

Living Things

National curriculum Objectives:

- Recognise that living things can be grouped in a variety of ways
- Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment

Science in the news today

A mouse-deer... Did you know such a thing could exist? Back in November 2019, cameras that had been laid in a forest in Vietnam caught photos of an animal that had not been photographed for over 10 years; the mouse deer. Now, this isn't actually a cross between a mouse and a deer, it just looks that way! They are a very rare type of animal, only found in Asia and Africa, and they are the smallest hoofed mammal in the world!

The local community all the way out in Vietnam have known about the animal's existence, but for the wider global community this is the first time we get to peak at what they look like - scientists even thought that they had disappeared completely...

There is a reason scientists thought that this animal had disappeared- the strange little creature is under threat. The cutting down of trees in the forest where they live - known as deforestation - and people hunting and trapping the animals has meant that scientists are worried for the survival of the species. Now, local scientists, as well as scientists from across the world will be working together to protect the population of these fantastic animals from hunters and the destruction of their homes.

Here is a picture of a mouse-deer

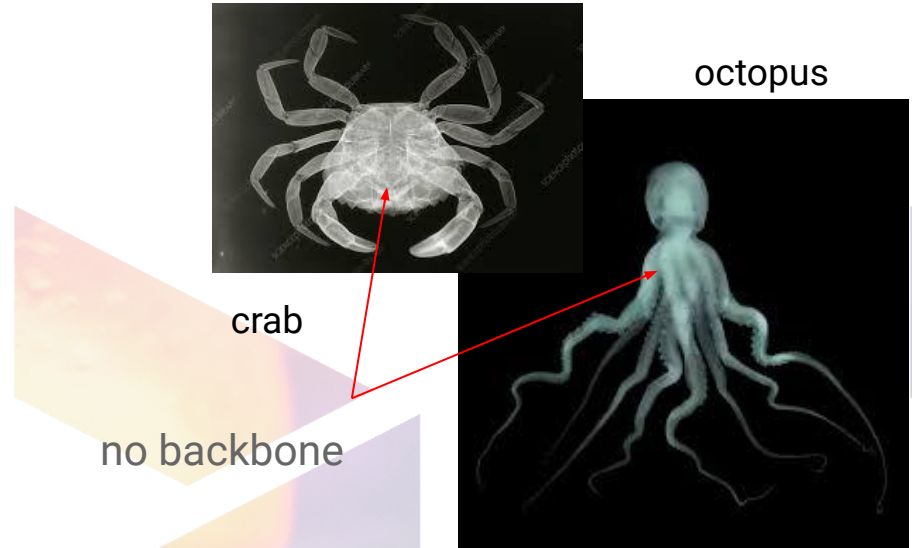
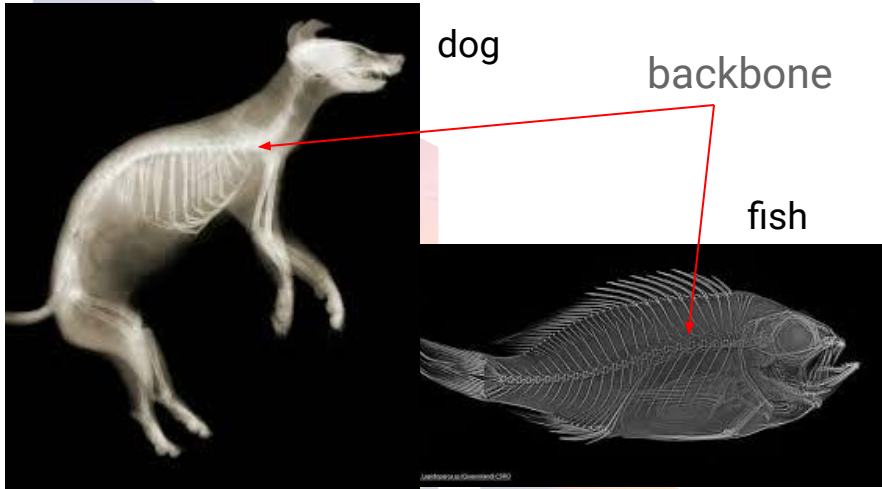
A rare image of a little mouse-deer



How do we group animals?

We group animals into different categories so that we can understand them better.

When we look at animals we can first separate them into two groups, based on a very important characteristic; whether the animal has a spine (a backbone) or not. We call animals with a spine '**vertebrates**' and animals without a spine '**invertebrates**'.



