

Who Wants a Spiny Snack?

Not many animals! How the spiny puffer stays safe in the ocean

This article is provided courtesy of the American Museum of Natural History.

A hungry shark looks for its next meal. It spots a small fish.

But as the shark gets close, PUFF-PUFF-PUFF! The fish puffs out into a big ball. And it's covered with sharp spines! Ouch! The shark swims away. The small pufferfish is safe for now.



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For a small fish, the ocean is full of danger. Bigger fish, sharks, and even birds eat small fish. Animals that hunt other animals are called predators. Pufferfish have their own way to stay safe from predators.

All animals have special ways to stay alive. These are called adaptations. An adaptation is a body part or action that helps an animal live. Predators have adaptations that help them hunt. Imagine a shark's sharp teeth. This adaptation helps a shark catch and eat fish.



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A shark uses its sharp teeth to catch and eat fish.

Other fishes have adaptations too. These adaptations help keep them safe from predators. Some fish might be fast enough to escape a predator. Others might be able to blend in and hide on the ocean floor.



Can you find the flounder?



Porcupines have long sharp spines that protect them.

But some animals don't run or hide. They have bodies that are hard to eat. Porcupines have long sharp spines. So do sea urchins in the ocean. Spines protect these animals. Predators don't like spiny food!

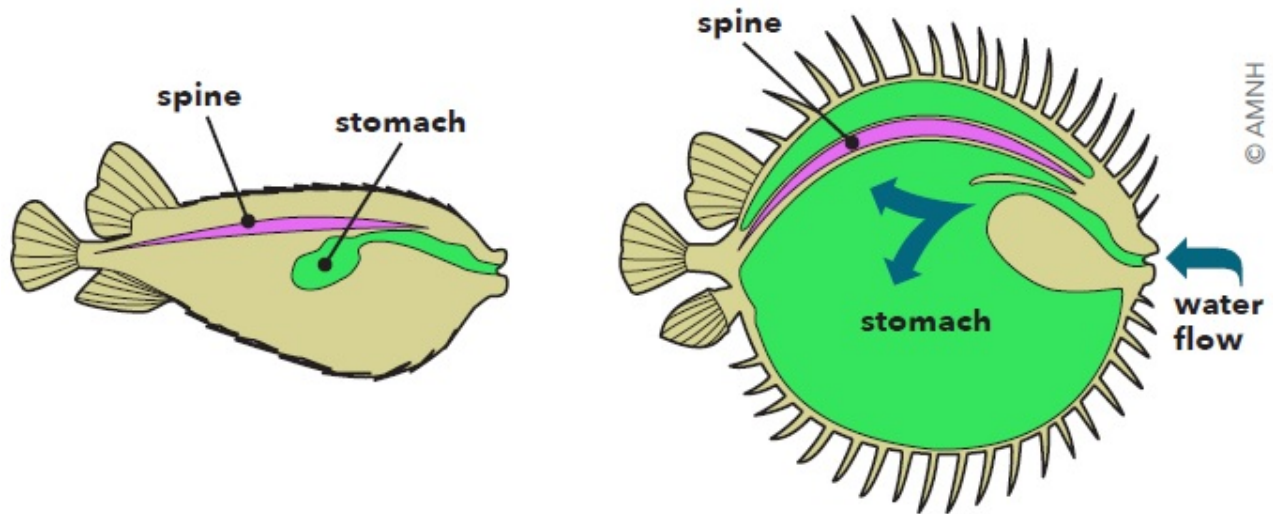
Some toads and snakes have another way to prevent a predator from trying to eat them. They puff up to look bigger. Pufferfish do both of these things. They puff up AND they have spines.

Swimming along, a pufferfish looks like any other fish. When a predator gets close, the puffer swells up like a big balloon. Some people call it a balloon fish. But this fish is not soft and smooth like a balloon. Its skin is hard and covered with sharp spines. These spines usually lie flat on the side of the fish. When the fish puffs up, the spines stick out in all directions.



A pufferfish's skin is hard and covered with sharp spines.

How does the puffer “puff” up? It’s not filled with air like a balloon. It’s full of water. The fish gulps lots of water into its stomach. Filled with water, its stomach becomes almost one hundred times bigger. Other body parts inside the puffer are pushed to the side to make room.



A puffer can turn into a spiny ball in a few seconds. Then only the biggest animals can eat it. The ocean may be full of dangers, but the puffer is ready. Adaptations like sharp spines and puffing up help keep the puffer safe.

Name: _____ Date: _____

1. At the beginning of the text, what does the small fish do when the hungry shark gets close?

- A It puffs out into a big ball covered with sharp spines.
- B It shoots spines at the shark as the shark comes near.
- C It swims away as quickly as it can.

2. What does the author describe in this text?

- A how sharks stay safe from other predators
- B how different kinds of toads puff up
- C how the pufferfish puffs up

3. Read these sentences from the text.

“Other fishes have adaptations too. These adaptations help keep them safe from predators. Some fish might be fast enough to escape a predator. Others might be able to blend in and hide on the ocean floor.”

What conclusion can you draw based on this information from the text?

- A If a fish does not have any adaptations, it is important for it to be able to swim quickly.
- B A fish that can swim quickly is more likely to stay safe than a fish that can blend in with the ocean floor.
- C Being able to blend in with the ocean floor is an adaptation that can keep fish safe.

4. When a predator comes near a pufferfish, the fish puffs up to look bigger. Why might a pufferfish want to look bigger?

- A to make the predator want to eat it
- B to stop a predator from trying to eat it
- C to fight the predator

5. What is the main idea of this text?

- A Adaptations like sharp spines and puffing up help keep pufferfish safe in the ocean.
- B Adaptations like sharp teeth help sharks catch and eat fish in the ocean.
- C The ocean is full of dangerous predators that eat small fish.

6. Read this sentence from the text.

“When a predator gets close, the puffer swells up like a big balloon.”

Why might the author have compared the pufferfish to a balloon in this sentence?

- A to hint to the reader that balloons also swell up when large animals get close
- B to show the reader that pufferfish and balloons are made of similar things
- C to help the reader understand what it looks like when the pufferfish swells up

7. Read these sentences from the text.

“Spines protect these animals. Predators don’t like spiny food!”

How could you rewrite these two sentences as one sentence without changing their meaning?

- A Spines protect these animals because predators don't like spiny food.
- B Spines protect these animals, so predators don't like spiny food.
- C Spines protect these animals, but predators don't like spiny food.

8. What is an adaptation?

9. Why do pufferfish need adaptations like sharp spines and puffing up? Support your answer with evidence from the text.

10. A shark is a predator that hunts and eats smaller fish like pufferfish. Explain why a shark might need different adaptations than a pufferfish in order to survive. Support your answer with evidence from the text.
