

Name _____

A Forest Secret

Until recently, saolas remained one of Earth's best-kept secrets. Upon discovering this animal in the wild, scientists just as quickly recognized this unique species as endangered. Immediate steps are being taken, in the form of establishing national parks, to ensure the survival of the species.

Villagers in Vietnam and Laos have spotted saolas only on rare occasion. Although saolas physically resemble miniature antelopes, DNA testing confirmed they are a separate species, previously unknown to mankind.

Biologically, saolas are related to cows and bison. Their name means "spinning wheel posts," referring to the animals' long horns that sweep back over the neck. Their most distinguishing feature, aside from the horns, are massive scent glands in their cheeks. Saolas mark their territory with musk from these glands. Scientists are uncertain exactly how many of the animals exist today.

Nearly twenty years ago, an adult female was captured and sent to a zoo in Laos. The saola stood about waist-high with 18-inch horns. This interesting mammal appears to have little fear of humans and was observed to be approachable in zoo settings. Their reaction to dogs, however, gives a clue as to possible predators. Unfortunately, observations of saolas have been limited, as those captured have died shortly thereafter. Causes of each death have not been fully determined, although at least two have succumbed to infection.

Scientists disagree as to the best course of action for saving saolas. Some believe that leaving the saola alone to roam the few remaining patches of their native habitat—wet evergreen forests—will ensure their survival. Others argue for a more direct approach, such as captive breeding. Either way, if saolas become extinct, it will represent another failure in protecting Earth's fragile ecosystems.

Text Questions

- What is the main idea of the last paragraph?
 - It provides examples of keeping a saola in captivity.
 - It offers ways to save saolas.
 - It describes how saolas are unique.
 - It gives a description of the saola's appearance.
- What does the word *distinguishing* mean as it is used in the second paragraph?
 - different
 - separated
 - infamous
 - unknown
- Why is this passage titled "A Forest Secret"?
 - Saolas were not known about until recently.
 - Saolas are a unique species.
 - Saolas are afraid of dogs, but scientists do not know why.
 - Saolas are endangered.
- Which information about saolas is not included in the passage?
 - their habitat
 - their appearance
 - their diet
 - their possible predators
- What are some reasons scientists might want to keep saolas from becoming extinct?

Name _____

Animal Intelligence

Did you know that animals can spy and retrieve information? People have trained animals to perform useful tasks, do entertaining tricks, and provide information as spies during wartime.

Often, the techniques and principles used to train animals for useful tasks have their roots in behavioral conditioning, as first described by B.F. Skinner. Subjects are trained to do things voluntarily based on cues in the environment. Rewards or consequences shape the likelihood of repeated behavior in the future. In classic experiments, animals learn to associate an action with a reward.

During the Cold War, ravens were trained to deposit and retrieve objects. The birds could recognize characteristics of objects and would be instructed accordingly. For example, a raven could be taught to always fly to a large or small table. Ravens are also able to carry quite a bit of weight, so they could transport objects that contained a message.

Intelligence agencies have also experimented with training cats. In one such instance, each feline was fitted with a wire, battery, and instruments to create a transmitter. While directing the cat remotely with ultrasonic sound, operators could eavesdrop on critical communications.

Advocates of such programs cite animals' low profiles as a benefit. People are less likely to pay attention to an animal arriving and leaving. In addition, animals can get into places people can't. On the downside, animals require ongoing training, care, and maintenance.

The details of specific intelligence programs actually put into use are relatively unknown. Many documents and records are classified information or have since been destroyed. It's safe to say, though, that studies in animal training for intelligence and security tasks continue. K-9 dog police units are one such example.

