

# Learning About Amphibians

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# Table of Contents

Introduction..... 1

Invertebrates and Vertebrates ..... 2

An Internal Affair..... 4

What Is an Amphibian? ..... 6

Herpetology: “Crawling Things”..... 8

Ancient Amphibians: The History of Amphibians..... 10

Classification ..... 12

Classification of Amphibians: Amphibian Orders..... 15

Order Anura: Frogs and Toads..... 20

Amphibian Behavior ..... 23

Metamorphosis: How Frogs Develop..... 26

Grow Up, Tadpoles!: Observation Activity..... 29

The Color of Frogs: Amphibian Observation Activity ..... 32

Keeping an Eye to the Future: Disappearance of the Cascades Frogs..... 33

Where Did All the Frogs Go?: Creative Writing Assignment..... 35

Can Endangered Amphibians Recover? Conservation/Research..... 36

Amphibian Vocabulary: Study Sheet..... 37

Amphibians: Crossword Puzzle ..... 38

Reviewing Key Concepts: Amphibian Jeopardy ..... 39

Amphibians: Unit Test ..... 41

Answer Keys..... 43

Bibliography ..... 46

## Invertebrates and Vertebrates

The animal kingdom is made up of more kinds of **organisms** (living things) than the other four kingdoms. Scientists **classify** (group) animals into two large groups. One group is made up of animals that have a backbone. The other group is made up of animals without a backbone.

### Invertebrates

An **invertebrate** is an animal that doesn't have a backbone. This is by far the largest group of animals. The invertebrates make up 95 percent of all the known animals. Scientists have already given names to over one million species of invertebrates. Invertebrates have an **exoskeleton** (skeleton on the outside) or no skeleton at all. The exoskeleton is on the outside of the body and is made up of a hard, waterproof substance called **chitin**. The exoskeleton protects and supports the body. Some invertebrates must **molt** (shed) their exoskeleton in order to grow. A grasshopper may molt seven times in order to reach adulthood. There is always a reason for everything an animal does. Most of an animal's behavior has something to do with the three basic needs. Every animal needs food, oxygen, and shelter. An animal can only stay alive if it has food and water to eat and drink, oxygen to breathe, and shelter for protection from weather and enemies. When you are watching invertebrates, can you guess why they do the things they do?

Invertebrate animals include sponges; corals and jellyfish; worms; starfish and sea urchins; mollusks, such as snails and octopuses; and arthropods, such as insects, spiders, and crabs.

### Vertebrates

A **vertebrate** is an animal that has a backbone. A **backbone** consists of a spinal column and a **cranium** (brain case). The vertebrates are the smallest group of animals. Only five percent of the known species of animals are vertebrates. Vertebrates live in water as well as on land. They are the most complex organisms in the animal kingdom. They are also the most familiar of all the animals. The largest animals on earth are vertebrates. Vertebrates can grow very large because they have an **endoskeleton** (skeleton on the inside of the body). The endoskeleton does not limit the growth and size of the animal. The endoskeleton covers and protects the soft body parts. It gives shape to and supports the animal's body. Vertebrates include fish; amphibians, such as frogs and toads; reptiles, such as snakes and lizards; birds; and mammals. In fact, you are a vertebrate.



Name: \_\_\_\_\_ Date: \_\_\_\_\_

## **Invertebrates and Vertebrates: *Reinforcement Activity***

**To the student observer:** Do you know the difference between an invertebrate and a vertebrate?

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**Analyze:** Identify the characteristic that divides the animals into two large groups.

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**Directions:** Answer the following questions.

1. What two groups make up the animal kingdom? \_\_\_\_\_  
\_\_\_\_\_
2. What is the difference between a vertebrate and an invertebrate? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. Which group is the most familiar group? \_\_\_\_\_
4. Which group is the largest group? \_\_\_\_\_
5. Which group do amphibians belong to? \_\_\_\_\_
6. What is an exoskeleton? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. What is an endoskeleton? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
8. What is chitin? \_\_\_\_\_  
\_\_\_\_\_
9. What must an invertebrate do in order to grow? \_\_\_\_\_  
\_\_\_\_\_
10. What are three basic needs all animals have? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_