

Name _____

Deadly Delicacy

Imagine a fish that swallows water to inflate itself like a balloon. The pufferfish does just that as a defense against predators. Its slow, clumsy swimming ability makes it hard for it to escape. However, once the pufferfish expands its size, it becomes an inedible ball. The fish can puff up to two or three times its normal size. Quick-acting predators that manage to eat the fish before it inflates will receive a lethal poison. The poison is also toxic to humans; one fish contains enough poison to kill thirty people.

However, in Japan, people consider the meat of the pufferfish a delicacy. Chefs undergo special training to learn how to prepare the fish in such a way that it is safe to eat. It takes two years to complete this training. Thin slices of the flesh are served with all traces of toxins from the organs removed. Still, as many as two hundred people a year are poisoned from the fish, and about half of them die.

Many species of pufferfish exist. Most make their homes in tropical or subtropical waters, but some are freshwater fish. Pufferfish have rough or spiny skin in place of scales. Some have bright coloring to warn predators of the poison. Others have coloring that blends in with their environment.

Pufferfish consume mostly invertebrates and algae. Some species eat clams, mussels, and other shellfish. Perhaps they derive toxins from the bacteria in the food they eat. The toxin acts on victims by affecting the nervous system. Paralysis begins from the outermost parts and works inward.

Why would anyone wish to eat such a food? Some people like to live on the edge. There's a thrill in doing something daring. Others want to experience the tingling sensation that can occur on the tongue and lips. The best approach, though, is to beware of the pufferfish.

Text Questions

1. What does the word *lethal* mean as it is used in the first paragraph?
 - a. authorized by law
 - b. slow
 - c. deadly
 - d. harmful
2. What do other fish have that pufferfish lack?
 - a. gills
 - b. scales
 - c. skin
 - d. poison
3. What is the purpose of the second paragraph?
 - a. It describes how chefs prepare pufferfish to make it safer to eat.
 - b. It gives details about a chef's training.
 - c. It explains why pufferfish are poisonous.
 - d. It tells why people like to eat pufferfish.
4. What does the idiom "live on the edge" mean in the fifth paragraph?
 - a. to be different from other people
 - b. to do unusual things
 - c. to participate in dangerous activities
 - d. to have a house built on a cliff
5. Why do you suppose people like to eat poisonous fish?

Name _____

The Climbing Rodent

At first glance, it's hard to tell if vizcachas are related to rabbits or rodents. The large ears and long hind legs of a vizcacha resemble those of a rabbit. However, it has a bushy tail similar to a chinchilla. Rodents and rabbits have specific physical differences. The vizcacha has two incisors, as do other rodents. Unlike some rodents, however, it is an herbivore, feeding on almost any type of plant.

Vizcachas live in colonies that range from a few members to hundreds. They use many different methods to communicate. The position of their tails indicates anxiety or relaxation. An extended tail shows the animal is anxious, and if the tail is curled, the animal is at ease. The animals chatter to one another within the colony. They give loud warning calls to alert others of danger. One advantage of colony living is protecting the young. A female gives birth to one fully developed baby, which is weaned at two months. But the young is small and vulnerable.

Mountain vizcachas live in rocky mountain areas of South America. Unable to dig well enough to escape predators, the animal has adapted to its habitat by developing superb climbing skills. It uses its powerful hind legs to jump quickly among the rocks. Their speed and harsh living environment keep the vizcacha safe from most predators, such as pumas and foxes. But speed cannot fully protect it from its worst enemy: humans. People hunt vizcachas illegally for their meat and fur. Habitat loss also threatens them.

We group things in our environment to help us understand the world in which we live. Most often, we use visual cues to help us categorize plants and animals. However, sometimes things are not what they seem. Not all furry creatures with large ears, long hind legs, and fluffy tails are rabbits. Not all rodents burrow to escape predators. Each animal adapts to its unique environment.

Text Questions

- What is the vizcachas' main defense against predators?
 - digging
 - climbing
 - attacking
 - hiding
- Which statement does not describe a communication behavior of vizcachas?
 - They extend their tails to show anxiety.
 - They chatter within the colony.
 - They move their ears to communicate food sources.
 - They give loud warning calls to alert others of danger.
- What is one purpose of this passage?
 - to show how one species is different from another
 - to describe the habitat of a chinchilla
 - to explain how animals communicate
 - to describe how animals survive in rocky mountain environments
- Which is a synonym for the word *categorize* as it is used in the text?
 - classify
 - characterize
 - describe
 - attribute
- How can scientists help people understand differences between species?

Name _____

Panda Ants

Is it a wasp or is it an ant? Meet the panda ant—a wasp that looks like a hairy ant! The black and white panda ant is so named due to its appearance. It is covered with coarse, short hair. Panda ants are part of a much larger family of wasps known as “velvet ants.” Females in this wasp family do not have wings, however, which makes them look more like ants. Some species make their home in arid areas of the southern and western United States. The panda ant, however, is found specifically in Chile.

Young velvet ants are parasites, feeding on the mature larvae and pupae of other species. They have an unusually tough exoskeleton, which likely helps them invade the nests of their prey. Although only the

female is capable of inflicting a sting, they are known to be quite painful. This powerful sting has earned them the name “cow killer.”

We often associate wasps with their stings. Wasps also bring to mind colonies of angry insects. However, they are more beneficial to humans than harmful. They prey on other insects we consider pests. However, many species, including the panda ant, are solitary. Solitary wasps use their sting to hunt rather than for defense.

