**Animals**

**Rescue Dogs**

Mountain rescue teams help people in trouble, for example, lost hikers, mountain climbers in danger, or skiers buried by avalanches.

Rescue dogs accompany rescue teams to help and guide them. With their sharp sense of smell, the dogs locate mountaineers in trouble.

These dogs are also important in rescue operations after earthquakes. They work together with firemen and policemen to find victims who are trapped under debris. Many people owe their lives to these dogs.

There are many other jobs that dogs do for our benefit. They guide the blind, take care of farm animals, inspect airports to find explosives and drugs, and help people who are unable to manage on their own.

Dogs are truly amazing. They also give us their company and affection.

A dog is truly man’s best friend!
1 Talk about the text

- Answer the questions.
  - How do dogs find lost mountain climbers?
  - Why are dogs important after earthquakes?
  - What job do dogs do at airports? What other jobs do they do?
- If you have a pet, tell your classmates what you like about it. If you do not have one, talk about the pet you would like to have. Explain your reasons.

2 Think about the questions

- Answer the questions. Read the texts.
  
  What type of animal is a dog?
  A dog has bones and a spinal column, so it is a vertebrate. It is a mammal because it nurses its young.

  What other types of animals are there?
  There are other types of vertebrates: fish, amphibians, reptiles and birds. There are also many types of invertebrates, insects, for example.

3 Find out about the unit

In this unit we are going to learn about:
✓ Mammals and other vertebrates.
✓ Insects and other invertebrates.
Mammals

1. Vertebrates

Vertebrates have a skeleton with a spinal column. Mammals, birds, reptiles, amphibians and fish make up the vertebrate group.

2. What mammals are like

Mammals can be very different, but they share the following characteristics:

- Although some are aquatic, the majority are land animals. 📖
- They breathe oxygen using their lungs.
- They give birth to live young, which means they are viviparous.
- They nurse their young with milk, a very nutritious liquid produced in the breasts of female mammals. 📖
- Their skin is usually covered with fur or hair.

A female baboon nursing her young. Milk is the only food newly born mammals need.
3. How mammals move

Most mammals have four legs and move about on land. However, some move about in other ways.  
- Humans move around using two limbs, their legs. We use other limbs, our arms, for grasping.
- Aquatic mammals, such as seals, whales, and dolphins, swim using fins.
- Bats fly using their forelimbs, which are wings.

4. What mammals eat

Mammals can be carnivores, herbivores or omnivores. Depending on their eating habits, they have different types of teeth. 
- Carnivores have pointed teeth for tearing the flesh from their prey.
- Herbivores have sharp teeth for cutting grass and large molars for grinding it.
- Omnivores, which include humans, have a mixture of pointed teeth, sharp teeth and molars.

Tasks

1. What kinds of animals make up the vertebrate group?
2. Look at picture 4. Explain what the teeth of herbivorous and carnivorous mammals are like.
Other Vertebrates

1. Fish

Fish are a large, **oviparous** vertebrate group. They have the following characteristics:

- They live in **water**.
- They breathe the dissolved oxygen in the water, using their **gills**.
- Their young hatch from **eggs**.
- Their limbs are **fins**, which they use to swim.
- Their skin is covered with **scales**.

Some fish live in salt water, and others live in fresh water. A few can live in both salt and fresh water.

2. Amphibians

Newly born amphibians are called **tadpoles**, and they live in water. When they grow and become adult animals, they live on land. Amphibians have the following characteristics:

- Tadpoles breathe through **gills**, but the adult amphibians breathe through **lungs**.
- Amphibians hatch from **eggs** laid in water.
- Tadpoles move with a **fin**, adults move with **legs**.
- They have **bare skin**.

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**Vocabulary**

**gill** the organ that fish and other water creatures use to obtain oxygen from water
3. Reptiles

In the reptile group, we find very different animals. Their characteristics are the following:

- They are terrestrial, which means they live on land.
- They breathe through lungs.
- They hatch from eggs laid on land.
- They have four legs, like lizards, for example. Snakes, however, have no legs and slither. Sea turtles have flippers, which they use to swim.
- Reptile skin is covered with scales. Turtles also have a hard shell.

4. Birds

Birds are the animals that fly best. They have the following characteristics:

- They are terrestrial.
- They breathe through lungs.
- They hatch from eggs laid on land.
- They have two wings, which they use to fly, and two legs.
- Their skin is covered with feathers.

A few birds, such as the penguin and ostrich, can’t fly.

Tasks

1. Which vertebrates breathe through gills? Which ones breathe through lungs?
2. Where do amphibians live, in water or on land?
3. What types of limbs do reptiles have? What types do birds have?
UNDERSTAND

1. Identify the mammal characteristic shown in each photo.

   EXAMPLE: A: Mammals breathe air through their lungs.

2. Choose one mammal that walks, one that swims, and another that flies. Describe their limbs and how they move around.

   EXAMPLE: A wolf has four legs. It uses them to walk and run.

FIGURE IT OUT

3. Look at the sets of teeth below. Which set is from a carnivore? A herbivore? And an omnivore?
Vertebrates

Fish, amphibians, reptiles, birds, and mammals are all vertebrates. They differ in the way they breathe, reproduce, move about, and their skin covering.

I CAN DO IT

4. Make a table.

A table is used to organize information in a way that is easy to read. It can be consulted quickly.

Complete the table. Use the fish column as an example.

