

Set Purposes for Reading

BQ BIG Question

As you read, ask yourself, can we ever completely understand animal behavior?

Literary Element Text Structure

Text structure is the way a piece of writing is organized. Text structures in informational writing include **problem and solution**, **compare and contrast**, and **cause and effect**. The text structure of this article is **classification**. In classification, the writer creates groups on the basis of shared characteristics. In this article, each of the first four subheads groups together similar types of animals and describes behaviors of animals within each group. As you read, think about how the information in each subhead helps explain whether animals lie.

Reading Strategy Analyze Evidence

When you **analyze evidence**, you look at the writer's reasons, facts, examples, and details to see if they support the main idea of the writer's argument. Writers have to provide evidence from reliable sources to support their claims. A reliable source may be an expert on the subject, a reference book, or a reputable Web site. To analyze evidence, look at the writer's claims and ask yourself if she supports her claims with examples, facts, and reasons from reliable sources. Then decide if the writer's evidence is strong enough to persuade you to accept her claims.

| | |
|--|---|
| Question: Do animals purposely lie as people do? | |
| Writer's claim: | |
| Evidence that animals do lie: | Do these examples show that animals purposely lie? Are there enough examples? Is the information from reliable sources? |
| My conclusion about the evidence: | |

Learning Objectives

For pages 289–296

In studying this text, you will focus on the following objectives:

Literary Study: Analyzing text structure.

Reading: Analyzing evidence.

TRY IT

Analyze Think of something you would like to change at your school. Now think of reasons, facts, and examples that support your idea to change something. Imagine that you are going to present your argument to the principal. Would your evidence be enough to persuade the principal to make the change?

Before You Read

Do Animals Lie?

Connect to the Magazine Article

Animals may deceive each other in order to survive, but do you think that they lie in the same way that people do?

Quickwrite Freewrite for a few minutes about why humans lie. Use your own knowledge to compare the way animals lie with the way that humans do.

Build Background

The magazine article "Do Animals Lie?" is about how animals survive by fooling other animals.

- Animals compete with one another for food and water. It may be necessary for animals to trick each other to get these necessities.
- Animals of the same kind compete with each other to produce offspring. Males may trick each other to be able to mate with females.

Vocabulary

survival (sər vī' vəl) *n.* the continuation of life (p. 291).

The group worked for the survival of endangered species.

predator (pred' ə tər) *n.* an animal that kills and eats other animals (p. 292). *A spider is a predator that traps and eats flies and other insects.*

courtship (kôrt' ship') *n.* the act, process, and time period that leads up to mating between animals (p. 292). *During courtship, a male bird may display his colorful feathers to impress the female bird.*

parasites (par' ə sīts') *n.* plants or animals that live in or on other plants or animals and that get all they need from their hosts and provide nothing in return (p. 293). *Worms living inside the stomach of a dog are dangerous parasites that can make the dog sick.*

Meet Mary Batten



"I feel very lucky to be a science writer because I can follow my curiosity wherever my questions take me."

