

Interdisciplinary Application

For use with pages 405–410

Amphibians

BIOLOGY An amphibian is an animal with scale-less skin that—with a few exceptions—lives part of its life in water and part on land. There are about 4000 kinds of amphibians, and they make up one of the classes of vertebrates.

Zoologists divide amphibians into three groups: (1) frogs and toads; (2) salamanders; and (3) caecilians.

Amphibians are cold-blooded—that is, their body temperature stays about the same as the temperature of their surroundings. Those that live in regions with harsh winters hibernate during the cold weather. Many of those that live in warm, dry climates estivate—that is, become inactive during summer.

Amphibians live on every continent except Antarctica. They generally live in moist habitats near ponds, lakes, or streams. Most amphibians eat insects. In some areas of the world, amphibians are quite numerous, and they play an important role in maintaining the balance of nature. Amphibians aid people by eating insects and insect larvae that destroy crops and carry disease.

In Exercises 1-4, use the following information.

There are many amphibians in your biology classroom. Your teacher tells you there are two kinds of amphibians, frogs and salamanders, 44 in all. The chart on the wall says to feed each frog 5 crickets a day and each salamander 3 crickets a day. You know that 182 crickets are used in one day.

1. Write a linear system to represent the situation. One equation should show the total number of amphibians. The other should show the total number of crickets used for feeding in one day.
2. Using substitution, find the number of frogs in the classroom.
3. Using your answer from Exercise 2, find the number of salamanders in the classroom.
4. Check your results by graphing your linear system.