flamingo
vertebrate
bird
feathers

Classifying Vertebrates

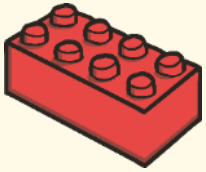
Lesson 2 - Aim

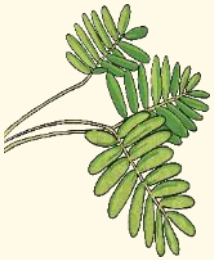
- I can generate questions to use in a classification key.
- I can identify vertebrates by observing their similarities and differences.

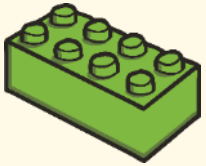
Success Criteria

- I can generate questions about animals.
- I can use questions to sort animals in a key.
- I can see similarities and differences between vertebrates.
- I can use these to identify vertebrate groups.

Sorting







Imagine you had to sort these things into two groups. How would you decide on the groups? What would you call each group?

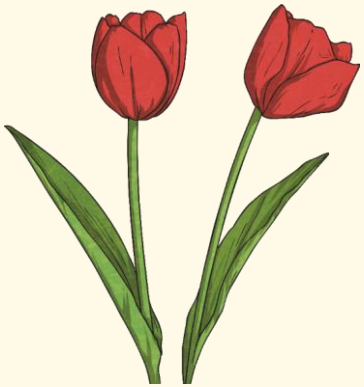
'<u>Classifying</u>' is just a name for 'grouping' or 'sorting'

There are lots of ways the objects could be grouped:

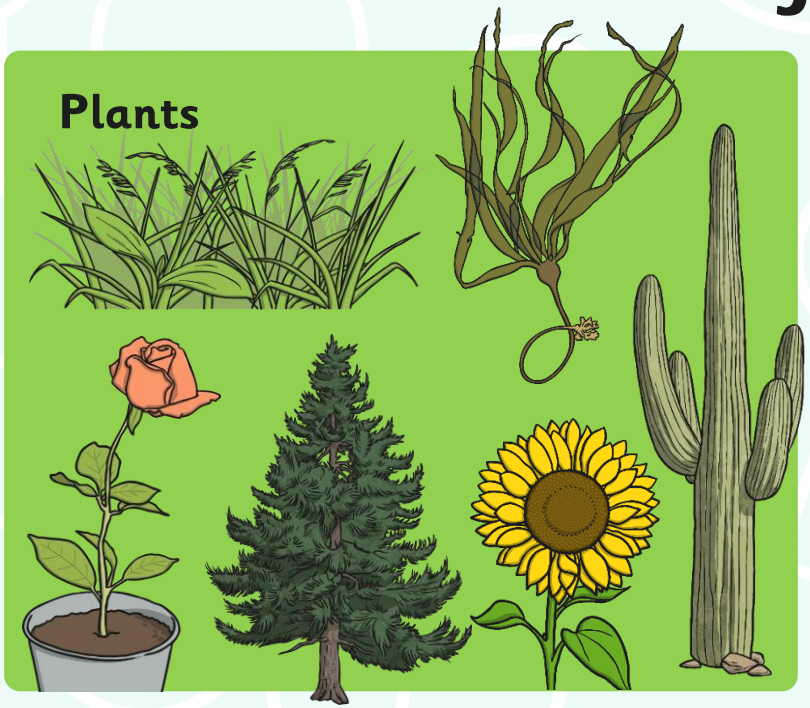
- plastic and non-plastic
- green things and red things
- living things and non-living things
- edible things and non-edible things
- animals and non-animals

In Biology we call grouping or sorting living things '**classifying**'. Each group is called a class.

Classification is the processes of organising living things into groups based on their similarities and differences.



Classification



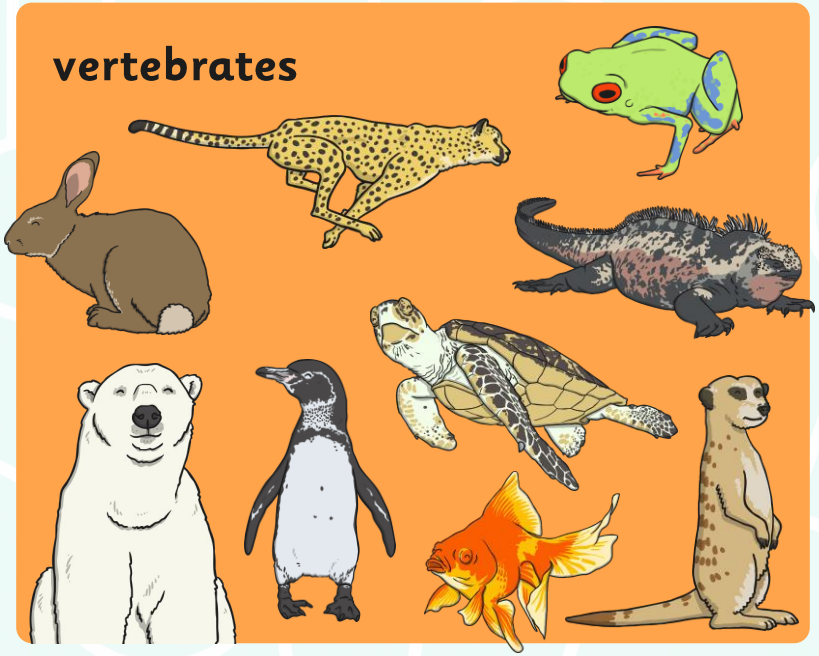
Most of the living things we can see in the world into two groups: plants and animals