—Mary Batten

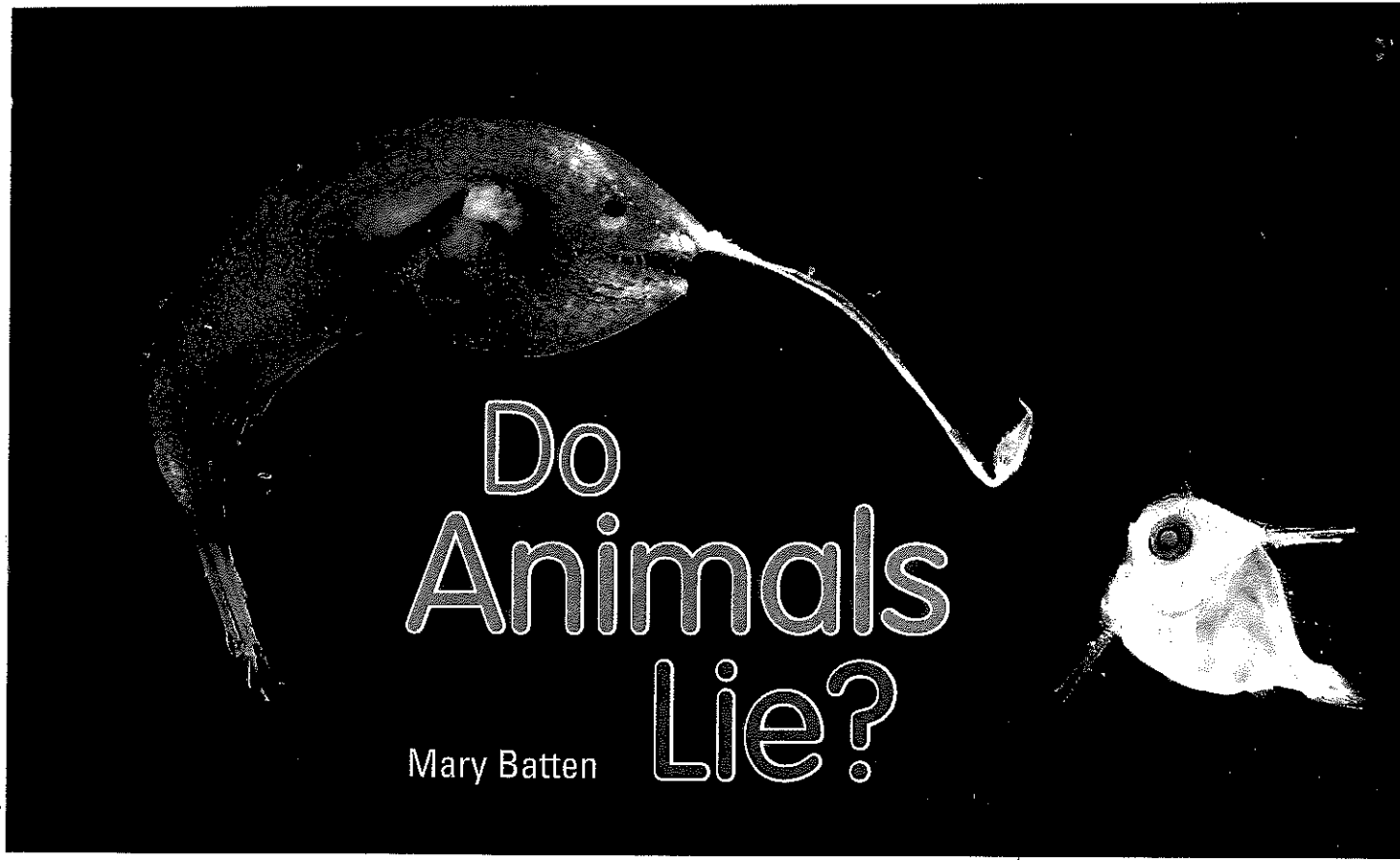
Nature Lover Mary Batten learned to love nature as a child playing in the woods and streams of rural Virginia. Today she writes books, television documentaries, and magazine articles about "anything and everything in the natural world," she says. Her topics include human behavior, ecology, animals, plants, health, disease, stars, and galaxies. She was born in 1937.

LOG
ON



Literature Online

Author Search For more about Mary Batten, go to glencoe.com and enter QuickPass code GL29763u2.



Do Animals Lie?

Mary Batten

It's no secret. Insects, birds, apes—all kinds of animals—cheat, bluff, and trick each other. Why? Because being deceptive¹ can give animals the edge on **survival**. It can help them escape their enemies, catch their prey, and even attract a mate.

PHONY FISH

An anglerfish is like a living lie. Dangling from a spine on the tip of its snout is a built-in fishing lure. Depending on the type of anglerfish, the fake bait may look like a worm, bunches of algae, or tiny shrimp—all tasty tidbits to a passing fish. When an angler is hungry, it simply casts its “rod” straight ahead and jiggles the false bait in front of its mouth. Pity the fish that is fooled and swims near. Snap! Rather than finding a meal, it ends up in the angler's stomach.

