ANIMAL COMPARISON

In “Search for a Monster” (p. 8), you read about a scientist’s hunt for evidence that the legendary Loch Ness Monster exists. There are many theories about what the creature might be, from a prehistoric reptile to a shark, an eel, or other type of fish.

Reptiles, fish, and amphibians, which include frogs and salamanders, all share some similar characteristics. That's why some people might mistakenly think an animal from one of these classes belongs to another. The table below contains information about reptiles, fish, and amphibians. Use the information to complete the Venn diagram and answer the questions on the following page.

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>REPTILE</th>
<th>FISH</th>
<th>AMPHIBIAN</th>
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</thead>
<tbody>
<tr>
<td>Like fish and amphibians, reptiles are <strong>vertebrates</strong>, which means they have a backbone. Reptiles’ bodies are covered in hard scales or <strong>scutes</strong>, such as the plates on a turtle’s shell. This tough outer layer protects the animals from injuries. It also helps prevent water loss so that reptiles can live on land without drying out. Reptiles are <strong>cold-blooded</strong>: Their body temperature is controlled by the environment. Reptiles have lungs to breathe air and most have four limbs, but some, like snakes, have none. Most reptiles reproduce by laying eggs, whose shells can be leathery or hard, but a few species of snakes and lizards give birth to live young.</td>
<td>Examples: snakes, lizards, turtles, crocodiles, alligators</td>
<td>Fish have a backbone and an internal skeleton. They live in water and have fins to propel them as they swim and help them keep their balance. Fish’s skin is covered in scales that help protect their bodies from injury. The body temperature of fish is determined by the water in which they live. They breathe by removing oxygen from water that passes through their gills. Most fish lay eggs surrounded by a flexible membrane, or skin, instead of a shell. However, some fish, like some shark species, give birth to live young.</td>
<td>The body temperature of amphibians depends on their environment. These vertebrates also have moist skin, and as a result need to stay near bodies of water. Many amphibians have four limbs, but some species have two or none. Amphibians lay eggs surrounded by a skin instead of a shell. Therefore, the eggs must remain in water or a very humid environment. Amphibians spend half of their life cycle in the water and half on land. The word <strong>amphibian</strong> is Greek for “to live a double life.” They begin as larvae that have gills and remain underwater and then grow into adults that breathe air and spend most of the time on land. Most amphibians have lungs, but they can also absorb oxygen through their smooth skin.</td>
</tr>
</tbody>
</table>
ANIMAL COMPARISON

Use the table on the previous page to complete the Venn diagram. Respond to the questions on a separate piece of paper.

Similarities and Differences Between Reptiles, Fish, and Amphibians

Reptiles

Amphibians

Fish

ANALYZE IT

1. Which two kinds of animals do you think are most similar? Use evidence to support your answer.

2. Infer, or determine using evidence and reasoning, which of these organisms are most closely related to birds. Explain your thinking and describe additional information that would help you answer the question.