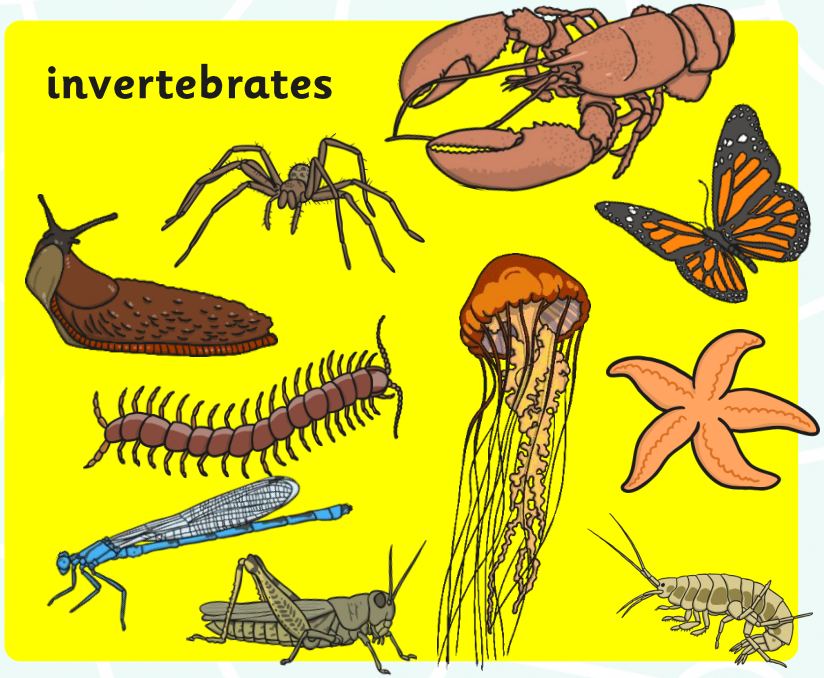
(there are bacteria too)

The video reminds us of the main difference between plants and animals and the different animal groups too.

https://www.youtube.com/watch?app=desktop&v=oB-ESbTSzQI

Animal Groups



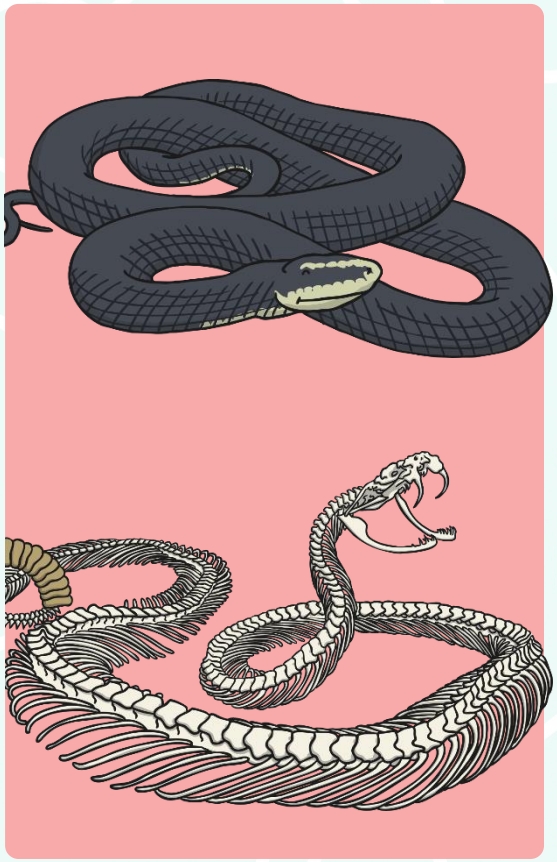


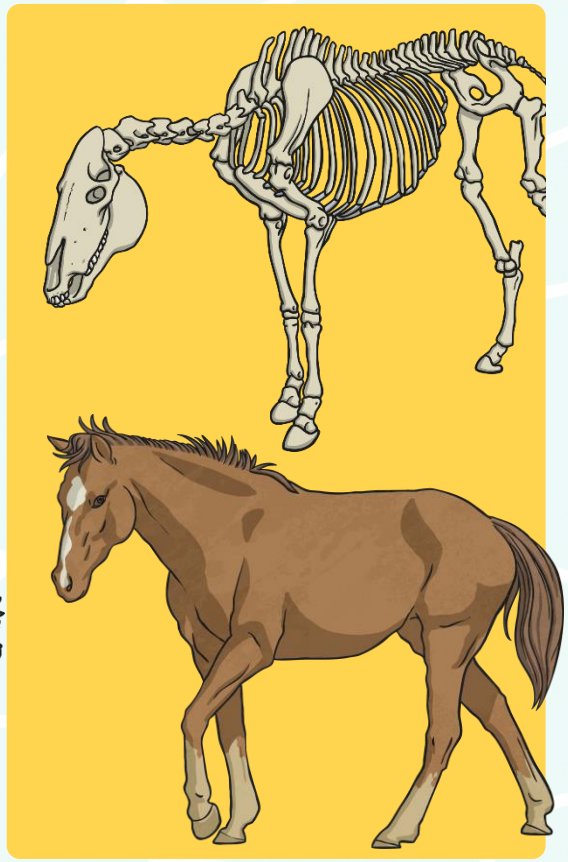
When looking at animals, scientists usually split them into two groups:
vertebrates (animals **with** a backbone)

invertebrates (animals **without** a backbone).