¹ **Deceptive** behaviors are misleading actions, such as tricking or fooling someone or lying to someone.

Vocabulary

survival (sər vī'vəl) *n.* the continuation of life

An anglerfish (left) tempts its prey with the tasty-looking fake bait on the tip of its snout.

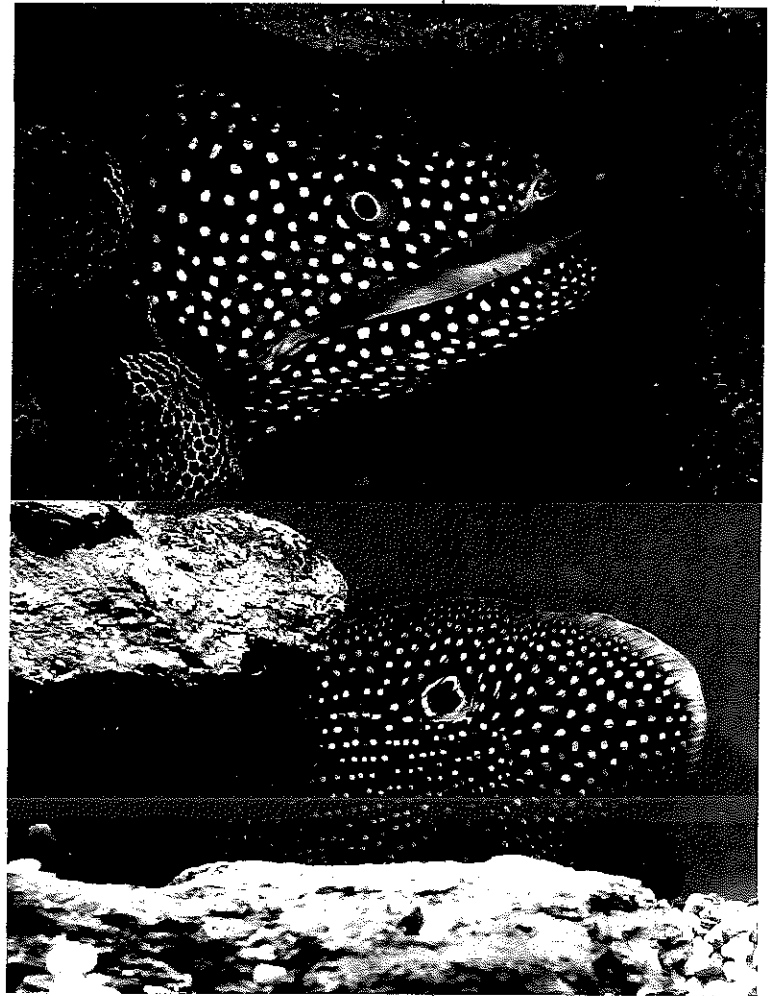
Analyze Evidence What evidence does the writer provide to support her claim that the anglerfish is a “living lie”?

Although it's rather small, a comet fish doesn't need to flee when it is threatened by its enemies in the coral reef. Instead, it fools them by transforming its six-inch-long body into a copy of the six-inch-long head of a moray eel—a large, sharp-toothed **predator** that causes other reef animals to swim for their lives.

INSECT IMPOSTERS

Animals can usually tell males from females, but sometimes an individual isn't what he or she seems.² During **courtship**, a male scorpionfly must hunt and catch a tasty insect to present as a gift to a female. The insect gift must be just the right size, or a female will reject the male and fly away. When a courting male has caught an insect, he hangs from a leaf or twig and releases a special chemical perfume that signals females to come over and have a look. If a female likes the gift, she hangs in front of the male and lowers her wings to accept it. Then the male gives her the gift and mates with her while she eats it.

