



A mammal is an animal that **feeds** its babies with milk when it is young. There are over 4,500 types of mammals.

Many of the **most popular** animals we know are mammals, for example, dogs, cats, horses, cows, but **exotic** animals like kangaroos, giraffes, elephants and **anteaters** belong to this group, too. **Humans** are also mammals.

Features of Mammals

Mammals live in all regions and climates. They live on the ground, in trees and even underground. Polar bears, **reindeer** and **seals** are mammals that live in the **Arctic** regions. Others, for example camels or kangaroos, **prefer** the world's dry areas. Seals and **whales** are mammals that swim in the oceans; bats are the only mammals that can fly.

Mammals have five **features** that make them different from other animals:

- **Female** mammals produce milk and **feed** their babies with it.
- Only mammals have hair or hair-like skin. All mammals have hair at least some time in their lives.
- Mammals are warm-blooded. Their body temperature always stays the same and does not change with the outside temperature.
- Most mammals have a larger and **well-developed brain**. They are more intelligent than other animals.
- Mammals **protect** their babies more than other animals. They prepare them for future life.

People have hunted mammals for **ages**. They ate their food and made clothes out of their skins. Thousands of years ago wild mammals were **domesticated** and gave **human beings** milk, wool and other products. Some mammals, like elephants and camels, are still used to transport **goods**. In poorer countries farmers use cows or oxen to **plough** fields.

Today some mammals are hunted **illegally**. Whales are killed because people want their meat and oil, elephants are killed for their **ivory** and **tusks**.



Colony of seals

Image: [M. Boylan](#), Public domain, via Wikimedia Commons



Mammals are often kept as pets. Among them are cats, dogs, rabbits or **guinea pigs**.

Mammals are **useful** to people in many other ways. Some help plants grow and eat **harmful** insects. Others eat **weeds** and **prevent** them from **spreading** too far. The **waste** of mammals is used as **fertilizers** that **improve** the quality of **soil**.

History of Mammals

The first mammals probably **evolved** from **reptiles** about 200 million years ago during the **Mesozoic period**. They were **rather** small at a time when dinosaurs **ruled** the lands. When the dinosaurs died out about 65 million years ago mammals became the **dominant** land animals. Many mammals became **extinct** during the **Ice Age**, which ended thousands of years ago.

Today, some **species** are in **constant** danger of becoming extinct because they are hunted by humans. Hunters and **poachers** earn money by selling fur, **tusks** and other parts of mammals. Larger wild animals are often taken to zoos where they are **protected**.



Artist's image of wooly mammoths during the Ice Age

Image : [Charles R. Knight](#), Public domain, via Wikimedia Commons



Types of Mammals

Mammals are divided into three groups:

- **Monotremes** are mammals that lay eggs, like a bird. They live in Australia and New Zealand. The **platypus** belongs to this group.
- **Marsupials** are mammals that **raise** their young ones in a **pouch** in their bodies.
- **Placentals** are the largest group of mammals. The babies grow inside their mothers until they are ready to be born. Humans are placentals.



Platypus

Image: Stefan Kraft, CC BY-SA 3.0, via Wikimedia Commons

Mammals and Their Bodies

Skin and hair cover a mammal's body. Some mammals have horns, **claws** and **hoofs**. The hair or **fur** of a mammal has many functions. The colour often **blends in** with the world around them and allows them to hide from their **enemies**. Some mammals produce needles or sharp hair that **protect** them from **attack**. But the main function is to keep the body warm.

Mammals have **glands** that produce **substances** that the body needs like **hormones**, **sweat** and milk.



The needles of a hedgehog

Image: Gibe [CC BY-SA 3.0], via Wikimedia Commons

A mammal's **skeleton** is made up of three parts:

- The **skull** contains the brain, teeth and other organs.
- The **spine** or backbone **enables** mammals to stand or walk.
- Limbs are legs and arms of a mammal, often with strong bones.

Mammals have a four-**chambered** heart system that pumps blood into all parts of their body and brings **oxygen** to muscles and **tissue**. The red blood cells of mammals can carry more oxygen than many other animals. Because mammals have a high body temperature they must burn a lot of food.



Food is **digested** through a mammal's **digestive system**. After food is eaten through the mouth it goes down the **throat** into the stomach and passes through the **intestines**. Mammals that eat plants have a complicated system with long intestines that help **break down** food. **Flesh** is easier to digest so meat-eating mammals have a simpler stomach.

Mammals **breathe** air through their lungs. Most of them have noses or **snouts** with which they take in air. Dolphins and whales breathe through a hole in the top of their back.

Mammals and Their Senses

Mammals have five **senses** that tell them what is happening in their **surroundings**. Not all senses are **developed** equally among mammals.

Mammals **rely on** a sense of smell to find food and warn them of their **enemies**. Many **species** use smell to communicate with each other. Humans, apes and monkeys have a relatively bad sense of smell. Taste helps mammals **identify** the food that they eat.

