Mammals

Notes and guidance

In this small step, children are introduced to the word "mammal" for the first time. Children learn that a mammal is an animal that has fur or hair on its body. They will build on this understanding and look at other characteristics of mammals, such as being warm-blooded and giving birth to live young, in later year groups.

The main focus of this step is to look at the difference between mammals that can be kept as pets and mammals that live in the wild. Classifying humans as mammals and identifying sea mammals will be explored in Year 2. Children should be able to name a variety of common mammals and should recognise that they all have fur or hair on their body.

In this small step, children begin a research enquiry to look at whether all animals are the same. Children should use secondary sources, such as picture books, images and videos, to help them form an answer to the enquiry question.

Things to look out for

- Children may think, for example, that a mouse and an elephant cannot both belong to the category of mammals due to their distinct physical differences.
- Children may assume all mammals can be kept as pets and not live in the wild.

Key questions

- What is a mammal?
- What mammals are shown?
- Is a _____ a mammal?

  How do you know?
- Does a _____ have fur?
- Can all mammals be pets?

  How do you know?
- Can all mammals live in the wild?

  How do you know?

Enquiry question

- Are all animals the same?

National curriculum links

- Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.
- **Working scientifically** – Asking simple questions and recognising that they can be answered in different ways.

Mammals

Key vocabulary

- **animal** – a living creature

- **mammal** – an animal with fur or hair on its body

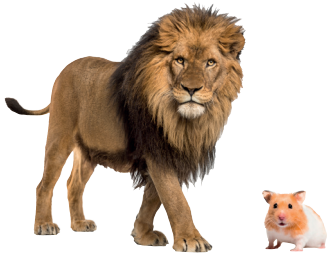
- **fur** – the fine, soft hair found on different animals

- **wild mammal** – a mammal that is not looked after by humans

- **pet** – an animal that is looked after by humans

Practical ideas

- Group images of mammals based on whether they can be kept as pets or whether they live in the wild. Encourage children to think about whether or not certain mammals can be kept as pets and also live in the wild.
- Prompt children to discuss different mammals they have as pets. Encourage them to ask questions about each other's pets to identify some similarities and differences between different mammals.
- Pick a card with a mammal on it but keep it to yourself. Children must guess the mammal on the card by asking yes/no questions about its characteristics.



Factual knowledge

- Mammals have fur or hair on their bodies.
- Some mammals can be kept as pets.
- Some mammals live in the wild.

Birds

Notes and guidance

In this small step, children explore and identify different birds and their features. They learn that birds have wings, a beak and feathers. Children should recognise that some birds can fly and some cannot. It is important that they are shown a wide range of examples, such as flightless and swimming birds. By the end of this small step, children should be able to name a range of common birds and identify their simple features.

Within this small step, children could gather and record data by completing a bird watch in the local area. This could be repeated later in the year to compare data from different seasons. With support, children could count the number of birds they see and record the data in numerals as they are not yet familiar with using tally marks.

Key questions

- What features do all birds have?
- Is a _____ a bird?

  How do you know?
- Does a _____ have feathers?
- Can all birds fly?

  How do you know?
- What birds are shown?
- Which birds can swim?
- What are the differences between these two birds?

Enquiry question

- Are all animals the same?

Things to look out for

- Children may think all birds can fly.
- Children may think fur and feathers are the same thing, as they both feel soft.
- Children may think all animals with wings are birds.

National curriculum links

- Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.
- **Working scientifically** – Gathering and recording data to help in answering questions.

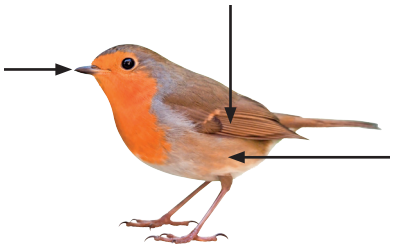
Birds

Key vocabulary

- **bird** – an animal that has feathers, wings and a beak

wings – a part of a bird's body that can be used for flying

beak – the hard part of a bird's mouth and nose



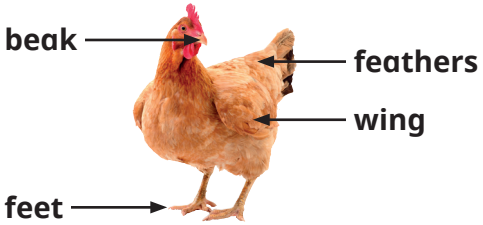
feathers – the soft covering on the outside of the bird

flipper – the part of the body some birds use to swim

webbed feet – fingers and toes that are joined together to help with swimming

Practical ideas

- Paint or draw a bird and label its features.



