

Animal 101 Information Guide

Lesson 1- Classifying Animals

- Animals are multicellular eukaryotes in the Animal Kingdom. They eat other living things because they can't make their food.
- Vertebrate animals are those that have an internal backbone, while invertebrate animals are any animal that doesn't have an internal backbone.
- Invertebrates make up about 95 percent of all animal species.
 - Some invertebrates have a soft, unprotected body—for example, sponges, jellyfish, and worms. Most soft-bodied invertebrates have no legs.
 - Other invertebrates have a covering to protect their body. Animals called echinoderms have tough skin covered in stiff points. These animals all live in oceans. Many mollusks, including oysters and snails, have a hard shell around their soft body.
 - Invertebrates with jointed legs are called arthropods. They have a hard covering called an exoskeleton. Insects, spiders, crustaceans, and centipedes are all arthropods.
- Vertebrate animals can be split into five groups: fish, amphibians, reptiles, birds, and mammals.
- Cold-blooded animals, like reptiles, amphibians, and fish, become hotter and colder, depending on the temperature outside.
- Mammals and birds are warm-blooded, which means that they can make their body heat even when it is cold outside.

Lesson 2 - Animal Vocabulary and Habitat

- Food chain - a group of organisms linked to the food they eat, for example, prey and predators (who gets eaten by a big animal vs. who eats smaller animals).
- All living things are in a food chain. For example, zebras eat plants and grasses. Lions eat the zebras. Lions, zebras, and plants all belong to one food chain.
- Large predators sit at the top of the food chain. They include sea animals, such as sharks, tuna, and dolphins. Most top predators are very good hunters. The disappearance of top predators can create serious problems. Populations of smaller animals are preyed upon by top predators to prevent their population from becoming too large. If the smaller animals are overpopulated, they will eat too much plant life thereby getting rid of food resources and affecting the whole food chain.

Habitats

- All animals and plants need a place to live. Most choose—or are born into—particular habitats. Habitats are places in nature that provide food, protection from predators and unfavorable weather, and a home in which to raise young.
- Habitats are characterized most often by climate and location.

Types of Habitats

- The two main types of habitats are land habitats and water habitats. Among the many types of land, habitats are rainforests, deserts, and mountains.
- **Rainforests** have moist climates and support more kinds of plant and animal life than any other habitat. They are areas of tall, mostly evergreen trees and a high amount of rainfall. Rainforests are lush, warm, wet habitats. Trees in the rainforest grow very tall because they have to compete with other plants for sunlight.
 - More than half of the world's animals live in the rainforest. Vampire bats and anacondas live in the rainforests of South America. Bengal tigers and orangutans live in Asia's rainforests, and chimpanzees live in the rainforests of Africa. Lots of smaller animals live in rainforests too, including dragonflies, tree frogs, and at least hundreds of species of ants. Many of the plants and animals in the rainforest haven't even been discovered yet!
- **Deserts** support only animals and plants that can live without much water.
 - Many deserts were formed 8,000 to 10,000 years ago. Some are super hot in the day.
 - Some deserts are always cold for example the biggest desert in the world is Antarctica!
 - Desert animals also have adaptations that help them survive without much water. Kangaroo rats in the Sonoran Desert get water from the seeds they eat. Some carnivores, such as desert foxes, get enough liquid from their prey.
- **Mountain** habitats have thin soil and cold temperatures. Over millions of years, sheets of rock push up and over one another, creating the mountain, some very tall. Only hardy plants and animals live there.
 - Mountains often have extreme climates, and the animals that live there have some amazing adaptations. For instance, the red panda in Asia's Himalayas grows a thick coat. Living in the mountains of North America, snowshoe hares have snow-white coats that help them hide from mountain lions and other predators.
 - Grizzly bears and hoary marmots living in the mountains of North America survive the cold winters by hibernating—hiding out in dens and resting—to conserve energy when food is hard to find.

- Other animals, like mountain goats and ibexes living in Europe's Alps, migrate to lower, warmer elevations during the winter. These animals have tough but flexible hooves to steady themselves when climbing up and down the rocky terrain looking for food.
- **Grassland** habitats are places that receive more rain than deserts but less than forests. Most of the plants here are grasses, which don't need as much water as forest plants.
 - Home to animals such as zebras, gazelles, wildebeests, cheetahs, lions, and leopards.
 - Kangaroo and flightless birds like emu and ostriches live throughout Australia's rangeland, which covers almost the entire continent. In North America, deer, antelope, rabbits, and prairie dogs roam the grassland - and also buffalo (usually called bison) ... just like the song says!
- Water habitats may contain freshwater or saltwater.
 - **Freshwater** habitats include streams, rivers, swamps, marshes, ponds, and lakes.
 - Rivers, creeks, lakes, ponds, and streams are all freshwater habitats. So are wetlands like swamps, which have woody plants and trees; and marshes, which have no trees but lots of grasses and reeds. Freshwater accounts for only three percent of the world's water. (The rest is saltwater.) But despite that tiny amount, freshwater habitats are homes for more than 100,000 species of plants and animals.
 - Fish living in freshwater habitats have plenty of company. Snails, worms, turtles, frogs, marsh birds, mollusks, alligators, beavers, otters, snakes, and many types of insects live there too. Some unusual animals, like the river dolphin and the diving bell spider, are freshwater creatures.
 - **Saltwater** habitats include oceans, seas, salt lakes, salt marshes, and saltwater swamps. Some animals and plants, such as fish and seaweed, live entirely in the water. Others, such as otters and river weeds, live partly in and partly out of the water.
 - Oceans are areas of salty water that fill enormous basins on the Earth's surface.
 - Scientists estimate that about one million species of animals live in the ocean. But most of them—95 percent—are invertebrates, animals that don't have a backbone, such as a jellyfish and shrimp.
 - The largest animal ever to live on Earth is an ocean mammal called the blue whale. Dolphins, porpoises, and sea lions are also ocean-dwelling mammals.
 - Coral reefs are one type of habitat. Animals such as seahorses, clownfish, and sea turtles all live on coral reefs.

- **Urban area-** developed, a densely populated area where most inhabitants have nonagricultural jobs.
- **Adaptation**
 - Over long periods animals adapt to fit their habitat. This means that they develop traits that help them to survive where they live. Animals adapt so that they can stay safe, travel well, and find food in their habitat.
 - Many animals that live in cold habitats grow thick coats of fur to keep them warm. Their fur may also be white so that their enemies cannot see them when the ground is covered with snow. The hard shell of the desert tortoise keeps in moisture and protects it from enemies. Dolphins have sleek bodies for swimming in the ocean. Giraffes have long necks so that they can nibble tender leaves from the tops of trees.