

L.O. To classify vertebrates.

What are vertebrates?



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Classification

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.

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?



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Classification

When scientists discover a new animal, they give it a name and record everything they know about it.



What kind of information do you think they will record?

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Hadogenes troglodytes
(Peters, 1861)

Common names:

Often known as South African rock scorpion or the flat rock scorpion.

Distribution:

Africa (Botswana, Mozambique, South Africa, Zimbabwe).

Habitat:

Lives in dry bushveld habitats in rocky areas.

Appearance:

These scorpions have very elongated, flattened bodies and powerful claws.

Venom:

This species has a mild venom. It will rarely sting, and usually defends itself by using the powerful claws.

Latin name

Who discovered it and when



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Classification

With so many living things to make records of, and so many yet to discover, it is important that we have a system to organise and make sense of the information we have about them.

We organise living things into groups based on their similarities and differences, so that we can learn more about what makes each species unique. The differences between living things is sometimes called **variation.**



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Classification



It is easy to sort most of the living things we can see in the world into two groups: plants and animals.

Plants and animals share life processes, but they do them very differently. Can you remember some of the differences between plants and animals?

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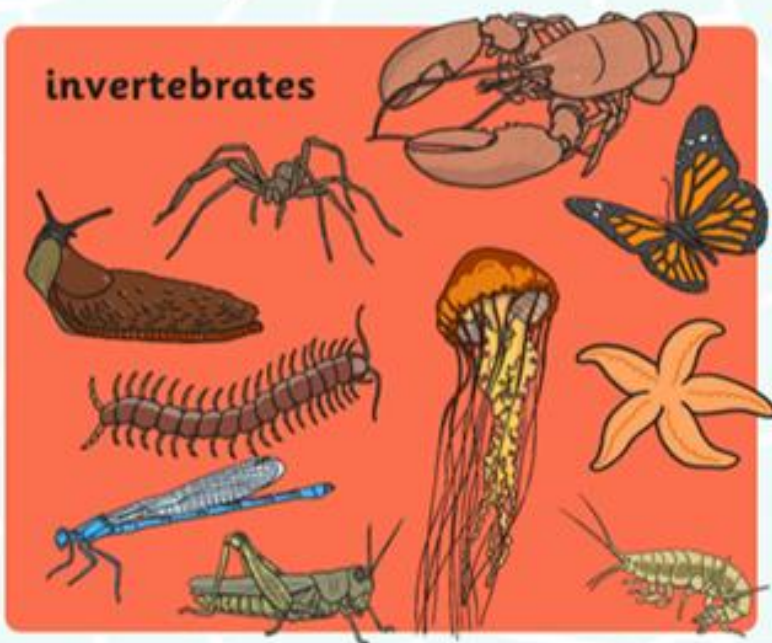
When looking at animals, scientists usually split them into two groups:
vertebrates (animals **with** a backbone) and **invertebrates** (animals **without** a backbone).