- Provide children with images of a range of familiar birds. Ask them to identify the birds and discuss their similarities and differences.

  Children could use sentence stems to structure their discussions.

  - Both birds have ...
  - Something that is similar about these birds is ...
  - Something that is different about these birds is ...

Factual knowledge

- Birds have beaks, wings and feathers.
- Some birds can fly.
- Some birds cannot fly.
- Some birds can swim.
- Some birds cannot swim.

Fish

Notes and guidance

In this small step, children explore different types of fish and their features. They learn that fish live in water, have fins to help them swim and most have scales on their bodies. They also learn that most fish breathe with gills. In Year 2, children build on this understanding to by looking at other features of fish, such as their needs for survival. Children may have limited knowledge of the names of different fish, so choose examples that they may be familiar with, such as goldfish, clownfish or sharks.

Children will now be able to explore the enquiry question in greater depth as they have an understanding of mammals, birds and fish. Provide opportunities to discuss the key differences between these animals groups and encourage children to explain, for example, why a penguin is not a fish and what group penguins belong to.

Key questions

- What features do fish have?
- What fish are shown?
- Is a _____ a fish?
- What do fish have to help them swim?
- What do fish have to help them breathe underwater?
- How is a fish different from a mammal?
- How is a fish similar to a bird?

Enquiry question

- Are all animals the same?

Things to look out for

- Children may use the term "fish" to describe all animals that live in water.
- Children may think that fish do not breathe as they are underwater.

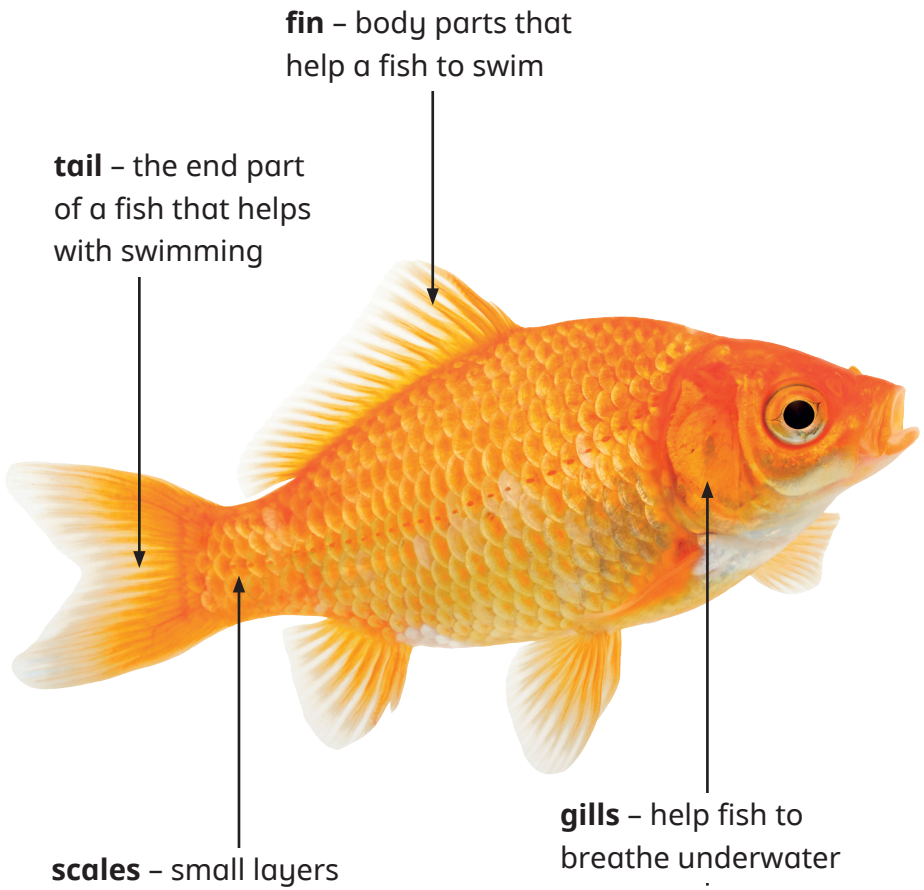
National curriculum links

- Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.
- **Working scientifically** – Identifying and classifying.

Fish

Key vocabulary

- **fish** – an animal that lives in water which usually has fins, scales and gills



Practical ideas

- Place large labels on the carpet.

fish	mammal	bird

Give children images of different animals and ask them to sort them into the correct groups.