Text Questions

1. What is the main idea of the second paragraph?
 - a. It describes the types of animals that are used as spies.
 - b. It explains the principles used to train animals for intelligence work.
 - c. It states the reason the author wrote the article.
 - d. It states the author's conclusion.
2. Which animals are not mentioned in the article as potential subjects for animal intelligence tasks?
 - a. birds
 - b. cats
 - c. dogs
 - d. rats
3. What does the word *associate* mean as it is used in the second paragraph?
 - a. to be a companion with
 - b. to connect in your mind
 - c. to be a member with less than full status
 - d. to ignore
4. What is one benefit of using animals for intelligence work?
 - a. They can come and go without attracting attention.
 - b. They require training.
 - c. They need care and maintenance.
 - d. They can understand critical communications.
5. How do we use trained animals today? Give examples and evidence to support your answer.

Name _____

Long-Distance Travelers

Arctic terns migrate farther than any other animal on the planet. They travel from their native habitat in the Arctic to Antarctica and back. During the migration season, terns nest in open tundra, rocky beaches, and boreal forests along the Pacific and Atlantic coasts. They have been observed migrating south along the coast of South America and as far south as New Zealand and Australia. They winter in the northernmost part of Antarctica. Arctic terns may migrate as far as 25,000 miles round trip every year!

How did researchers track such long-distance migratory routes? They attached locators to terns in Greenland and discovered the birds flew south along the coast of Africa in the fall, spent winter on the north coast of Antarctica, and then returned to their Arctic habitat in the spring. Given a life span of about thirty years, this adds up to over one million miles traveled in

a tern's lifetime. That's the equivalent of three trips to the moon and back!

Researchers find it difficult to observe and study Arctic terns due to their remote habitats. Scientists have learned a few things, though. Terns hover in mid-air before plunging into the water to catch fish. Occasionally, they may steal fish from other birds in mid-flight.

Along with many other species, Arctic terns will be affected by possible global warming. They winter on pack ice in the Antarctic and rely on Arctic ecosystems for breeding, habitat, and feeding. During the winter, they molt and lose most of their feathers. If feathers are lost faster than they can be replaced, the birds are rendered flightless for a time. Perhaps this is nature's way of giving them a rest before they make the long trek back north for the summer breeding season.

Text Questions

1. What is the main idea of the text?
 - a. how global warming will affect Arctic terns
 - b. the migratory routes and patterns of Arctic terns
 - c. why scientists study Arctic terns
 - d. to compare Arctic terns to other birds
2. Which title would be a good alternative for this text?
 - a. "Breeding Habits of Arctic Terns"
 - b. "All About Arctic Terns"
 - c. "The Longest Flight"
 - d. "Fishers of the Arctic"
3. What does the word *remote* mean as it is used in the text?
 - a. distant
 - b. wireless
 - c. temperate
 - d. tropical
4. Which statement from the text best describes the migratory route of the Arctic tern?
 - a. They travel from their native habitat in the Arctic to Antarctica and back.
 - b. This adds up to over one million miles traveled in a tern's lifetime.
 - c. The birds flew south along the coast of Africa in the fall.
 - d. Arctic terns will be affected by possible global warming.
5. How can learning about the migration routes of Arctic terns benefit people?

Name _____

The Jumping Spider

Nature photographers have captured on film a spider jumping from one flower to another. Using its large eyes, the jumping spider follows its prey. Then, the jumping spider set its sights, spins out a "safety line," and jumps.

A common variety in the United States, the Daring Jumping Spider makes its home in woods, fields, and gardens. Its distinctive, big-eyed appearance makes it easy to recognize. Four of its eight eyes are located on its face, and the other four are on top of its head. The spider is black with gray or white stripes, and it has spots on its abdomen.

Jumping spiders feast on a variety of insects, as well as other spiders. Some varieties climb as well, giving them

a wide range of potential prey. These arachnids do not build webs to catch prey. They hunt on foot by sneaking up and pouncing on their victims. Even though jumping spiders only grow to be between one-quarter and one-half inches long, they can leap amazing distances for their size. Additionally, their excellent eyesight makes them very accurate. Jumping spiders are also one of the fastest arachnids. Scientists claim they are very smart.