But sometimes a male scorpionfly is fooled. What looks like a female is really a male trickster that steals the gift and uses it to attract a female of his own. It might not seem fair, but it's a strategy that works. Deceitful male scorpionflies succeed in mating—and fathering babies—



The harmless comet fish (below) copies the dangerous looks of a moray eel (top).

Text Structure Why does the author group the anglerfish and comet fish together in this section of the article?

² An *imposter* is a person who acts like something he or she is not.

Vocabulary

predator (pred'ə tər) *n.* an animal that kills and eats other animals

courtship (kôrt' ship') *n.* the act, process, and time period that leads up to mating between animals

more often than those that do their own hunting. The more babies an animal has, the more successful it is in passing its genes³ on to future generations—the only kind of success that counts in evolution.

You've probably seen fireflies, or lightning bugs, flashing on a warm summer evening. Each species⁴ of firefly has its own special flashing signal that males and females of that species use to tell each other when they are ready to mate. But the flashes of some female *Photuris* fireflies are deadly. These females can mimic, or imitate, the flashing signal that females of another group, named *Photinus*,⁵ use to attract mates. When a *Photinus* male responds to the *Photuris*'s false signal, he finds out too late that there is no mate waiting for him. The tricky *Photuris* female eats him instead.

But two can play the false flashing game, and sometimes the *Photuris* female is tricked. When she flashes her false signal, a sneaky *Photuris* male might approach her, mimicking the answering flashes of a *Photinus* male. The hungry *Photuris* female, expecting a *Photinus* male she can devour, instead finds herself greeting a male of her own species who is seeking a mate.

BLUFFING BIRDS

Brood **parasites**, a group of birds that includes cowbirds, cuckoos, and widow birds, have found a way to avoid much of the work of parenthood. They don't bother building nests. Instead, they sneak their eggs into other birds' nests and let them hatch the eggs. Some parasites are able to pull off this trick because their eggs mimic the size and color of the host birds' eggs. What happens when the sneaky parasite's egg hatches? The host birds usually

3 **Genes** are parts of the cells of all living things. They carry traits from parents to offspring.

4 A **species** is a group of living things that shares certain traits. Members of the same species are able to mate and have offspring.

5 **Photuris** and **Photinus** fireflies are two different species. They cannot mate and produce offspring.

Vocabulary

parasites (par' ə sīts') *n.* plants or animals that live in or on other plants or animals and that get all they need from their hosts and provide nothing in return

feed the chick, mistaking it for one of their own.

Among birds called scrub jays, some are thieves. Scrub jays typically cache some of their food; that is, they bury bits of it to eat later. When food is scarce, they can always find a meal by returning to eat a stored snack. But sometimes when a scrub jay caches its food, it is watched by a thief. The thieving scrub jay waits until the coast is clear, then digs up the food and steals it!



That's pretty tricky. But scrub jays who do the work of caching have a trick of their own. Scientists have observed that they seem to know about the thieves and to be aware of when they're being watched by a bird that might be one. To outsmart the thieves, cautious scrub jays will come back in secret and rebury their food in a different spot.

CHEATING CHIMPS

Scientists who study monkeys and apes have reported a wide range of deceptive behaviors, particularly among chimpanzees. Chimps bluff, give warning calls when there is no predator in sight, do all sorts of sneaky things behind the troop leader's back, and try to outsmart each other.

In one example, a chimp named Yeroen, who had been the alpha, or top, male of a group of chimps at the Arnhem Zoo in the Netherlands, began limping badly after he was hurt in a fight with Nikkie, the new alpha male. But Yeroen only bothered to limp when he was within sight of Nikkie. As soon as he turned a corner or circled behind Nikkie, the limp mysteriously disappeared.

Puist, another chimp, had a different way of fooling rivals. After a fight, one chimpanzee will extend a hand, as if offering to shake and make up. When Puist was getting nowhere in a fight, she would sometimes stop, approach slowly, and extend her hand. When her opponent accepted her friendly gesture and did the same, Puist would grab the hand and launch another attack.