What features does each animal group have?

Ask children to sort the images in another way. For example, they may choose to sort the images as animals that can be kept as pets and animals that cannot.

Factual knowledge

- Fish live in water.
- Some fish have scales on their bodies.
- Fish have fins to help them swim.
- Most fish have gills that help them breathe underwater.

Amphibians

Notes and guidance

In this small step, children explore different amphibians and their features. This may be the first time children are introduced to the word "amphibian". They learn that an amphibian is an animal that lives both on land and in water. Adult amphibians spend most of their life on land, usually in damp habitats. Introduce children to common amphibians such as frogs, newts and toads.

Children continue to explore the enquiry question in this step and should be given opportunities to develop their ideas and thinking throughout. Children may think that amphibians are fish as they spend part of their life in water. Therefore, it is particularly important to explore the differences between these two animal groups.

Key questions

- Is a _____ an amphibian?
- What features do amphibians have?
- What amphibian is this?
- Where do amphibians live?
- What are the differences between a fish and an amphibian?
- How is an amphibian similar to a mammal/bird/fish?
- How is an amphibian different from a mammal/bird/fish?

Enquiry question

- Are all animals the same?

Things to look out for

- Children may think that amphibians have scales like fish. Explore the differences between fish and amphibians to address this misconception.
- Children may assume penguins are amphibians as they spend part of their life in water.

National curriculum links

- Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.
- **Working scientifically** – Identifying and classifying.

Amphibians

Key vocabulary

- **amphibian** – an animal that lives on land and in water

- **frog** – an amphibian with moist, smooth skin

- **toad** – an amphibian with dry, bumpy skin

- **newt** – a small amphibian with a long tail

- **webbed feet** – fingers and toes that are joined together to help with swimming

Practical ideas

- Take a class trip to a local pond where children have the opportunity to look for amphibians.

- Group images of animals based on whether they are amphibians or not. Include examples of mammals, fish and birds. Encourage children to explain their reasoning.
- Use secondary sources to compare different amphibians. Encourage children to discuss their similarities and differences.

Factual knowledge

- Amphibians live on land and in water.
- Amphibians have webbed feet.
- Frogs, toads and newts are amphibians.

Reptiles

Notes and guidance

In this small step, children explore reptiles and their features. They learn that a reptile is an animal that has dry scales on its body. Children will build on this understanding and look at other features of reptiles in later year groups, such as being cold-blooded and laying eggs. Children may be familiar with some common reptiles, such as lizards, snakes, crocodiles and turtles.

By the end of this small step, children should be able to name a range of common reptiles and identify their features. Discussing different reptiles may naturally lead to discussing where they live. Some reptiles are land reptiles and some are aquatic reptiles. In this small step, children should provide an answer to the enquiry question for this block. They should be encouraged to draw on evidence from the previous small steps when forming an answer.

Things to look out for

- Children may think that all reptiles are small.
- Children may think that all reptiles live on land. Discuss examples of aquatic reptiles, such as crocodiles or turtles, to address this misconception.
- Children do not need to use the word "habitat" within this step.

Key questions

- What features do reptiles have?
- What reptile is this?
- Is a _____ a reptile?
- What is similar about these two reptiles?
- What is different about these reptiles?
- Are there similarities between reptiles/mammals/birds/fish and amphibians?
- What are the differences between reptiles/mammals/birds/fish and amphibians?

Enquiry question

- Are all animals the same?

National curriculum links

- Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.
- **Working scientifically** – Using their observations and ideas to suggest answers to questions.

Reptiles

Key vocabulary

- **reptile** – an animal that has dry scales

- **scales** – small, hard layers that grow from the skin

- **lizard** – a small reptile

- **crocodile** – a large reptile

- **turtle** – a reptile with a shell

Practical ideas

- Provide children with images of a variety of reptiles.

  Ask them to identify the similarities and differences between different types of reptiles.

  Children could then start grouping the images of the reptiles in different ways. Suggestions are highlighted below.

  - Whether the reptiles live on land
  - Whether they have legs or not

- Children could carry out a virtual zoo visit. Many zoos have live cameras within animal enclosures.

  Encourage children to identify and name different reptiles.

  They can gather and record data about different reptiles and their features and then present their findings to the class.

Factual knowledge

- Reptiles have dry skin.
- Reptiles have scales on their bodies.
- Lizards, snakes, crocodiles and turtles are reptiles.

