

Learning Objectives

- 1) Understand that organisms, like animals, are grouped together by the ways in which they are alike and different; this is called classifying.
- 2) Know the six different classifications of animals and describe the characteristics of each.
 - a) **Insects** – With more than one million types, insects are the largest group of animals. Insects have six jointed legs and three body parts: head, thorax, and abdomen. These invertebrates have exoskeletons, which protect their insides like a suit of armor. As the insect grows, a new exoskeleton grows and the older, smaller one falls off. In addition, most insects see four stages throughout their lives: egg, larva, pupa, and, finally, adult insect. The change from one stage to another is called a metamorphosis.
 - b) **Reptiles** – Reptiles are cold-blooded vertebrates that have dry, scaly skin; some reptiles have a hard shell (turtles). Reptiles lay their eggs, which have a very tough protective covering, on land. When the baby reptile hatches, it looks like a smaller version of the adult reptile. Also, reptiles breathe air with lungs inside their bodies. Examples of reptiles include lizards, snakes, alligators, turtles, and tortoises.
 - c) **Amphibians** – Amphibians, which include frogs, toads, newts, and salamanders, are cold-blooded vertebrates. They begin their lives in the water, but the adults live on land. The babies hatch from eggs that were laid in the water; they have no legs and they have no lungs, so they must breathe using gills. However, as amphibians grow, they develop legs and lungs. Most adult amphibians live in wet areas, so they can keep their skin moist.

- d) **Fish** – Over twenty thousand types of fish exist in the world, and most of them hatch from eggs. These cold-blooded vertebrates live their entire lives in the water. Fish swallow water and push it out through their gills; this allows them to breathe by obtaining air from the water. Most fish protect themselves using scales that cover their bodies.
- e) **Birds** – These warm-blooded vertebrates have wings and two legs; also, they are the only class of animals that has feathers. Although all birds have wings, not all of them can fly (ostrich). Also, birds hatch from eggs.
- f) **Mammals** – Mammals are warm-blooded vertebrates that have fur or hair and feed their young with the mother's milk. In addition, almost all mammal babies are born alive; they do not hatch from eggs.

Suggested Activities

- 1) **Classifying:** Before watching the video, have students work together to make groups of familiar objects in the classroom. Students can even sort themselves by height, hair color, eye color, shoe type, etc. Encourage students to find new ways of classifying the same objects. For example, bottle tops can be separated into plastic and not plastic, but also into white and not white, or big and not big.
- 2) **Classification scavenger hunt:** Divide the class into small groups. Assign each group a class of animal (mammal, bird, fish, amphibian, reptile, or insect). Give each group a number of magazine cutouts or other pictures of different animals. The groups should find animals that belong to their class and paste them to a piece of construction

paper. Groups may trade pictures with each other to find more animals from their class.

Vocabulary

Cold-Blooded — Describes animals that cannot produce their own body heat; instead, they must rely on their surroundings to regulate their body temperature

Exoskeleton — A hard outer covering that protects internal organs and maintains the animal's shape

Gill — An organ used to obtain oxygen dissolved in water

Invertebrate — An animal without a backbone

Lung — One of a pair of organs responsible for obtaining oxygen from the air

Scales — Small, semi-round, hard plates used as a protective covering

Vertebrate — An animal with a backbone

Warm-Blooded — Describes animals capable of maintaining a constant body temperature independent of the temperature of the surrounding environment