Can you spot the cuckoo's egg in this nest belonging to another bird species?

Analyze Evidence Is reburying food to fool another bird an example of lying? Why or not?

TRUE LIES?

Animals are deceptive, sure. But can any of them be said to purposely lie, like people do? Are their deceptions the result of deliberate choice—or just unthinking instinct?⁶ In some cases, scientists aren't certain.

Fake fish bait and egg mimicry are deceits that evolved over many thousands of years through natural selection.⁷ Traits such as these, which improve an animal's ability to survive and reproduce successfully, are passed on from parents to offspring, from one generation to another. Such deceptions are mere instinct. A baby cowbird doesn't decide to fool its host parents into feeding it. It just hatches from its egg and expects to be fed.

On the other hand, scientist Frans de Waal, the expert on primate⁸ behavior who observed Yeroen and Puist, considers both their bluffs to be examples of calculated deception. Yeroen and Puist seemed able to imagine what another animal would do in a given situation, and acted accordingly. They behaved as if they were purposely fooling their foes—rather like human liars.

One thing seems clear—nature often favors the trickster. Perhaps even human tricksters. While we don't think of lying as a good thing, it's possible, say some scientists, that the efforts of early humans to trick and outsmart each other may have spurred the evolution of larger brains and greater intelligence, including the distinctly human ability to use language. Inventing clever tricks and lies requires brainpower. And so does the ability to see through them and seek the truth. Indeed, survival can depend on being smarter than the tricksters.

But purposely choosing not to lie—something only humans seem able to do—may be the smartest action of all. 🐾

⁶ **Instincts** are natural behavior patterns. Instincts are present at birth, not taught. Instinct causes living things to react without thinking to something in their environment.

⁷ **Natural selection** is a process that results in the survival of individuals and groups of plants and animals that are best suited for life in a particular environment.

⁸ **Primates** are a group of mammals that includes humans, apes, and monkeys.

Text Structure In what way is this section of the article different than the other sections?

BQ BIG Question

In what way do these statements affect your understanding of lying and human and animal behavior?

After You Read

Respond and Think Critically

1. How do female *Photuris* fireflies act as imposters? [Recall]
2. Have you ever had an experience with an animal in which the animal behaved deceptively? Describe your experience. Do you think the behavior was instinctive or on purpose? [Connect]
3. In your own words, explain why some scientists think that tricking and outsmarting may have helped humans develop greater intelligence. [Paraphrase]
4. **Literary Element** Text Structure Why do you think the author chose to use classification as the text structure for this article? [Analyze]
5. **Reading Strategy** Analyze Evidence How reliable is the evidence in this article? Use the graphic organizer you created to help you answer the question. [Evaluate]
6. **BQ** **BIG Question** How did reading this article change your understanding of animal behavior? Explain. [Evaluate]

Vocabulary Practice

Synonyms are words that have the same or nearly the same meaning. **Antonyms** are words that have opposite meanings. Identify whether each set of paired words are synonyms or antonyms. Then write a sentence using the first word of each pair or draw or find a picture that represents the word.

| | |
|------------------------|----------------------|
| survival and existence | courtship and dating |
| predator and prey | parasites and hosts |

Example:

survival and existence = synonyms

Sentence: The survival of our way of life depends on finding new sources of energy.

Writing

Write a Summary On page 219, you learned what a summary is. Write a summary of the article "Do Animals Lie?" Batten uses subheads to organize her article. These subheads can help you write a summary. Summarize the main idea and important details of each subhead. Use your own words, and be sure not to change Batten's ideas or to include your own opinion.

TIP

Evaluating

To answer question 6, think about what you learned about animal behaviors from the article. Then think about what you know to be true about animals from your own experience.

- What did you think about animal behavior before you read the article? What do you think after reading the article?
- Did any of the author's examples change your opinion about animal behavior? If so, which examples, and why?

FOLDABLES Study Organizer Keep track of your ideas about the **BIG Question** in your unit Foldable.



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Selection Resources

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