Animal Groups: Vertebrates

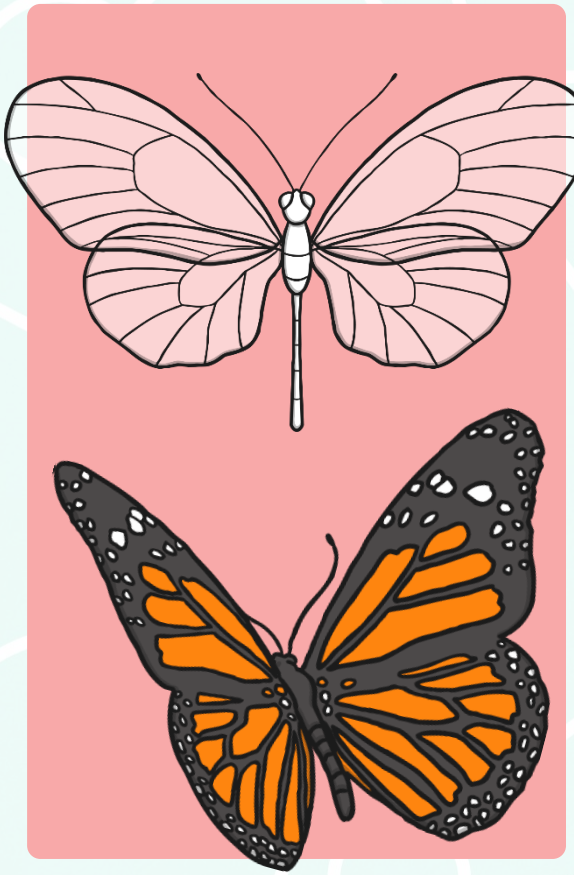
Vertebrates are animals with a backbone. They have a hard skeleton made of bone. It holds their body up and gives them shape.

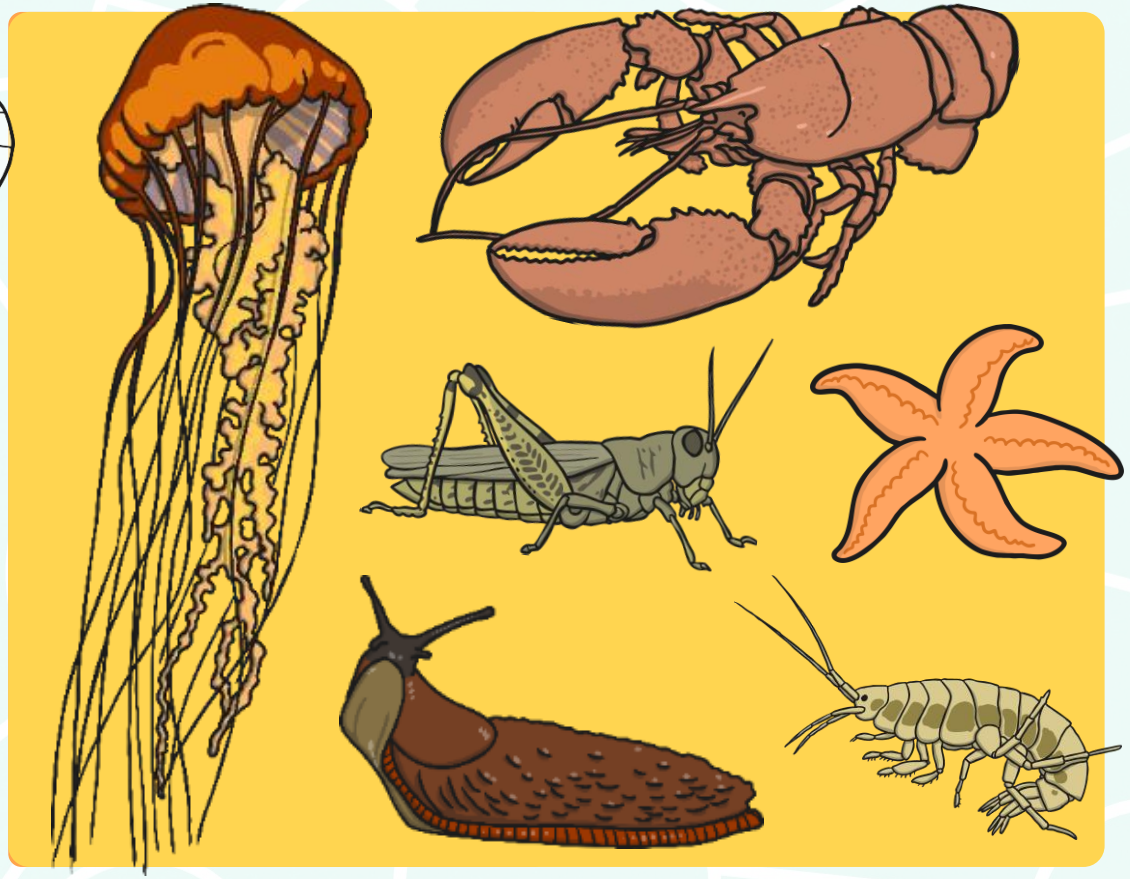




Animal Groups: Invertebrates

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.



