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Grouping animals

Sustainability Goals:



Subject links:
Science, ICT

Ages 5-11

Curriculum links:

UK wildlife, Animal classification, Habitats, Investigation, Digital skills

Ocean Literacy Principles:

5. The ocean supports a great diversity of life and ecosystems

Learning Objectives:

- To be able to identify and describe a variety of marine and coastal animals
- To understand the difference between a vertebrate and an invertebrate
- To be able to group animals together based on shared characteristics

Resources provided:

[Marine vertebrates & invertebrates](#)
[Grouping vertebrates](#)
[Giant sort out](#)
[Grouping giants poster](#)
[Grouping giants completed](#)

Extra resources required:

Mini whiteboards, poster paper, pens, scissors, glue
Tablets and books

Step 1

Background

Animals are grouped according to their physical and behavioural characteristics. Vertebrates are animals with a backbone, and invertebrates have no backbone. Within each broad group there are subgroups or classes. Vertebrates can be further classified as mammals, amphibians, fish, birds and reptiles.

This lesson introduces simple classification of vertebrates according to these groups, focusing on some of the largest creatures in our ocean.

Step 2

Set the Scene

10 minutes – Vertebrates and Invertebrates

Write the words 'vertebrates' and 'invertebrates' on the board for students to copy on to mini whiteboards. Introduce the idea that all animals can be grouped depending on their features. Explain that vertebrates have a backbone like humans, and invertebrates are animals without a backbone. Ask children if they can think of a soft creature without a backbone. After one example, ask children to work in pairs to brainstorm other ideas for animals on land and in the sea, looking at which are vertebrates or invertebrates. After 5 minutes, discuss answers and show the [marine vertebrates & invertebrates](#) sheet on your whiteboard.

Step 3

Activities

Activity 1: 5-10 minutes – Grouping vertebrates

Explain that today's lesson is going to focus on marine and coastal vertebrates. Show the [grouping vertebrates](#) sheet to introduce that vertebrates can be split into subgroups: mammals, fish, birds, amphibians and reptiles. Talk through the characteristics of each subgroup and explain that amphibians don't live in the sea. In pairs, return to the brainstorm concentrating just on the vertebrates. Determine which subgroup each animal listed during the Set the Scene activity belongs to.

Activity 2: 30 minutes – Grouping ocean giants

Show the [ocean giant sort out](#). Explain that these creatures need to be large because they travel over great distances, live in a huge habitat and in cold environments. Ask children if they think any of these animals are found in the UK. Which ones? (e.g. sea eagle, leatherback turtle, basking shark, dolphin, tuna, humpback whale). Briefly discuss characteristic features of each animal, giving clues to their group. Split the class into small groups. Hand out the [ocean giant sort out cards](#) and the [grouping giants poster template](#), scissors and glue to each group. Working together in groups, cut out the animal cards and stick on to the correct group (mammals, reptiles, fish, birds).

Display [grouping vertebrates](#) on your whiteboard to help them. Students can use this information to add descriptions for each group. Reveal answers by showing the [completed grouping giants poster](#).

Activity 3: 30 minutes – How else do we group animals?

Describe how animals can also be grouped by where they live (habitats), where in the world they are found (their range) and by what food they eat (herbivore, omnivore, or carnivore). Make sure students understand all the terms. Students should try adding extra information for each animal on their poster. For example, tuna live in the open ocean, they can be found all around the world, and are predators. Students should use existing knowledge before looking for extra information from books or the internet.

Step 4

Extend

30 minutes – Creature fact file

In pairs, students could choose an animal to study further using books or the internet to research more information. They could then use a computer programme to create a fact file on their chosen species, adding images and text.

Step 5

Reflect

5 minutes

Show [grouping giants](#) to summarise learning. Are these groups vertebrates or invertebrates? What is a characteristic of mammals? What is a characteristic of fish? What is a characteristic of reptiles? What is a characteristic of birds?

Step 6

Follow up

Learn more about ocean giants in our [Sharks aren't scary](#) or [Tremendous Turtles](#) lessons. For more on classifying animals into groups, take a look at our [Rockpool](#) lessons.

To study how creatures are adapted to their environment, have a look at our lesson, [How do creatures adapt?](#)

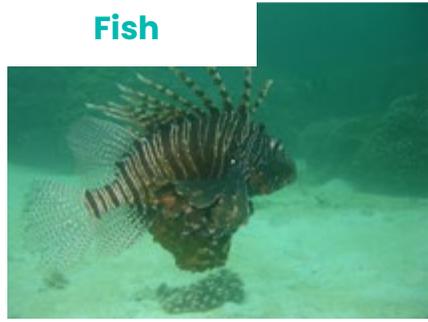
Vertebrates

Vertebrates are animals with a backbone, like humans.

Sea snake



Fish



Whale



Seahorse



Ray



Otter



Invertebrates

Invertebrates are animals without a backbone, like insects and jellyfish.

Sea snail



Sea spider



Anemones



Crab



Jellyfish



Grouping Vertebrates

All vertebrates belong to one of these groups.

Mammals

eg. Human



Live on land or in sea
Have hair or fur
Warm blooded
Have live young
Breathe with lungs
Some lay eggs

Fish

eg. Tuna



Live in sea
Have scales
Cold blooded
Lay eggs
Breathe with gills

Reptiles

eg. Sea snake



Live on land or in sea
Have scales
Cold blooded
Lay eggs
Breathe with lungs

Birds

eg. Seagull



Live on land or sea
Have feathers and wings
Warm blooded
Lay eggs
Breathe with lungs

Amphibians

eg. Frog



Live on land and in fresh water
Have smooth, moist skin
Cold blooded
Lay eggs
Breathe with lungs and gills



Pelican



Crocodile



© Julie Edgley

Sea eagle



King penguin



Leatherback turtle



Manta ray



Polar bear



© Mark Kirkland

Basking shark



Bottlenose dolphin



Tuna



Humpback whale



© Q Phia

Sea snake

Grouping Giants

Please print to A3 if possible

Mammals

Reptiles

Fish

Birds

Grouping Giants

Mammals



Reptiles



Fish



Birds

