

## Science Article of the Week: TURTLE

*Directions:*

C

**Step 1:** Read the article.

**Step 2:** Read the article again. As you read underline information that is important, surprising, interesting or thought provoking. When you underline something, STOP reading and write a sentence that explains WHY you choose to underline the passage. Imagine you are having a conversation with the article in your head. You can make comments or ask questions. The goal is to explain your thoughts, opinions or questions. Mark/comment/write about at least 5 passages.

**Step 3:** Answer the questions.

1. Which of the following sentences from the article LEAST supports the idea that plastics can be directly responsible for the death of sea turtles?

- A Perhaps most distressingly, turtles can starve to death because they feel full after swallowing plastic debris.
- B They can also die because of toxic chemicals that were used to create the plastic, or that were absorbed through water.
- C Olive Ridley Turtles, which eat jellyfish and other floating animals in the open ocean, were shown to be at the most risk.
- D "Turtles can be killed directly by ingesting plastics, through blockage of the intestines or through piercing of the intestinal wall," Schuyler said.

2. Which of the following topics is NOT fully explored in the article?

- A whether turtles are harmed by the micro plastics in cosmetics
- B whether animals other than sea turtles are at risk because of discarded plastics
- C whether consumers are willing to reduce their dependence on plastics
- D whether scientists have closely studied the effects of plastics on sea animals

3. Which sentence in the section "Floating Plastic Looks Like Food" explains what must be done to save the sea turtles?

- A After that, they looked at published data from sea turtle necropsies to see how likely it was for turtles to ingest certain amounts of plastic.
- B The species is considered to be "threatened" in most parts of the world, and is already endangered off the coast of Mexico because of illegal hunting.
- C According to Schuyler's research, we need to protect these creatures from more than just hunters — we need to protect them from our trash.
- D They can also die because of toxic chemicals that were used to create the plastic, or that were absorbed through water.

4. Which of the following sentences from the article would be MOST important to include in its summary?

- A The east coasts of Australia and North America, Southeast Asia, southern Africa and Hawaii seem to be particularly dangerous.
- B First, Schuyler told The Washington Post, her team made a model of where marine plastic might be distributed in a body of water.
- C "Turtles can be killed directly by ingesting plastics, through blockage of the intestines or through piercing of the intestinal wall," Schuyler said.
- D Schuyler pointed to a recent study on seabirds that showed that less plastic in the water leads to less consumption of it.

# **Floating plastic being eaten by sea turtles at alarming rates, a study says**

By Washington Post, adapted by Newsela staff

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Ugh, humanity.

According to a new study, half of the sea turtles on the planet have ingested some form of plastic. This comes just days after another study showed that some 90 percent of seabirds have also consumed plastic.

The new study was led by Qamar Schuyler of the University of Queensland in Australia, and published in the journal *Global Change Biology*. It estimates that 52 percent of sea turtles worldwide have eaten plastic debris, some 13 million tons of which is dumped into the ocean every year. The east coasts of Australia and North America, Southeast Asia, southern Africa and Hawaii seem to be particularly dangerous. Schuyler used a combination of predictive models and actual evidence from necropsies, or animal autopsies, to reach her conclusions.

## **Floating Plastic Looks Like Food**

First, Schuyler told *The Washington Post*, her team made a model of where marine plastic might be distributed in a body of water. Then they added simulated sea turtles to see how much debris the species would likely encounter. After that, they looked at published data from sea turtle necropsies to see how likely it was for turtles to ingest certain amounts of plastic.

Olive Ridley Turtles, which eat jellyfish and other floating animals in the open ocean, were shown to be at the most risk. The species is considered to be "threatened" in most parts of the world, and is already endangered off the coast of Mexico because of illegal hunting.

According to Schuyler's research, we need to protect these creatures from more than just hunters — we need to protect them from our trash.

"Turtles can be killed directly by ingesting plastics, through blockage of the intestines or through piercing of the intestinal wall," Schuyler said. They can also die because of toxic chemicals that were used to create the plastic, or that were absorbed through water.

## **Micro Plastics Are Sneaky**

Perhaps most distressingly, turtles can starve to death because they feel full after swallowing plastic debris.

"Currently plastics are being produced at an exponentially increasing rate, but globally our waste disposal technology and capacity is not increasing at the same rate," Schuyler said. "Plus we now know that unseen micro plastics are entering the oceans from our cosmetics, from the clothing we wear, and from fragmentation of larger plastic particles. Unless we take substantial action, the problem is bound to increase."

Schuyler pointed to a recent study on seabirds that showed that less plastic in the water leads to less consumption of it. She said this gives her hope that we may be able to turn things around.

To make a difference, she said, consumers should just say no to single-use plastics, like grocery bags and disposable water bottles. Microbeads, which are present in many cosmetic products, are a big no-no.

"We now know that both sea turtles and seabirds are experiencing very high levels of debris ingestion, and that the issue is growing," Chris Wilcox, lead author of the seabird study, said. "It is only a matter of time before we see the same problems in other species, and even in the fish we eat."