Very little is known about this particular species of wasp. Other related species have been observed and studied in the United States. Scientists want to learn more about any harmful effects and benefits to people.

Text Questions

- What does the word *parasites* mean as it is used in the second paragraph?
 - animals that live in multiple locations
 - people who live at the expense of others without paying
 - animals that live on an organism from which they receive nourishment
 - animals that spread bacteria to other organisms
- What can you infer about this insect from its name?
 - It lives in China.
 - Its black and white color resembles a panda bear.
 - It is an ant that eats bamboo leaves.
 - It has a lot of fur.
- Based on the text, how do solitary wasps differ from social wasps?
 - They are never seen around people.
 - They sting to defend themselves.
 - Their sting is used to hunt.
 - They do not build nests.
- What organizational structure does the author use to help the reader understand the information?
 - compare and contrast
 - sequential
 - problem and solution
 - cause and effect
- Why might farmers place wasps near crops?

Name _____

Cave Dwellers

Amphibians are cold-blooded vertebrates that live in water and breathe with gills when they are young. As they mature, they develop lungs and live on land. However, not all species go through this common metamorphosis. The olm, or cave salamander, retains external gills and a tail fin throughout its life. The amount of time it takes for the young to mature depends on water temperature.

Found mostly along the Adriatic Sea, the olm dwells in underwater caves. It also lives in underground freshwater lakes and streams in the mountains. These bodies of water contain high amounts of oxygen. The temperature of the water ranges from 40 to 60 degrees. The animals generally live almost 1,000 feet below the surface of the water.

The relatively inaccessible habitat of olms makes studying them difficult. Much of what we know about this animal has been learned from those in captivity. Scientists expect the life span to be around 100 years, making olms the longest-lived amphibian species.

Olms prey mostly on insects and spiders. They will also eat crustaceans and mollusks. Due to their underwater environment, the salamanders' eyes are not well developed, although their eyes do have some sensitivity to light. Olms can sense chemicals, sound vibrations, and electric fields. They use these abilities to orient themselves as well as to detect prey. They have no known predators. As with many species, they are vulnerable due to loss of habitat and pollution.

Text Questions

1. Why might olms have poorly developed vision?
 - a. They do not lose their juvenile underwater characteristics.
 - b. They can detect their prey using other senses.
 - c. There is nothing to look at underwater.
 - d. They need to develop senses that will enable them to survive in permanently dark environments.
2. What does the word *inaccessible* mean as it is used in the text?
 - a. impossible to reach
 - b. cannot be seen
 - c. cannot be obtained
 - d. cannot be influenced by the environment
3. What can you infer about olms that makes them different from most amphibians?
 - a. They do not swim well.
 - b. They do not have gills.
 - c. They do not venture onto land.
 - d. They are not vertebrates.
4. What is the main idea of the second paragraph?
 - a. where cave salamanders live
 - b. why cave salamanders are considered amphibians
 - c. the senses of olms
 - d. how people study olms
5. What can we learn from studying cave salamanders?

Name _____

Animals and Humans

Animal behavior is a fascinating study. Scientists divide animal behavior into categories that are similar to those we use to describe human behavior, such as diet and habitat. Scientists study the strategies animals use to hunt, capture, or forage for their food. They research the defenses animals use against predators and which animals prey on other animals. All of this helps us understand how animals can benefit us.

Each country or cultural group raises certain animals for food. In the United States, people mainly eat meat from cows, chickens, and pigs. In other countries, people might raise sheep or buffalo for meat. The differences arise in part from climate and other environmental factors. People around the world eat a variety of fish and shellfish from oceans and freshwater sources. In the United States, we don't always consider some animal groups as valid options for food as readily as others. For instance, you might not have thought about eating insects. But people in other countries regularly consume insects. Amphibians for dinner? In specific regions such as West Africa, yes.

Animals provide humans with more than food. They have been helping people with daily tasks for thousands of years. Horses, oxen, and other work animals pull loads. Harnessed, they can move machinery to do work such as grinding grain. Elephants, camels, and other animals transport people and goods from place to place. Carrier pigeons have been used to deliver messages.

People also receive companionship and other health benefits from animals. For instance, dogs and cats can have a calming effect on people. This is helpful for people fighting various diseases. Animals can also lower stress, making it easier for people to concentrate on learning new information, such as reading. When people interact with dogs or horses, it encourages exercise.

Animals and humans share space on Earth. Maintaining a healthy relationship with our fellow inhabitants is in our best interest.

Text Questions

- Which of the following would be a good summary sentence for this text?
 - We study animal behavior to help us learn how to find food.
 - Animals provide us with food, work, and companionship.
 - Animals make great companions for people.
 - People and animals should learn to work together.
- Why did the author include the information in the first paragraph?
 - to summarize the passage
 - to give details about how animals help us with work
 - to explain why people eat animals
 - to introduce the topic and provide an overview
- What does the word *forage* mean as it is used in the text?
 - to search for food
 - to search for what you want
 - to take food from others
 - to provide with provisions
- Which statement explains one way in which animals benefit people?
 - We divide animal behavior into categories that are similar to those we use to describe human behavior.
 - In the United States, we don't always consider some animal groups as valid options for food as readily as others.
 - Animals have been helping people with daily tasks for thousands of years.
 - Animals and humans share space on Earth.
- What can studying animal behavior teach us about the world in which we live?