In addition to using silk for safety lines when jumping, jumping spiders also use this thread to create shelter under leaves and to encase eggs until hatching.

Insects should be wary of this spider without a web that can stealthily approach, keenly observe, and leap.

Text Questions

1. Why does the author say these spiders are distinctive?
 - a. They have large eyes to observe their prey.
 - b. They spin out a line to construct a web and catch prey.
 - c. They enclose their eggs in a silk sack.
 - d. They create a shelter under a leaf.
2. Which is a synonym for the word *stealthily* as it is used in the text?
 - a. awkwardly
 - b. unreliably
 - c. privately
 - d. slyly
3. Which paragraph gives details about the spider's jumping abilities?
 - a. the first paragraph
 - b. the second paragraph
 - c. the third paragraph
 - d. the fourth paragraph
4. Which title would be a good alternative for this text?
 - a. "The Spider Without a Web"
 - b. "Life Cycle of the Jumping Spider"
 - c. "A Beautiful Web"
 - d. "Ready, Set, Jump!"
5. Describe what makes the jumping spider's tactics so effective. Use evidence from the text to support your answer.

Name _____

Swimming with the Turtles

Imagine swimming through refreshing ocean waves with a graceful prehistoric animal. Many people hope to do just this when they snorkel off the shores of the tropical islands where green sea turtles make their home.

The Hawaiian sea turtle (or “Hono”) is a symbol of peace and good luck to the Hawaiian people. Out of respect for this ancient creature, laws have been enacted to protect them. It is illegal to touch or harass them.

Green sea turtles have smooth shells with shades of black, brown, gray, green, or yellow. The soft bottom shell is yellowish-white. So why are they called green sea turtles? The largest of all hard-shelled sea turtles, green sea turtles feed exclusively on plants, such as seaweed and algae. Scientists believe their diet contributes to their green fat, for which they are named. They are the only herbivorous marine turtle.

Habitats of green sea turtles include nesting beaches, the open ocean, and coastal areas for feeding. Females return to the same beaches where they were born to lay their eggs. Hatchlings swim to offshore areas for feeding for several years. Once they reach a certain age, they return to coastal areas to live as adult sea turtles.

Green sea turtles are not overly fearful of people, although they can swim up to 35 miles per hour to escape perceived danger. They are endangered in many areas of the world due to the harvesting of eggs and adult turtles. Turtles also face the danger of becoming accidentally trapped in gillnets and other fishing gear. They are subject to a disease that causes tumors that interfere with the animals' swimming, vision, feeding, and ability to escape from predators.

Ongoing research and legislation seek to ensure that green sea turtles will remain part of the tropical ecosystem for many years to come.

Text Questions

1. Which context clue from the text helps define the meaning of *herbivorous*?
 - a. Laws have been enacted to protect green sea turtles.
 - b. They return to coastal areas to live as adult sea turtles.
 - c. Green sea turtles feed exclusively on plants.
 - d. Hatchlings swim to offshore areas for feeding for several years.
2. Which pair of words from the text best describes the author's opinion of green sea turtles?
 - a. tropical, endangered
 - b. harass, escape
 - c. fearful, prehistoric
 - d. graceful, respected
3. What is the main idea of the second paragraph?
 - a. Treat green sea turtles with respect.
 - b. Green sea turtles are endangered.
 - c. It describes details about the turtles' habitat.
 - d. It describes the life cycle of a green sea turtle.
4. Which of the following is not an example of a threat to green sea turtles?
 - a. Green sea turtles can swim up to 35 miles per hour to escape perceived danger.
 - b. People harvest turtle eggs and adult turtles.
 - c. Green sea turtles can become trapped in gillnets and other fishing gear.
 - d. Green sea turtles are subject to a disease that causes tumors.
5. What can people do to protect sea turtles and other endangered species?