Compare and group animals

Notes and guidance

In this small step, children build on their knowledge from previous small steps to compare and group animals. Children should now be able to name and identify a range of mammals, birds, fish, amphibians and reptiles. Using this knowledge, children identify and group animals into categories based on their features. They compare the different features between groups of animals and also look at similarities between groups.

This is a great opportunity to recap learning from the previous small steps in this block. Children should be encouraged to sort and group animals in different ways. They may initially need to be given predetermined categories for sorting and grouping animals. However, to extend learning allow children to choose their own ways of sorting and grouping.

Key questions

- What animal is this?
- What features do _____ have?
- How can you group these animals?
- What is similar about these groups of animals?
- What is different about these groups of animals?
- What is similar about mammals/birds/fish/amphibians and reptiles?
- What is different about mammals/birds/fish/amphibians and reptiles?
- How do you know a _____ is a _____?

Things to look out for

- Children may group animals incorrectly. Revisiting the features of different types of animals will address this.
- Children may think all animals that live in water are fish. Be sure to include animals such as penguins and turtles to avoid this assumption.

National curriculum links

- Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets).
- **Working scientifically** – Identifying and classifying.

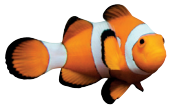
Compare and group animals

Key vocabulary

- **mammal** – an animal with fur or hair on its body

- **bird** – an animal that has feathers, wings and a beak

- **fish** – an animal that lives in water which usually has fins, scales and gills



- **amphibian** – an animal that lives on land and in water

- **reptile** – an animal that has dry scales

Practical ideas

- Children group images or small figures of animals based on what type of animal they are.

  Encourage children to think about the particular features each type of animal has.

- Place labels of each animal group around the room.

  Name or describe an animal and ask children to move to the label that the animal belongs to.

- Pick a card with an animal on it but keep it to yourself. Children must guess the animal on the card by asking yes/no questions about its features.

Factual knowledge

- There are different types of animals.
- Animals have different features.

Carnivores

Notes and guidance

In this small step, children explore different carnivores and their key characteristics. This is the first time children have been introduced to the word "carnivore". Children should learn that in the wild, carnivores hunt and kill other animals for food. Children learn about specific characteristics commonly associated with carnivores including speed, strength and sharp teeth and claws.

In this small step, children look at similarities and differences between different carnivores in terms of their characteristics. They may be familiar with some carnivores, such as lions, tigers, crocodiles and wolves. Provide opportunities to recap knowledge from previous small steps within this block by discussing what group of animals each carnivore belongs to.

Key questions

- What is a carnivore?
- Is a _____ a carnivore?

  How do you know?
- What do carnivores eat?
- What animals does a _____ eat?
- Do all carnivores live in the wild?

  How do you know?
- Are there any pets that are carnivores?
- What animal group does this carnivore belong to?
- Are there any reptiles/birds/amphibians/fish that are carnivores?

Things to look out for

- Children may think that only mammals can be carnivores. Sorting carnivores into their different animal groups will address this misconception.
- Children may assume carnivores can only be large animals.

National curriculum links

- Identify and name a variety of common animals that are carnivores, herbivores and omnivores.
- **Working scientifically** – Identifying and classifying.

Carnivores

Key vocabulary

- **animal** – a living creature

- **carnivore** – an animal that eats other animals

- **sharp teeth** – teeth used for ripping and tearing

- **wild animal** – an animal that is not looked after by humans

- **pet** – an animal that is looked after by humans

Practical ideas

- Group images or small figures of animals based on whether they are carnivores or not.

- Use five labels.

mammal | bird | fish | amphibian | reptile

Have a variety of different images of carnivores. Children should sort the carnivores based on what animal group they belong to.

- Use secondary sources to compare different carnivores. Encourage children to discuss their similarities and differences.

Factual knowledge

- Some animals are carnivores.
- Carnivores eat other animals.
- Many carnivores have sharp teeth and claws.

Herbivores

Notes and guidance

In this small step, children explore herbivores and their key features. This is the first time children have been introduced to the word "herbivore". In this step, children learn that herbivores are animals that eat plants. They look at similarities and differences between different herbivores, particularly how they range in size from rabbits to elephants. Unlike carnivores, which often have sharp teeth, many herbivores have flat teeth for chewing plants.

Children may already know some common herbivores, such as cows, horses, sheep and rabbits. Throughout this step, provide opportunities to recap knowledge from previous small steps within this block by discussing what group of animals each herbivore belongs to.

Key questions

- What is a herbivore?
- Is a _____ a herbivore?

  How do you know?
- What do herbivores eat?
- Do herbivores live in the wild?

