Living things and their habitats

Animals with a backbone: Classifying vertebrates

Year 6
Age 10-11

For parents
Thank you for supporting your child's learning in science.
Before the session:
- Please read slide 2 so you know what your child is learning and what you need to get ready.
- As an alternative to lined paper, slide 5 may be printed for your child to record on.

During the session:
- Share the learning intentions on slide 2.
- Support your child with the main activities on slides 3,4 & 5, as needed.
- Slide 6 is a further, optional activity.
- Slide 7 has a glossary of key terms.

Reviewing with your child:
- Slide 8 gives an idea of what your child may produce.

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Living things and their habitats

Animals with a backbone: Vertebrates

Key Learning

- **Animals** can be divided into two main groups: **vertebrates** (animals with backbones) and **invertebrates** (animals without backbones).

- **Vertebrates** can be divided into five main groups: **Fish, Reptiles, Amphibians, Birds and Mammals.**

- Each vertebrate group has distinctive characteristics.

I can…

- Describe the characteristics of Fish, Reptiles, Amphibians, Birds and Mammals.

Activities (pages 3-5): 30 - 40 mins

- Use lined paper, a ruler and a pencil.

- Alternatively, print page 5 as a worksheet.

Find out more… (page 6): 20 - 30 mins

- Find out more about a vertebrate of your choice; you may choose to research a family pet.

- Look at these pictures of a ladybird, a crab and a tortoise.

- Which one do you think is the odd one out?

- Think about the animal characteristics to help you.

- You may have chosen body colour, body shape or number of legs to describe the odd one out.

- You can also classify animals as **vertebrates** – with a backbone, or **invertebrates** – without a backbone.

- Watch BBC bitesize to find out whether ladybirds, crabs or tortoises have a backbone.
  https://www.bbc.co.uk/bitesize/topics/zn22pv4/articles/z8mbqhv

  https://www.bbc.co.uk/bitesize/topics/zn22pv4/articles/zp6g7p3
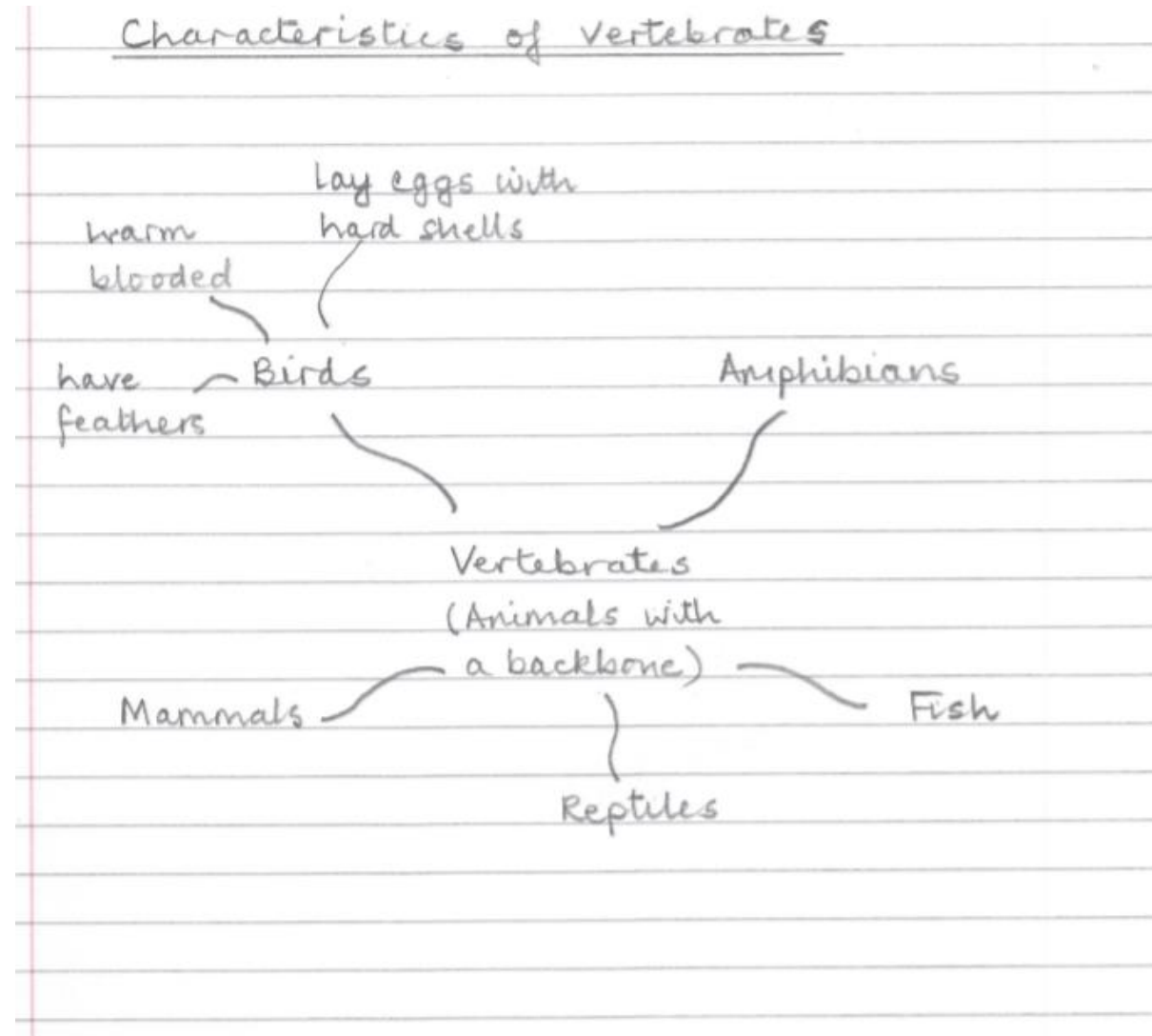
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- Watch this 7 minute clip about vertebrates. Try to jot down some of the features which help to classify each group.