<table>
<thead>
<tr>
<th></th>
<th>Fish</th>
<th>Amphibians</th>
<th>Reptiles</th>
<th>Birds</th>
<th>Mammals</th>
</tr>
</thead>
<tbody>
<tr>
<td>They breathe through</td>
<td>gills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Their body is covered with</td>
<td>scales</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Their limbs are</td>
<td>fins</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Their reproduction is</td>
<td>oviparous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

APPLY

5. Identify which group each animal belongs to. Explain your answer.

Summary

Vertebrates

Fish, amphibians, reptiles, birds, and mammals are all vertebrates. They differ in the way they breathe, reproduce, move about, and their skin covering.
Invertebrates

1. What invertebrates are like

Invertebrates are animals that do not have an inner skeleton made of bones. They all hatch from eggs. There are many groups of invertebrates. There are probably many you have never seen because they are very small or because they live underwater.

2. Worms

Worms are invertebrates with long, soft bodies and no legs. Earthworms, marine worms and intestinal worms are types of worms. Some worms produce serious illnesses in humans.

3. Mollusks

Mollusks are invertebrates with soft bodies. Most have one or two shells to protect their body. Almost all mollusks are marine animals. Clams, mussels, octopuses, squids and snails are all mollusks.

Vocabulary

shell the hard outer covering that protects the body of some animals, especially mollusks

Clam (above) and octopus (below). Although they look very different, they are both mollusks.
4. Insects

Insects make up the largest group of invertebrates. They have the following characteristics:

- Insects hatch from eggs.
- An insect’s body is divided into three parts: head, thorax and abdomen.
- An insect head has two antennae on the head and there are six legs on the thorax. Most insects also have four wings that are found on the thorax.
- Insects that have just hatched are different from adult insects. They look like worms and are called larvae. Later, they turn into adults. This transformation is called metamorphosis.

5. The importance of insects

Insects are very important, since there are so many of them. Some of them are beneficial to humans, but others are harmful.

- Insects are food for other animals.
- They act as natural garbage collectors, because they feed on the remains of dead animals and excrement.
- They can produce irritating bites and transmit diseases, such as malaria.
- They can harm crops.
- They provide useful products, such as silk, honey and wax.

Tasks

1. What are worms like?
2. Give two reasons why insects are beneficial.
ACTIVITIES

UNDERSTAND

1. Match the following silhouettes to a type of invertebrate.

A □ B □ C □
- a worm
- a mollusk
- an insect

Complete the following sentences.

- Silhouette A is ___________ because ___________.
- Silhouette B is ___________ because ___________.
- Silhouette C is ___________ because ___________.

2. Put the pieces of the puzzle together. Write three sentences about insects.

- They have six legs...
- They have two antennae...
- ...on the thorax.
- Baby insects don’t look like...
- ...on the head.
- ...adult insects.

FIGURE IT OUT

3. Imagine that all the insects in the world suddenly disappeared. What would happen?
4. Read the text. Answer the questions.

**Social Insects**

Many insects are solitary creatures except when they look for a partner to reproduce. Others, however, like bees and ants, are social. This means they live in groups or colonies.

In each group there is a queen, the mother of all the other insects. The other insects are responsible for doing the work. They look for food, care for the queen and the larvae, and defend the group.

Ants do more than look for food. They keep colonies of aphids that they protect and defend. In exchange, the aphids produce a sugary substance that the ants eat.

- What social insects do you know about?
- Could we say that an anthill or a beehive is home to a big family? Why?

5. Look up the information about the invertebrates below in an encyclopedia or on the Internet. Write about each one: what it looks like, where it lives and what it eats.

   medusa – tapeworm – spider – locust – starfish

**Summary**

**Invertebrates**

Invertebrates do not have a spinal column. There are many different types. Worms, mollusks and insects are all invertebrates.

Insects are the largest invertebrate group. Some are beneficial to humans and others are harmful.
Check what you know

1. Complete the word map.

Animals

are divided into

vertebrates

that include

mammals

invertebrates

that include

fish

worms

2. Mark the correct words.

1. Mammals breathe through...
   - gills.
   - lungs.

2. Herbivores have molars that are...
   - large.
   - small.

3. Fish are...
   - oviparous.
   - viviparous.

4. Amphibian babies are called...
   - caterpillars.
   - tadpoles.

5. A worm’s body is...
   - hard.
   - soft.

6. Octopuses and snails are...
   - worms.
   - mollusks.

7. Insect wings are located on...
   - the thorax.
   - the abdomen.

8. Insects give us...
   - leather.
   - honey.
My project

3. Make a mobile of living things.

   Materials: three straws, thread, glue, and white card.
   ● Draw a mammal, a bird, a reptile, an amphibian, and a fish on the card. Color the pictures. Outline each animal to make it easier to cut out.
   ● Next, cut out the animals and color them on the other side, too.
   ● Make a small hole in each animal and pull a thread through. Tie a knot in the thread.
   ● Look at the diagram. Tie each animal to one of the straws to hang it. Fix the string with a drop of glue. Now assemble your mobile.

Citizenship

4. Read the text. Answer the questions.

   Watch Out! Protected Species

   Sometimes, people find frogs, turtles or birds in nests when they go to the country, and they take them home as pets. They probably do not know that many animals are protected species, including some that might seem common, for example, frogs and lizards. It is illegal to harm or capture them.

   ■ Do you think it is all right to take a protected animal home if you are going to take good care of it?
   ■ Do you think it is easy to take care of a wild animal at home?