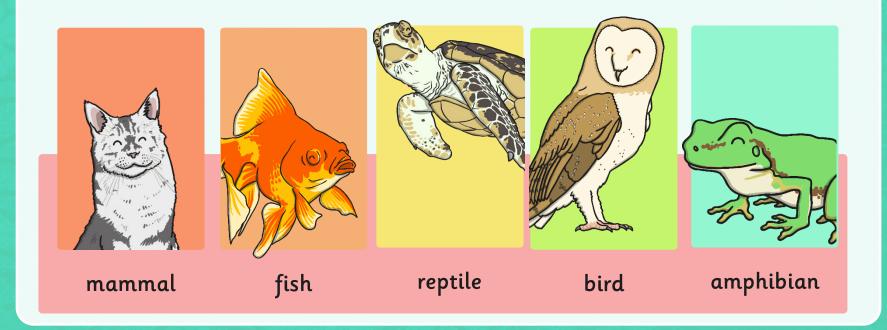
vertebrates (animals with a backbone)

invertebrates (animals without a backbone).

https://www.youtube.com/watch?v=ITrRMiQB8g4

The video will remind you if you need it.





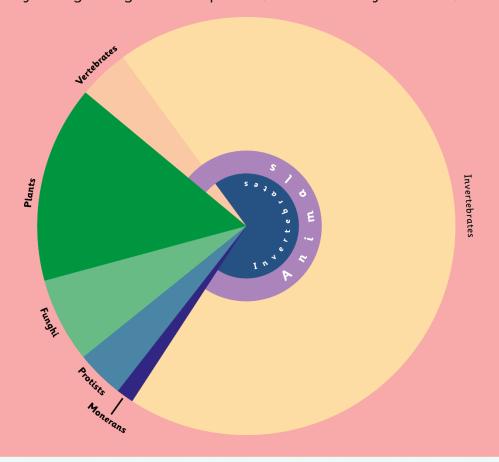
### Today we will classify invertebrates

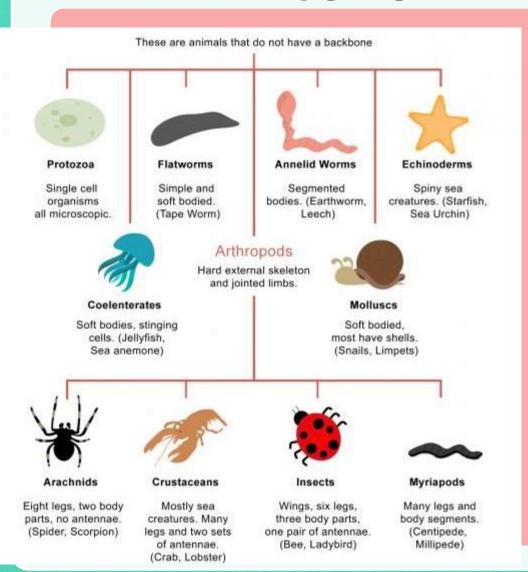
Invertebrates do not have a backbone, or a skeleton made of bones. Many have a hard shell outside their bodies to protect them. Others have soft, flexible bodies.



## Classification

More than 80% of living things on the planet, and 98% of animals, are invertebrates.





There are 7 main groups of invertebrates.

Classifying them does get complicated.

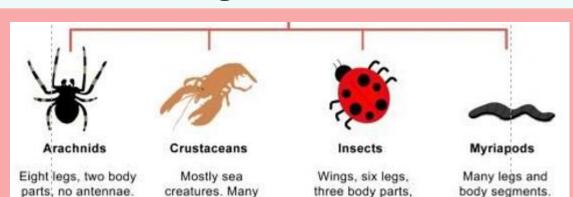
The 'arthropod' group is 'subdivided' into 4 more groups.



https://www.youtube.com/watch?ap p=desktop&v=Sr\_T4skBYNo

If you watch this video it will explain the groups.

#### Classification - arthropods



parts; no antennae. (Spider, Scorpion)

creatures. Many legs and two sets of antennae. (Crab Lobster)

three body parts, one pair of antennae. (Bee, Ladybird)

(Centipede, Millipede)

The ivertebrate group we probably know the best are the arthropods.

Although we think of them as creepy crawlies, arthropods are really interesting. There is more detail in the 2 videos below



Arthropods – insects, myriapods, crustaceans, arachnids https://www.youtube.com/watch?v=XSvB <u>YVjqtGs</u>

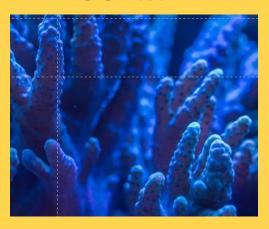
WARNING! There are some big ARACHNIDS in this video!



https://www.youtube.com/watch?v=puKoq5fzyAg

# Classifying Invertebrates (Cnidaria or Coelenterata)

#### Coral



Coral looks like plants but because they cannot make their own food, they are actually animals.