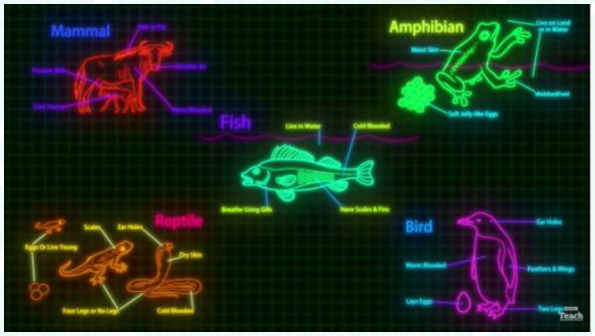


Animal Groups

Vertebrates can be separated into five broad groups.

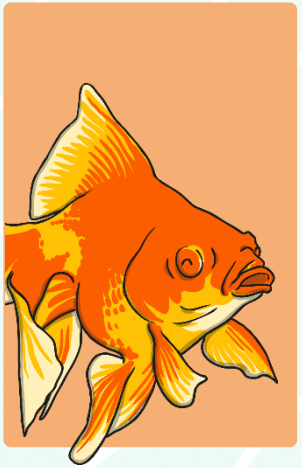
You may remember learning about these before:

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

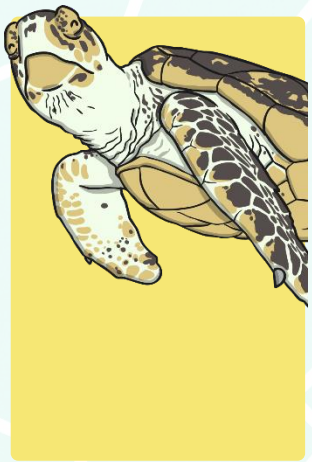


This video will remind you of the characteristics of the 5 vertebrate groups

mammal

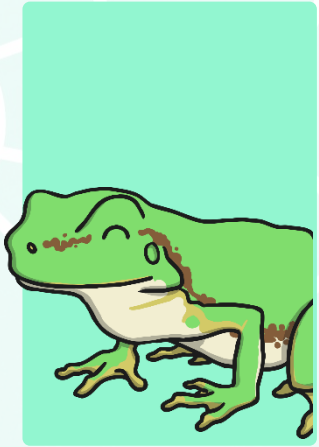


fish



reptile

bird



amphibian

Mammals

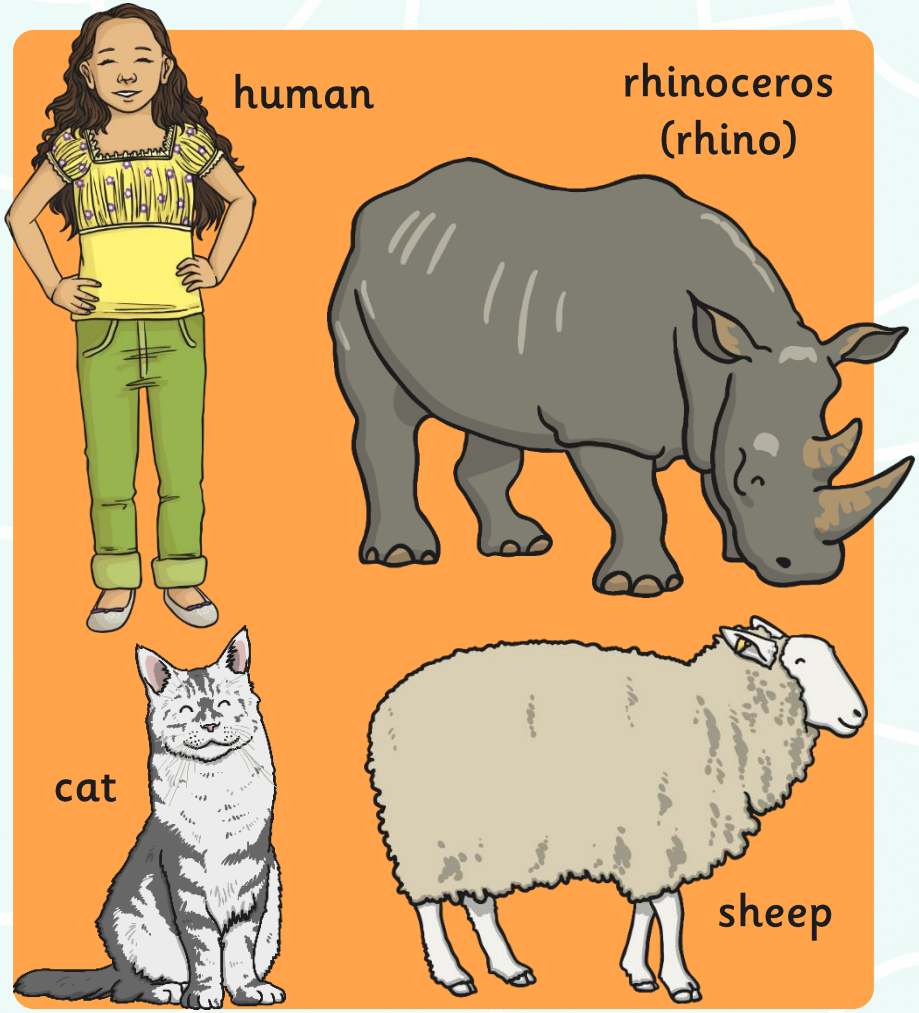
Mammals have warm blood, and have hair or fur on their bodies.

Mammal babies are born alive.

The mothers feed their babies milk.

What do animals of this kind have in common?

Can you think of any differences between them?



Amphibians

Amphibians live on land and in water.