Animal Groups

vertebrates



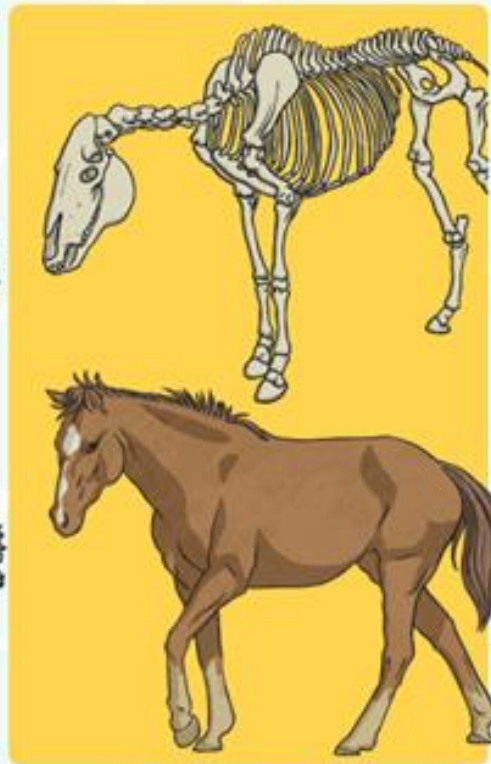
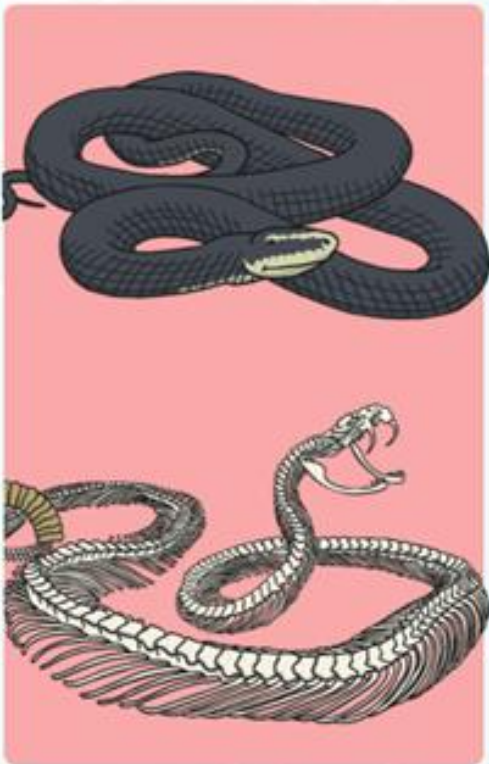
invertebrates



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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.



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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.



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Animal Groups

Vertebrates can be separated into five broad groups:



mammal



fish



reptile



bird



amphibian

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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?

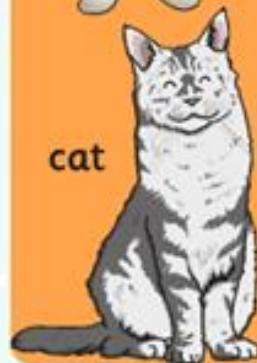
Can you think of any
differences between them?



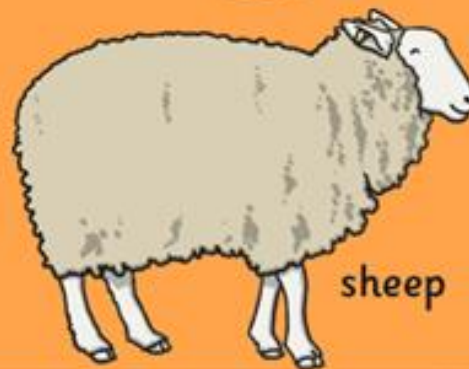
human



rhinoceros
(rhino)



