



ANSWER KEY

Exercise: 1

Instructions: You are a biology teacher in McCammon*, Idaho. You have decided to take your students on a field trip to the Mink Creek area to look for amphibians and lizards. First, compile a list of the species that are known to occur within Caribou National Forest. Although this list will provide you with a good guess as to what species you might find, figure that some species may not occur because their habitat is not in the Mink Creek area. You were able to obtain the following list of habitat available in the Mink Creek area. Create a table with the species from your list down the left hand side of the table and the habitat across the top of the table. Using the Digital Atlas of Idaho's Wildlife, put check marks on the type of habitat that each species may be found in.

1. What are the characteristics that distinguish amphibians from other animals? Amphibians have moist, glandular skin that does not have scales. Most amphibians have complex life cycles that include eggs, larvae, and adults. Eggs lack shells as well as an amniotic membrane that surrounds the embryo.
2. What species are included in each of the two orders of amphibians found in Idaho? The two orders found in Idaho are Urodela (newts and salamanders) and Anura (frogs and toads).
3. What are the major differences between these two orders? The order Urodela is characterized by having a visible tail, lacks an external ear drum, and has legs adapted for walking. The order Anura is characterized by absence of a tail in adult form, lacks a long neck, and has limbs adapted for hopping and swimming. (Hind limbs are longer than front limbs)
4. Using the family tree page, indicate which family of salamander is the least related to the other families of salamanders. Which family of the order Anura is the least related to the others? Plethodontidae is the salamander family least related to the others, while Ascaphidae is the family of Anurans least related to the others.
5. Of the two families Ranidae and Pelobatidae, which one is more closely related to Bufonidae? Ranidae is more closely related to Bufonidae.
6. What do most amphibians eat? The diets of amphibians vary to a large degree depending on the species. Diets mainly consist of aquatic invertebrates and vertebrates, insects, and algae.
7. Describe the basic life cycle of a frog. Trace the path of a frog from an egg to an adult. A frog for starts off as an egg, the egg hatches and a tadpole is born which swims and has gills and is generally herbivorous. It grows, develops limbs and lungs, and takes its adult form as a frog that can spend some time out of the water.

Conservation: Visit the web site of the North American Reporting Center for Amphibian Malformations at: <http://www.npwrc.usgs.gov/narcam/>

1. What types of malformations did you observe? Many types of malformations exist, including malformations of the limbs, eyes, jaw, skull, spine, and skin.
2. What are the possible causes of these malformations? Three major possible causes could include sunlight, toxic chemicals, and parasites.
3. Why do you think toxic chemicals influence frogs so easily? Frogs have moist permeable skin. This skin can easily absorb chemicals directly from their environment.
4. What might happen to the genetic diversity of amphibians if they continue to decline? If the number of frogs