They are cold-blooded.

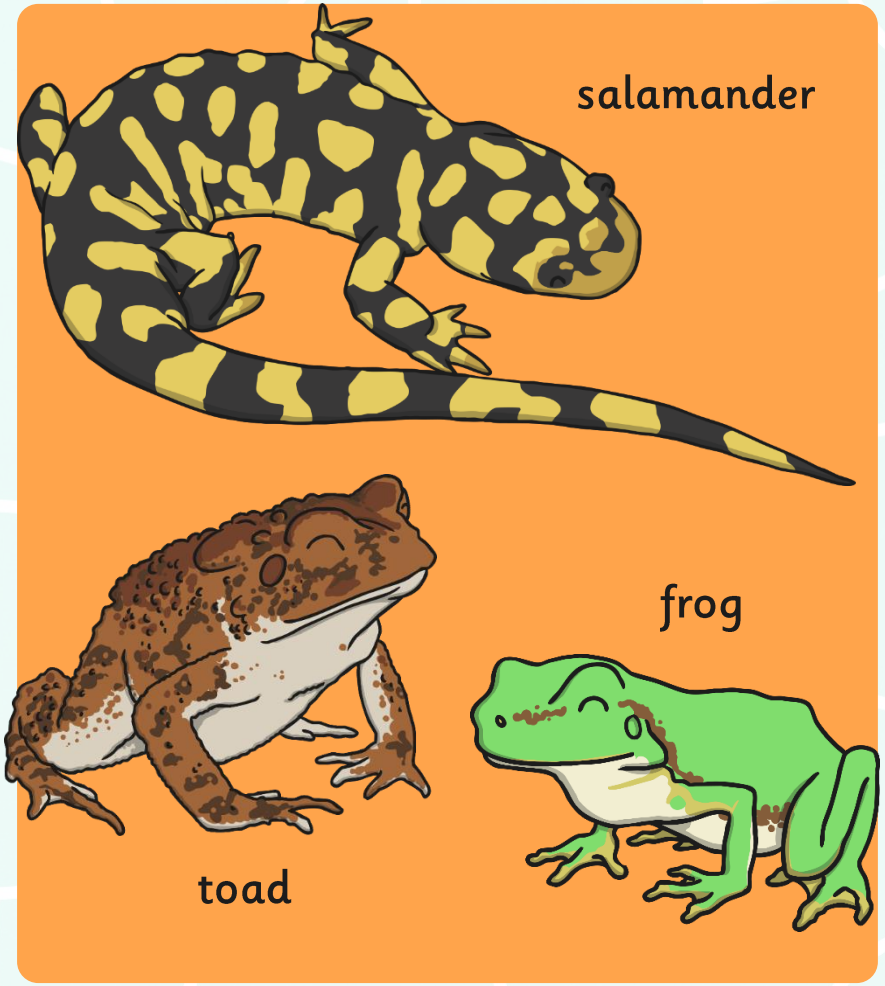
They have gills when they are young.

They have smooth skin.

They lay their eggs in water.

What do animals of this kind have in common?

Can you think of any differences between them?