cat



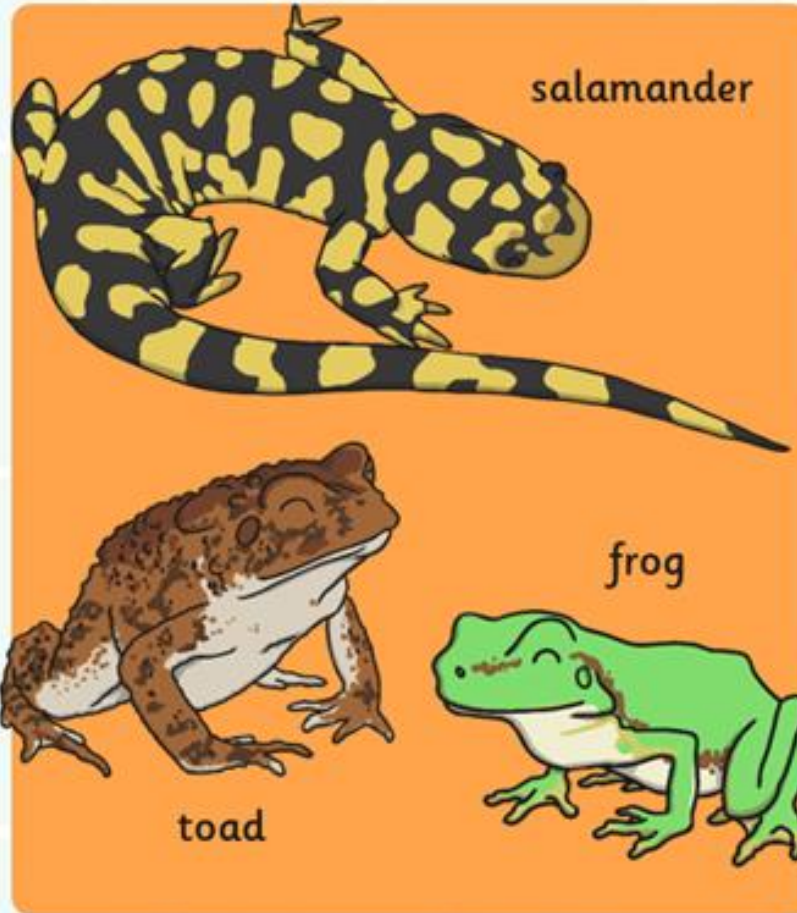
sheep

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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?



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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?



peacock



penguin



owl



chicken

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Fish

Fish live in water.

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

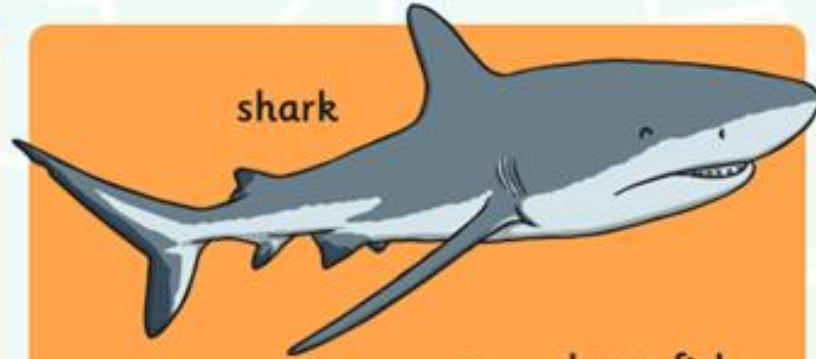
They lay their eggs in water.

They have cold blood and scaly skin.

What do animals of this kind have in common?

Can you think of any differences between them?

shark



clown fish



goldfish



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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?



turtle



snake



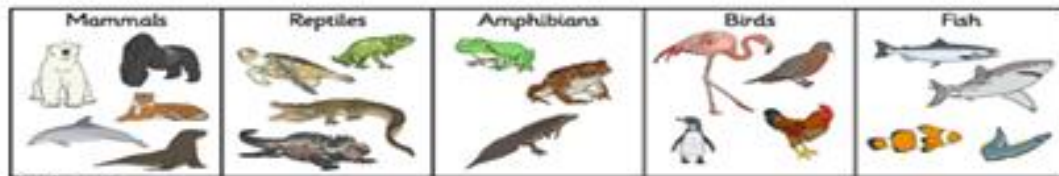
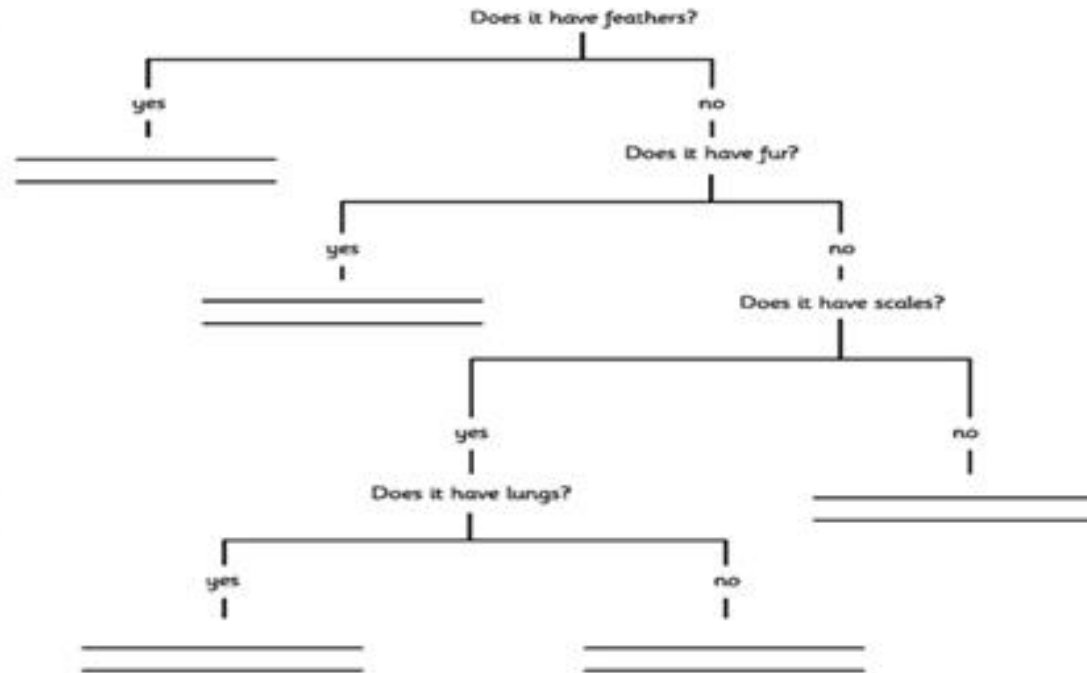
lizard