Vertebrates



Examples of vertebrates (animals with a spine): Humans of course have a spine, so we are vertebrate. Dogs, cats, rats, goldfish, seagulls, giraffes, lizards, monkeys, lions, squirrels, sparrows, sharks **all** have spines too!



Invertebrates



Examples of invertebrate (animals without a spine): Invertebrate animals are a lot smaller than vertebrate, they can have soft squishy bodies or hard outer bodies. These are snails, spiders, bees, slugs, worms, woodlice, scorpions, flies, wasps, beetles and more! All the creepy crawlies.



How do we group animals?

We can group animals into even more groups based on their physical characteristics.

We use different classifications to determine what animal is in each group.

For vertebrate animals, we ask these questions:

Do they have hair or fur, feathers, scales, or wet and slimy skin?

Do they lay eggs?

Can they breathe in air or underwater?

Are they warm blooded or cold blooded?

When we ask these questions we can separate vertebrate into 5 main groups...

Mammals

These are animals with hair or fur, they breathe only air and are warm blooded. They also produce milk for their young.

Amphibians

These animals are born underwater. Later on in life, they live on land. They have slimy, wet skin - not scales or fur. They are cold blooded and lay eggs with a soft skin (not a shell).

Reptiles

These animals are cold blooded and have scales. They breathe air and lay eggs with a hard shell.

Fish

These animals have gills which mean they can only breathe underwater. They have scales and are cold blooded. They also lay eggs with a soft skin.

Bird

These animals are characterised by having feathers, breathing and being warm blooded. They lay eggs with a hard outer shell.

Which of the groups do each of these animals belong? Mammal, Reptile, Amphibian, Fish or Bird?



Did you get them right?



Frog : Amphibian



Pelican: Bird



Cat: Mammal



Iguana: Reptile



Horse: Mammal



Monkey: Mammal



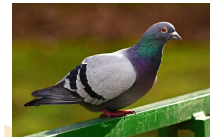
Snake: Reptile



Goldfish: Fish



Shark: Fish



Pigeon: Bird



Crocodile: Reptile



Salamander: Amphibian

How do we group animals together?

From these 5 main groups we group the animals into more groups, and then into more groups, based on their physical characteristics.

Remember the mouse deer in the article? That was the 'smallest hoofed mammal in the world'. So one of the sub groups of the mammal groups is 'hoofed mammal'.

What other animals do you think are in this group? How many can you come up with?



Which group do I belong to?

What do you need?

- Paper
- Scissors
- Pen/pencil



Instructions:

1. First, write the names of many different animals in clear, large writing (we recommend at least 15 for this activity).
Alternatively draw or print lots of different animals.
Top tip - try to include animals from different groups e.g mammals, reptiles, birds, fish, amphibians, insects
1. Next, cut the names/images of the animals out
2. Then, group them anyway you like (colour, size, features, animal group, diet etc)
3. Repeat step 3 as many times as you can!

What are you learning?

You are learning that living things can be grouped in many different ways!

Observe animals carefully!

What do you need?

- Ideally a garden*
- A tupperware box or container
- A clean paintbrush (optional)
- A magnifying glass (optional)



Instructions:

1. First, go slowing and quietly into your garden (always tell an adult first). You don't want to scare away any animals.
2. Next, crouch down next to flower pots, look under leaves, roll over stones and find dark corners where insects may be hiding.
Top tip - snails like the backs and lips of flowerpots.
1. If you find one, gently try to put it in your container using a leaf, or gently brush it into your pot using the paintbrush, if you have one.
2. Then, look very closely at it. Use a magnifying glass if you have one. How many legs does it have? Does it have a shiny, hairy or hard body? Can you see its mouth or eyes or wings?
3. After that, and this is very important, put your living thing gently back where you found it, including rolling stones back over or putting flower pots back where they came from. Remember that is an animals home.
4. Repeat and find as many living things as you can.

*If you do not have a garden but have a terrace or balcony then give that a try. You may still find beetles in flower pots or spiders hiding in a dark corner. If you do not have outside space, try sitting at a window and making a note of every animal you see then trying to identify them online (What breed of dog walked past? What type of bird was that?).

Play 'What am I?'



What do you need?

- All the pieces of paper with animals on that you made for the previous activity (Which group do I belong to?)
- A partner

Instructions:

1. First, lay all the animal cards face down
2. Next, choose one and look at the animal on it but without your partner seeing what's on the card
3. Then, describe the animal to your partner without saying its name
4. After that, swap, so that your partner describes to you
5. Keep going until you've used all the cards
6. Repeat the game but challenge yourself by putting new rules in place e.g. you are not allowed to describe what it looks like, just its habitat or just its lifecycle etc.