Most coral structures are made up of tiny coral creatures called polyps.

#### Jellyfish



Jellyfish have been on earth millions of years, even before dinosaurs. They have no brain but some kind of eyes.

They are made of a 'jelly like' material.

#### **Echinoderms**



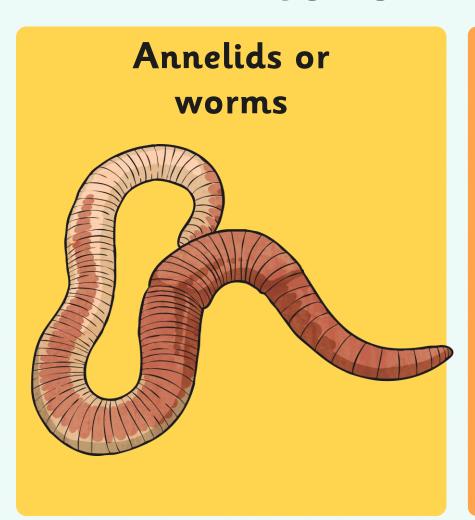
They are marine animals that live in the ocean.

Common echinoderms include the sea star, sea urchin, sand dollar and sea cucumber.

They have arms or spines that radiate from the centre of their body.

The central body contains their organs, and their mouth for feeding.

The mouth is underneath, to eat other sea life.



They have existed for over 120 million years.

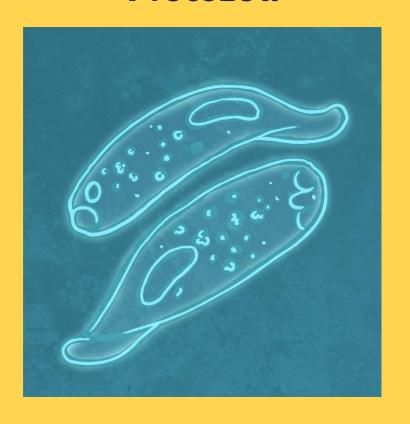
There are over 9,000 species, including worms and leeches.

They have bodies divided into segments.

They don't have any limbs.

Some have long bristles; others have shorter bristles and seem smooth.

#### Protozoa



They eat tiny algae and bacteria.

They can only be seen under a microscope.

They are simple, single-celled animals.

They are a source of food for fish and other animals.

They reproduce by splitting in half.

#### **Molluscs**



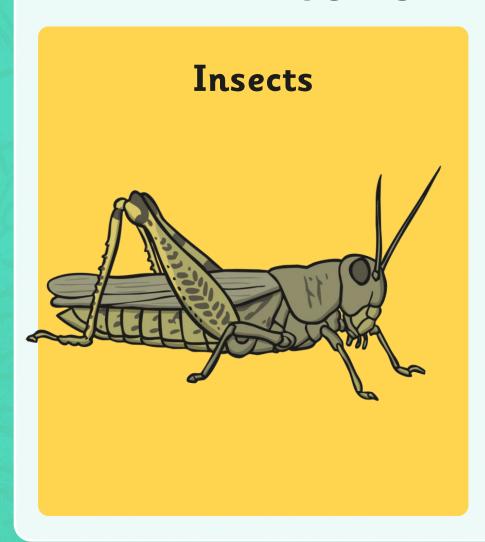
They were among the first inhabitants of the Earth.

They live on land or in water.

Most have a soft, skin-like organ covered with a hard outside shell.

Land molluscs move slowly on a flat sole called a foot.

Ocean molluscs attach themselves to rocks or other surfaces, and can't move.



There are over 800 000 different types of insects.

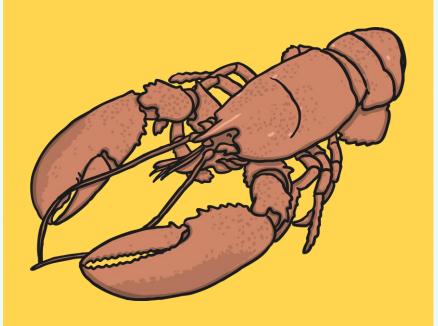
They have an exoskeleton covering their body.

The body consists of 3 parts: the head, thorax and abdomen.

They must shed their exoskeleton in order to grow.

They have a pair of antennae on their head.

#### Crustaceans



Most common crustaceans are the crab, lobster and barnacle. Woodlice are also crustaceans.

They have a hard, external shell which protects their body.

They live mostly in the ocean or other waters.

They have a head and abdomen.

Many have claws that help with crawling and eating.

#### **Arachnids**



Most arachnids have 4 pairs of legs.

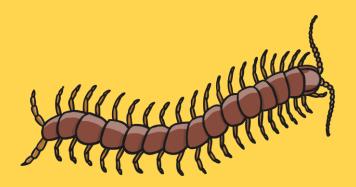
The first pair of legs may be used for holding their prey and feeding.