  How do you know?
- Are there any pets that are herbivores?
- What animal group does this herbivore belong to?
- Are there any reptiles that are herbivores?
- Are there any birds that are herbivores?

Things to look out for

- Children may assume large animals, such as elephants, eat other animals. Sorting animals into carnivores and herbivores will address this misconception.
- Children may identify animals that eat both animals and plants as herbivores. Omnivores will be explored in the next step.

National curriculum links

- Identify and name a variety of common animals that are carnivores, herbivores and omnivores.
- **Working scientifically** – Identifying and classifying.

Herbivores

Key vocabulary

- **animal** – a living creature

- **herbivore** – an animal that eats plants

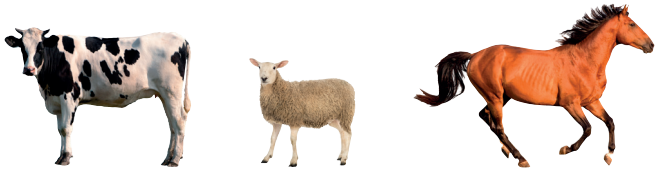
- **plants** – living things which usually grow in soil

- **vegetable** – a plant or part of a plant that is eaten as food

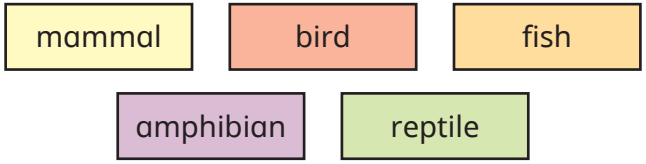
- **fruit** – the part of a plant that contains seeds

Practical ideas

- Group images or small figures of animals based on whether they are herbivores or not.



- Use five labels.



Have a variety of different images of herbivorous animals. Children must sort the herbivores based on what animal group they belong to.

Factual knowledge

- Some animals are herbivores.
- Herbivores eat plants including grass, fruits and vegetables.
- Some herbivores eat seeds and nuts.
- Herbivores have flat teeth for chewing plants.

Omnivores

Notes and guidance

In this small step, children are introduced to the word "omnivore" for the first time. They learn that an omnivore is an animal that eats both animals and plants. Omnivores range in size from tiny insects such as ants, to larger animals like bears. They have sharp teeth for eating other animals and flat teeth for chewing plants. Children should look at similarities and differences between different omnivores using secondary sources to support them.

Children may know some common omnivores such as bears, foxes, mice and hedgehogs. As children have now learnt about carnivores, herbivores and omnivores, provide opportunities for them to group animals based on their diet, as well as their animal type.

Key questions

- What is an omnivore?
- Is a _____ an omnivore?

  How do you know?
- What do omnivores eat?
- Do omnivores live in the wild?

  How do you know?
- Are there any pets that are omnivores?
- What animal group does this omnivore belong to?
- Are there any reptiles/birds that are omnivores?
- Are there any amphibians/fish that are omnivores?

Things to look out for

- Children may confuse the meanings of the words "carnivore", "herbivore" and "omnivore", which can lead them to classify an animal incorrectly.
- Children may assume animals of the same type (for example, birds) all have the same diet.

National curriculum links

- Identify and name a variety of common animals that are carnivores, herbivores and omnivores.
- **Working scientifically** – Identifying and classifying.

Omnivores

Key vocabulary

- **omnivore** – an animal that eats other animals and plants

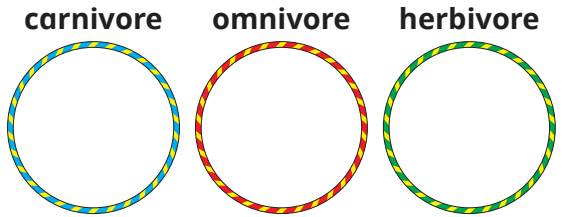
- **carnivore** – an animal that eats other animals

- **herbivore** – an animal that eats plants

- **plants** – living things which usually grow in the soil

Practical ideas

- Create a large sorting station on the carpet. Use three hula hoops and create a label for carnivores, herbivores and omnivores.



  Provide each child with an image of an animal. Children should sort the animals based on their diet.

- Create some flashcards with different animals on. Ensure there are examples of mammals, birds, fish, amphibians and reptiles.

  Choose a card with an animal on it but keep it to yourself. Children must guess the animal on the card by asking yes/no questions about its characteristics and diet.

Factual knowledge

- Omnivores eat other animals and plants.
- Some animals are carnivores.
- Some animals are herbivores.
- Some animals are omnivores.