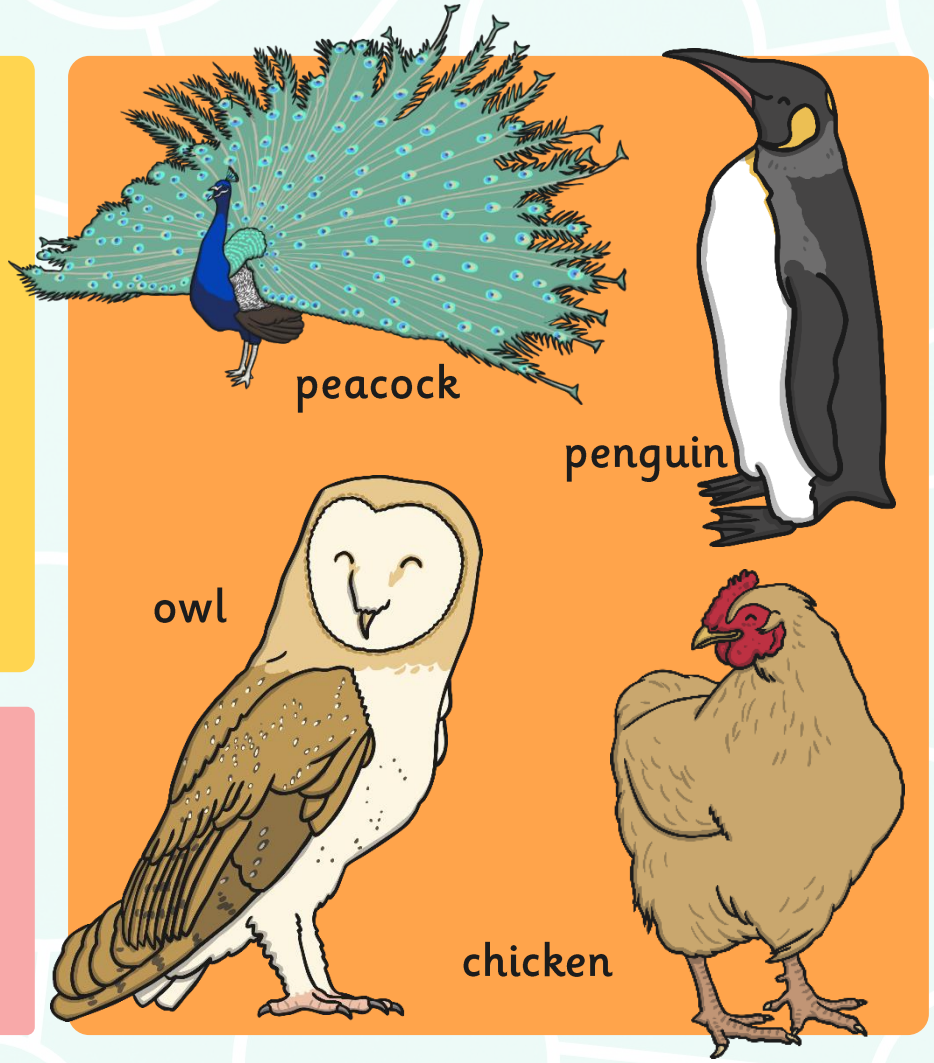


Birds

Birds have a beak, wings, feathers and 2 legs.

They lay eggs on land.

They have warm blood.



What do animals of this kind have in common?

Can you think of any differences between them?

Fish

Fish live in water.

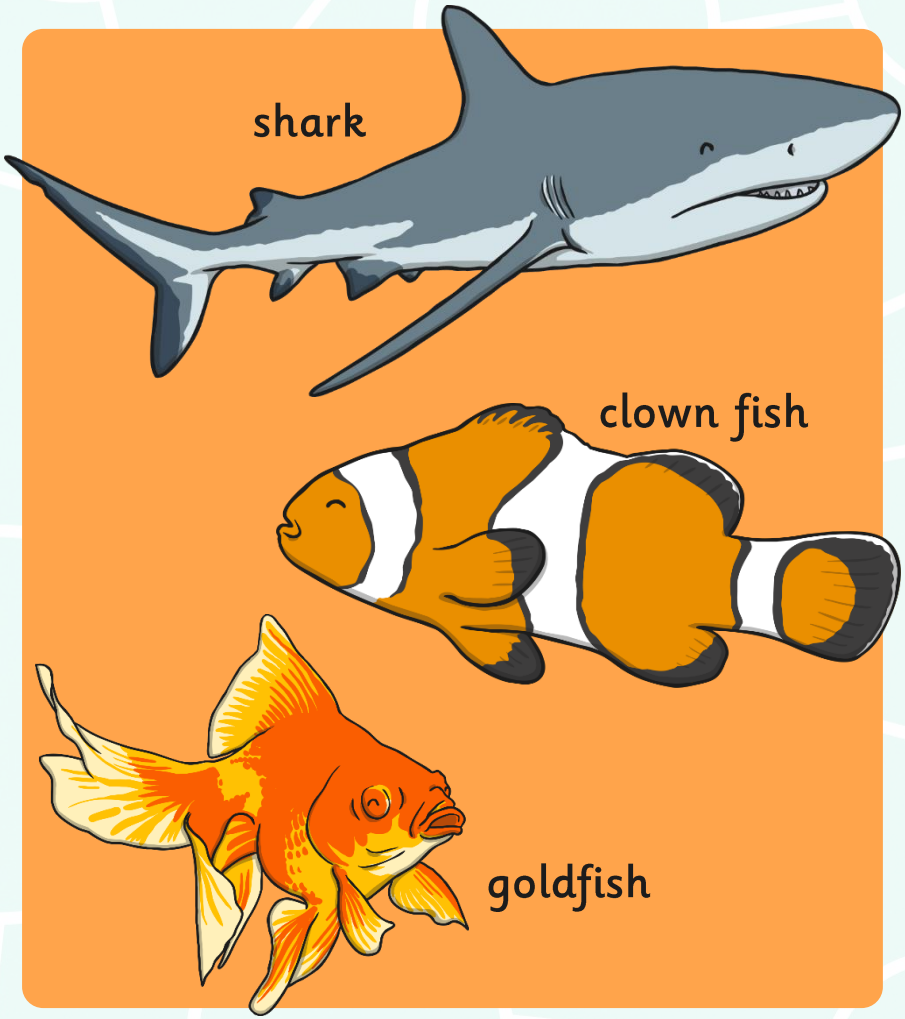
They have fins instead of legs and gills instead of lungs.

They lay their eggs in water.

They have cold blood and scaly skin.

What do animals of this kind have in common?

Can you think of any differences between them?