Most mammals have a good **sense of hearing**. Some mammals use their hearing to **detect** objects in the dark. Bats, for example, use sounds to **navigate** and detect **tiny** insects. Dolphins also use such a system to find their way around.

While higher **primates**, like humans, apes and monkeys have a **highly developed** sense of **sight**, other mammals are **nearly** blind. Most of these mammals, like bats, are active at night.

A good sense of touch is a feature that many mammals have. They have nerves in all parts of their body that let them feel things. Cats and mice have **whiskers** with which they can feel themselves around in the dark.



Leaping dolphin

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What Mammals Eat

Herbivores are mammals that eat plants. They have special teeth that allow them to **chew** food better. Examples of herbivores are **deer**, cows and elephants. The giant panda is a plant eater that only eats **bamboo**.

Carnivores are mammals that eat other animals. Cats, dogs, tigers, lions, wolves belong to this group. They are hunters that tear their **prey apart** with sharp teeth. They do not chew their food very much.

Omnivores are mammals that eat plants and meat. Bears, apes, pigs and humans are examples of omnivores.



Giant pandas eating bamboo

Image: [Chi King, CC BY 2.0](#), via Wikimedia Commons

How Mammals Move

Most mammals live and move on the ground. They have four legs and walk by lifting one foot at a time or by **trotting**. Kangaroos **hop** and use their **tail** for **balancing**.

Mammals that live in forests spend a lot of their time in trees. Monkeys can **grasp** tree branches with **claws** and can hang on to them with their curved tail. Mammals often spend time hanging **upside down** in trees.

Dolphins and whales are mammals that live and move around in water. Instead of **limbs** they have **flippers** which they use to move forward. Other animals, like the **hippopotamus**, only spend some time in the water.



Monkey hanging in a tree

Photo by Klub Boks:

<https://www.pexels.com/photo/monkey-hanging-on-tree-15035846/>

Bats are the only flying mammals. Their wings are made of skin **stretched** over their bones. They can fly by **beating** their wings up and down.

Gophers and **moles** are mammals that spend most of their life underground.



How Mammals Reproduce

Mammals **reproduce** when a male's **sperm** gets into contact with a female egg and **fertilizes** it. A young mammal grows inside the female's body. Before this can happen mammals **mate**. Males and females stay together for a certain time.

Unborn mammals live in their mother's body for different periods of time. While hamsters are born after only 16 days, it takes elephants 650 days to give birth. Human **pregnancies** last about 9 months. Many new-born mammals, like horses and camels, can walk and run shortly after they are born.



Lions mating in Africa

Image: Christopher Michel, CC BY 2.0, via Wikimedia Commons

Marsupials give birth to babies that **attach** themselves to their mothers. They stay in **pouches** because they are too **weak** to live alone. Almost all marsupials, **including** kangaroos, koala bears or wombats live in Australia.

After **birth**, the **glands** of female mammals produce milk. Some mammals **nurse** their babies for only a few weeks. Others, for example elephants, give milk to their babies for a few years.

The **duck-billed** platypus and echidnas are the only mammals that lay eggs. After the young **hatch** they drink milk from their mother, just like other mammals do.

Life Habits of Mammals

Many mammals live in families or groups. Wolves and lions help each other in their **search** for food and **protect** each other from **attackers**. Leopards, cats, tigers and other mammals **prefer** living alone. They do not **share** their living space and food that they have, **however** males and females get together to **mate**. Mammals can **mark** the areas that they live in. They defend these areas by fighting off attackers. Some mammals **claim territories** only during the **breeding season**.

Some mammals **migrate** during special times of the year in order to get food and **survive**. North American bats travel to the south because insects become



scarce during the cold winter months. Zebras and other wild animals follow the rainy seasons in Africa to find green grass. Whales migrate to warmer southern waters off the **coast** of Mexico to give birth to babies because they cannot **survive** in the cold waters of the Arctic Ocean.

If they cannot find enough food to survive, mammals **hibernate**. Their body temperature falls, heartbeat and **breathing** become slower. During this period hibernating mammals do not eat. They live from the fat of their bodies. Bats, **squirrels** and other **rodents** hibernate.

Mammals defend themselves from attackers in many ways. **Hoofed** mammals can run quickly in order to get food or **escape**. Squirrels rush into trees to hide. Some animals have special **features** that protect them from enemies. **Skunks** **spray** a bad smelling **liquid** to **keep off** attackers. The **fur** of mammals sometimes changes with the **surroundings**. Arctic foxes, for example, are brown in summer and in the winter their **coats** turn white.



Herds of zebras migrating in eastern Africa

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Arctic fox

Image: Erik F. Brandsborg from Oslo, Norway [[CC BY-SA 2.0](#)], [via Wikimedia Commons](#)