- https://www.bbc.co.uk/teach/class-clips-video/science-ks2--ks3-classification-of-organisms/zh7g92p

- **Vertebrates** can be divided into five main groups: **Fish, Reptiles, Amphibians, Birds and Mammals.**

- Certain **characteristics** help us to classify vertebrates, such as:

  - Warm blooded or cold blooded

  - Lay eggs or give birth to live young

  - Have fur, hair, feathers, scales or smooth moist skins

- For example, **birds** are **warm blooded, lay eggs** with hard shells and have **feathers.**

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Create a mind map of the five vertebrate groups, adding labels to describe the main features of each group:

- Warm blooded

- Cold blooded

- Lay eggs

- Lay soft jelly-like eggs

- Give birth to live young

- Provide milk

- Have fur or hair

- Have scales

- Have feathers

- Have smooth moist skin

- Breathe using gills

I can describe some of the characteristics of mammals, fish, reptiles, birds and amphibians.

Characteristics of Vertebrates

Lay eggs with hard shells

warm blooded

have feathers

Birds

Amphibians

Vertebrates (Animals with a backbone)

Mammals

Fish

Reptiles

You may like to choose a family pet
(20 – 30 minutes)

Find out more about a vertebrate of your choice:

- Which vertebrate group does it belong to?

- Describe its characteristics.

- Is it a domestic animal/pet or a wild animal?

- Can you find out its two-part Latin name?

- What other interesting facts have you found out?

https://www.activewild.com

https://www.dkfindout.com/uk/animals-and-nature

- You may like to create a poster.

Suggestions:

Tortoises and Turtles are both reptiles but they live in different habitats.

https://www.dkfindout.com/uk/animals-and-nature/reptiles/tortoises-and-turtles/

Barn Owls are protected in the UK.

https://www.barnowltrust.org.uk/owl-facts-for-kids/

Glossary of terms

Characteristic: **Characteristics** are features of living things which help scientists **classify** them.

Classification: **Classification** is the method scientists use to group living things.