Reptiles

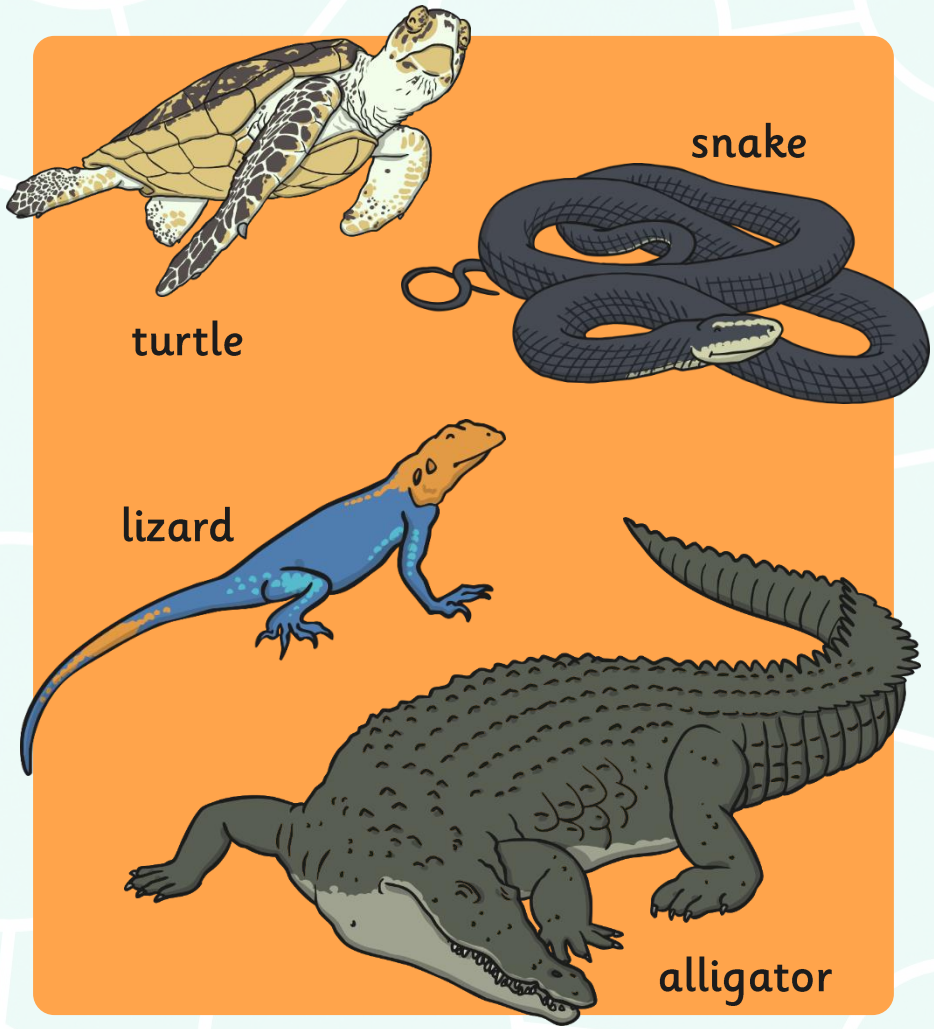
Some reptiles live on land, and some in water. They have lungs that breathe air.

They have scales and are cold-blooded.

They lay their eggs on land.

What do animals of this kind have in common?

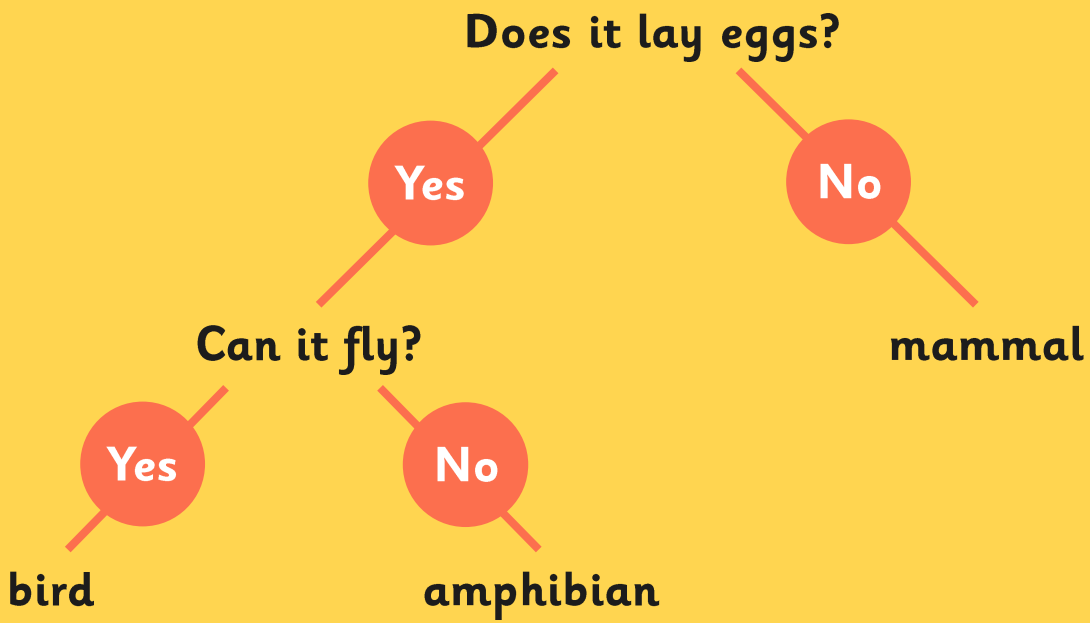
Can you think of any differences between them?



Classification Keys

Classification keys are a way of identifying living things through a series of questions based on their similarities and differences.

Each question has a yes or no answer and leads you one step closer to the name of a living thing.



Classification Keys

The questions start out very general at the beginning of the key as they help you sort the animals into broad groups.

Does it lay eggs?