alligator

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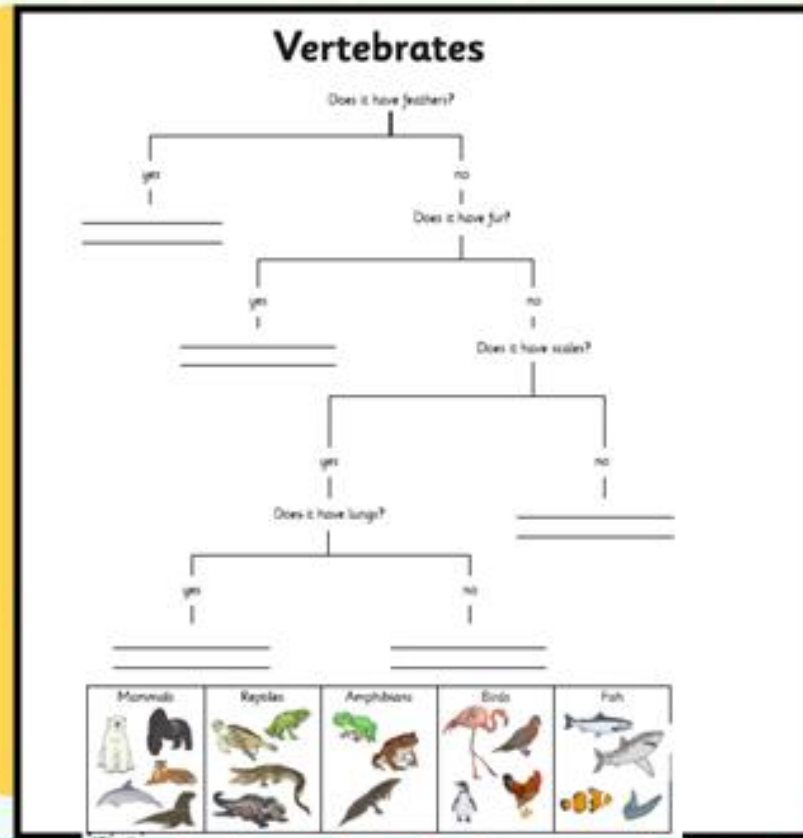
Vertebrates



Complete activity 1

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Classification Keys



The activity you have just done uses a kind of classification key.