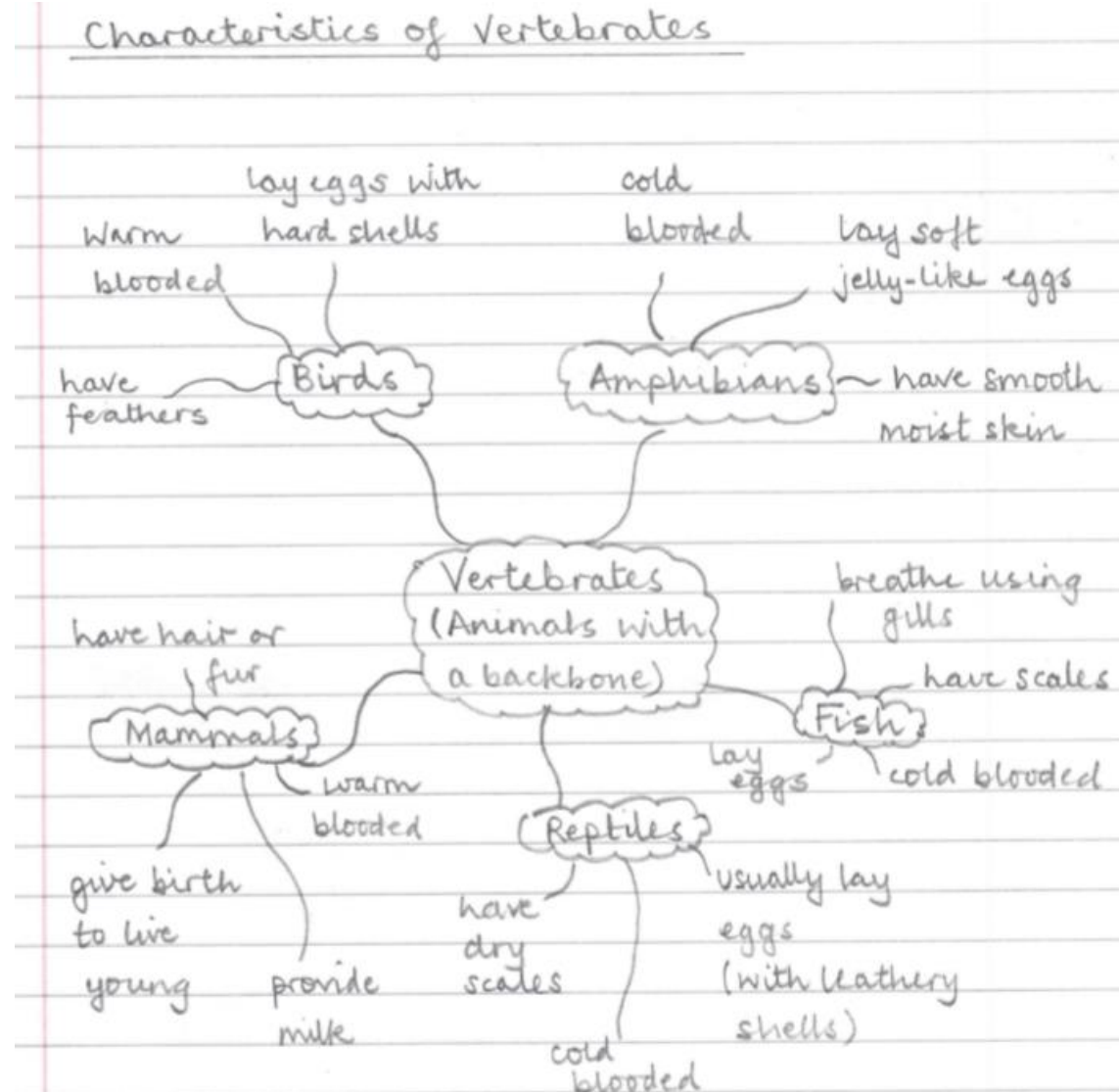**Invertebrate:** An **invertebrate** is an animal without a backbone.

Vertebrate: A **vertebrate** is an animal with a backbone.

Amphibians include frogs, toads and newts. They have a smooth moist skin and are cold blooded. They lay soft jelly-like eggs and can live on land and in the water.

Mammals have fur or hair and are warm blooded. They give birth to live young and provide milk. Some live in water but need to breathe air, like whales and dolphins.

I can describe some of the characteristics of mammals, fish, reptiles, birds and amphibians.

Fish have scales and fins. They are cold blooded and lay eggs. They live in water and breathe using gills.

Reptiles have dry, scaly skin and are cold blooded. They usually lay leathery eggs.

Birds have feathers and are warm blooded. They lay eggs with hard shells. Birds have wings, but some do not fly.