Yes

No

bird

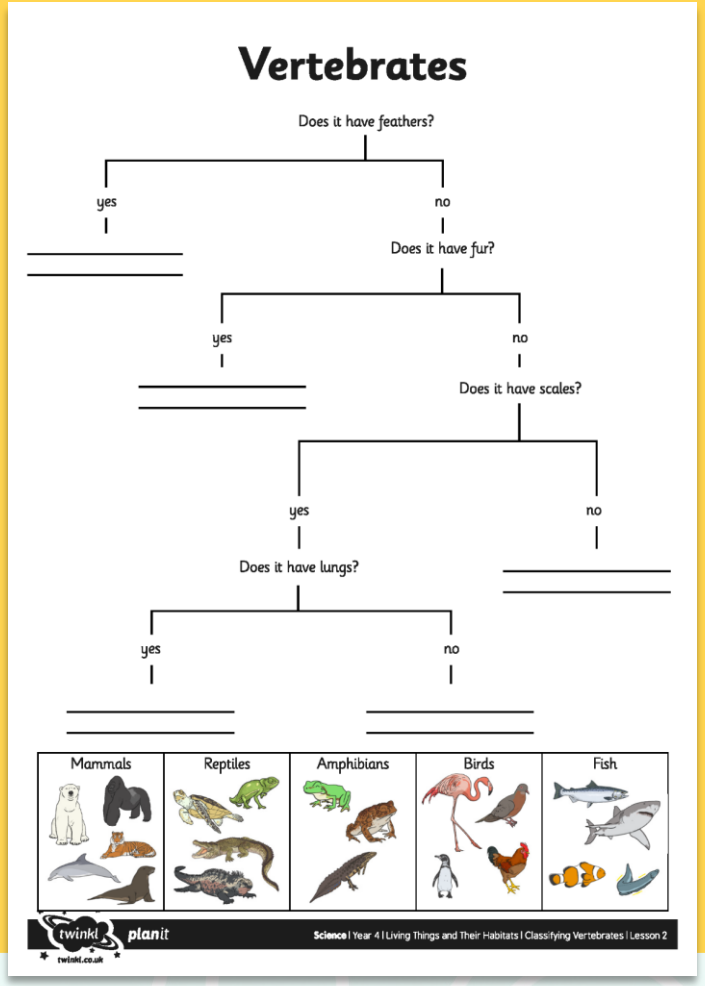
mammal

Does it have a long, thin beak?

Yes

No

Classification Keys Activity Sheet

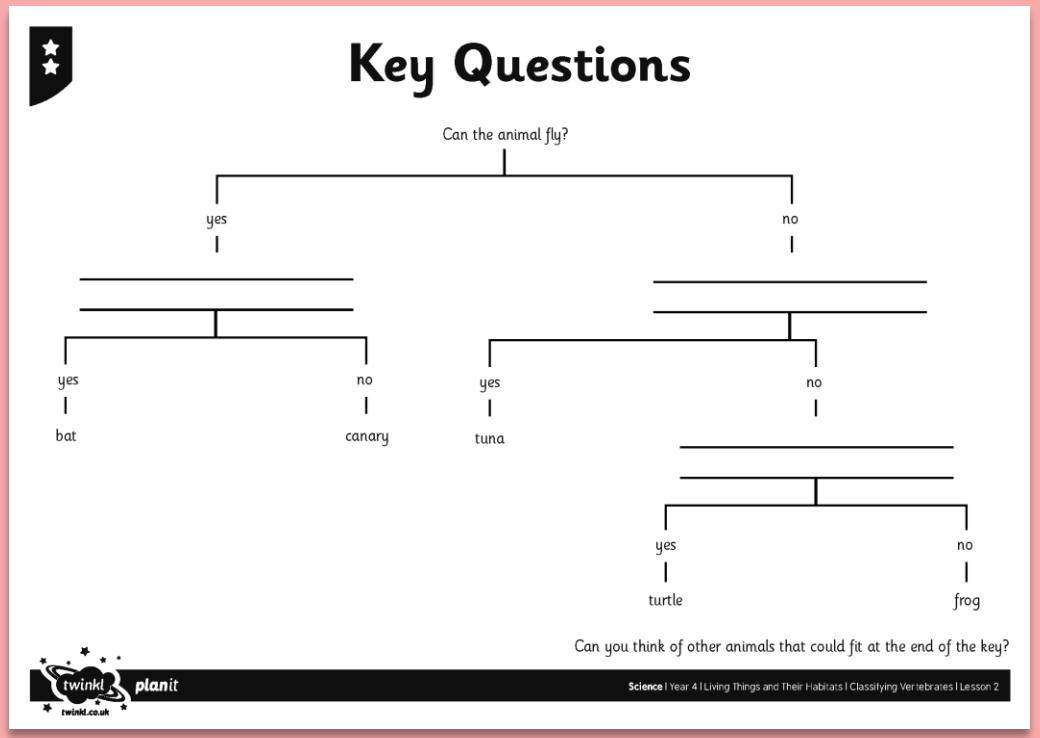


Have a try at the vertebrate identification activity.

Choose animal e.g. frog

Follow the questions to help you place the animal on the key

Classification Keys



Have a go at making up your own questions for a classification key.

There are 1, 2 and 3 star sheets. You can have a try at 1 or all of them. You don't need to print the sheets, just draw the key.

Listen to the catchy song – you'll be singing it all day!

B.R.A.M.F.

https://www.youtube.com/watch?v=4VixROiu8Qg

What does this stand for?

Learn more about vertebrates.

https://www.youtube.com/watch?v=qRKoGO7hNXg

Some interesting facts!

Scientists think that there are 7.77 million species of animals in the world, living on the land, in the sky and in the sea. Classification helps to keep things organised.

We have discovered and named about 1.4 million of these…which means that over 6 million species of animal are yet to be discovered!

We have already discovered:
5500 species of mammal
10 400 species of bird
10 000 species of reptile
7300 species of amphibian
33 000 species of fish
1 305 000 kinds of invertebrate

Which kind of creature are we?

flamingo
vertebrate
bird
feathers

Classifying Vertebrates