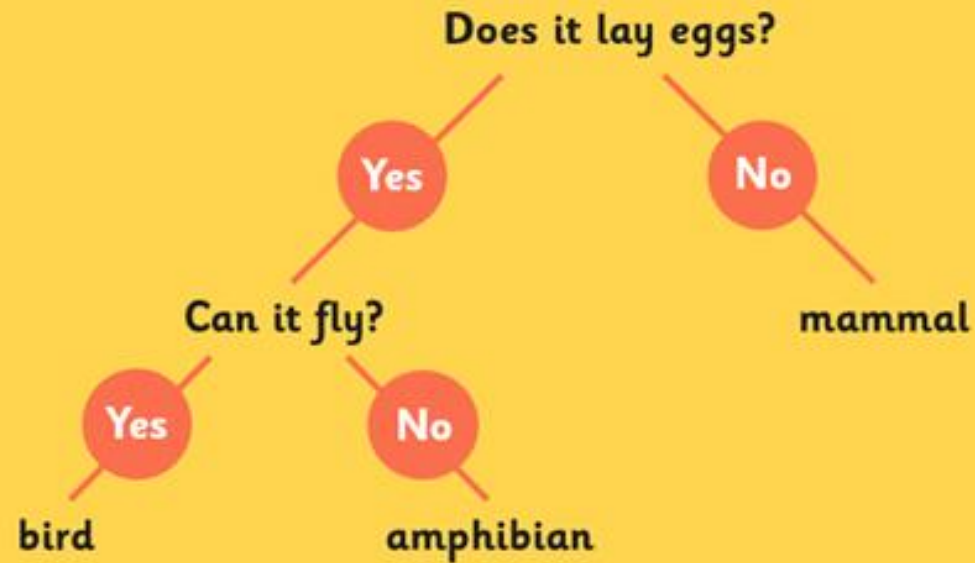
Classification keys are a way of identifying living things through a series of questions based on their similarities and differences.

For example: 'Does it lay eggs?'

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Classification Keys

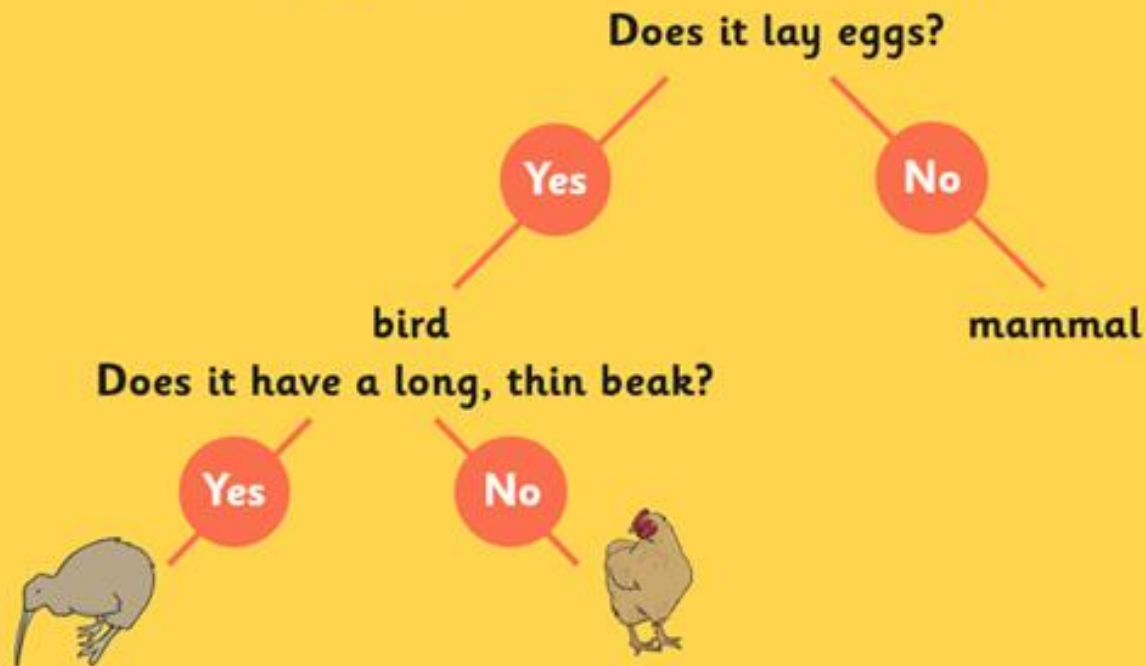
Each question has a yes or no answer and leads you one step closer to the name of a living thing.



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Classification Keys

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



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How do you feel about
today's L.O?

What will I
remember most
from today's
lesson?

