

Frogs

Frog species are members of the Class Amphibia in the scientific classification of living things. Frog species make up 88 percent of all amphibian species on earth. There are three orders within Class Amphibia and the order with the most species is Anura, which includes frogs and toads. Even though we separate frogs and toads based upon their different physical characteristics, they are so closely related that they both belong in the same scientific classification.

All frogs have four legs that, in most species, are well-adapted for jumping. Frogs don't walk; they jump or leap from place to place propelled by their hind legs. Some frogs can jump a distance twenty times their length. Even though most species of frogs are found in tropical and subtropical areas, some species can tolerate the cold, as far north as the Arctic Circle. There aren't any frogs at the North or South Pole or in desolate, extremely dry deserts.

Frogs need moisture because they obtain oxygen through their skin in addition to breathing through their noses and into their lungs. If a frog's skin gets too dry, the frog cannot obtain oxygen through its skin. A frog's feet are adapted to the environment that the frog species inhabits. For example, frogs that spend most of their time in the water have webbed feet but tree frogs instead have small sticky pads at the tips of their toes for clinging to trees and leaves. Since most frogs are small in size, they are a food source for other carnivorous creatures. In order to hide from predators, the skin coloration of frogs is designed for camouflage. Rainforest tree frogs usually are a bright green that matches well with the surrounding vegetation while pond dwelling frogs are shades of deep green and even black to blend with dark pond water. Some colorful species of frogs are poisonous and predators know not to eat them.

The life cycle of frogs is responsible for their classification as amphibians. The term Amphibia comes from two Greek words which mean "double life" first as a tadpole and then as a frog. Most species of frogs hatch as tadpoles from eggs that are laid in the water. Most tadpole species are herbivorous and eat algae and plants. When tadpoles develop enough they undergo metamorphosis. During metamorphosis the tadpole develops the body of an adult frog in stages that begin with growing legs and ends with shedding the tadpole's tail.

Name: _____ Date: _____

Multiple Choice Questions

Circle the correct answer.

1. Frogs are classified as

- a. Fish
- b. Reptiles
- c. Amphibians
- d. Mammals

2. Frogs travel from place to place by

- a. Running
- b. Walking
- c. Jumping or leaping
- d. All of the above

3. Most frog species in the world can be found in

- a. Subtropical areas
- b. Tropical areas
- c. Both a. and b. above
- d. None of the above

4. Besides having lungs frogs can breathe through their

- a. Eyes
- b. Skin
- c. Ears
- d. Feet

5. As a defense mechanism some species of frogs

- a. Are poisonous
- b. Use camouflage
- c. Both a. and b. above
- d. None of the above

6. A tadpole becomes an adult frog during

- a. Metamorphosis
- b. Morphing
- c. Metamorphism
- d. Metamerism

Name: _____ Date: _____

Short Answer Questions

1. If a 3-inch frog can jump twenty times its length, how far does it jump in feet?

2. The Celebrated Jumping Frog of Calaveras County is a book by a famous American author. Do some research and find out who wrote the book and what it is about.

3. Is there such an event as a frog jumping contest? Do some research to answer this question. If there are frog jumping contests, describe the competition.

4. Do some research and with a team of your classmates, create a detailed diagram of the life cycle of a bullfrog.

5. Locate pictures of poison frogs. Create a poster or collage of your pictures. Be sure to label the species and location of each frog in your collection.

6. Famous magician Harry Houdini performed an illusion called Metamorphosis. Based on the definition of metamorphosis in biology, is the illusion correctly named? Explain your answer.

7. Explain why the feet of some species of frogs are different from those of other species.

Answer Key

Multiple Choice

1. c.
2. c.
3. c.
4. b.
5. c.
6. a.

Short Answer

1. $3'' \times 20 = 60'' = 5 \text{ feet}$

2. The Celebrated Jumping Frog of Calaveras County is Mark Twain's first book, an 1867 collection of short stories.

3. Individual response

4. Individual response

5. Individual response

6. Individual response

7. A frog's feet are adapted to the environment that the frog species inhabits. For example, frogs that spend most of their time in the water have webbed feet but tree frogs instead have small sticky pads at the tips of their toes for clinging to trees and leaves.