Common arachnids are spiders, scorpions, ticks and mites.

They have a hard exoskeleton and jointed legs for walking.

Arachnids do not have antennae.

#### Myriapods



The myriapod group contains the millipedes, centipedes, and others.

The group has 13,000 species, all of which are live on land.

Their name suggests they have many legs. In fact, one has over 750 legs (*Illacme plenipes*), but some have fewer than ten legs.

# Invertebrates in the Local Environment

If you go out into your local environment (your garden or school) what kinds of invertebrate do you expect to find?

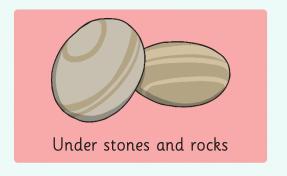
Are there any invertebrates that won't appear in the local habitat?

Think about those that live only in an 'aquatic' (water) environment and those which are 'terrestrial' (land).

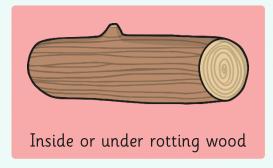


# Invertebrates in the Local Environment

Invertebrates often inhabit small homes called microhabitats. Here are some different microhabitats you might find.













Can you think of any more?

#### Classification

Because invertebrates are so small, they must be handled very carefully.

How can we observe and capture specimens without causing them any harm?



#### WARNING!

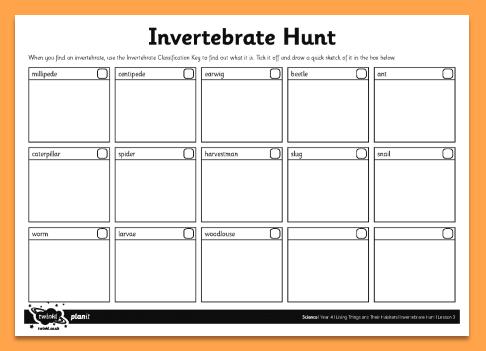
Check with an adult before you touch anything in the garden.

Never put anything in your mouth or lick your fingers, plants can be poisonous.

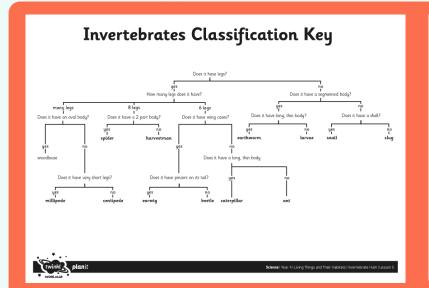
Invertebrates are living creatures and they are FRAGILE!

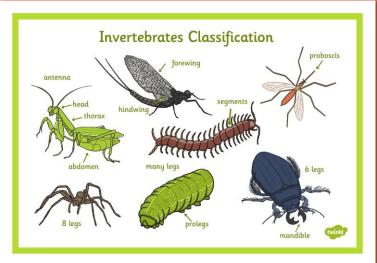
#### Invertebrate Hunt

The activity this week is to go into your garden, school grounds or the park and see if you can find, identify and name invertebrates, using your activity sheet.



#### How Do You Know?





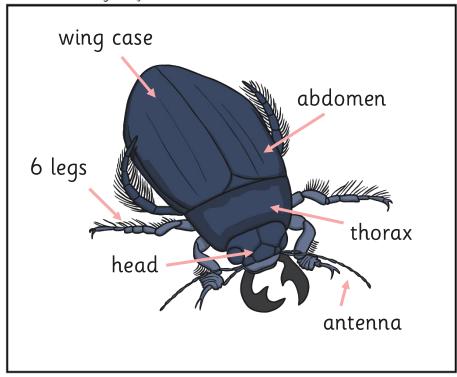
Last week we looked at how to use classification keys. Use your skills to identify the invertebrates you find.

The classification sheet will help you with some of the vocabulary too.

## Identifying Invertebrates

Now it is time to identify your specimen!

Draw a labelled diagram of the invertebrate.



Name of invertebrate: beetle

Habitat where it was found: leaf litter

Characteristics: this invertebrate has 6 legs, a body in 3 parts and a hard wing case. It has antenna. It does not have pincers on its tail.

Hint: to find out the characteristics of your specimen, look at the Invertebrates
Classification Key to see the questions you have used to identify it.

# Do you want to know more about invertebrates?

https://kids.kiddle.co/Invertebrate





https://www.youtube.com/watch?app=desktop&v=Sr\_T4skBYNo



https://www.youtube.com/watch?v= YvRCOWYQ6Rk

 $https://kids.nationalgeographic.com/animals/invertebrates/\#:\sim:text=Invertebrates\%20are\%20animals\%20without\%20a,soccer\%2Dball\%2Dsize\%20eyes.$ 

