

Shark Skin & Swimsuits

by ReadWorks



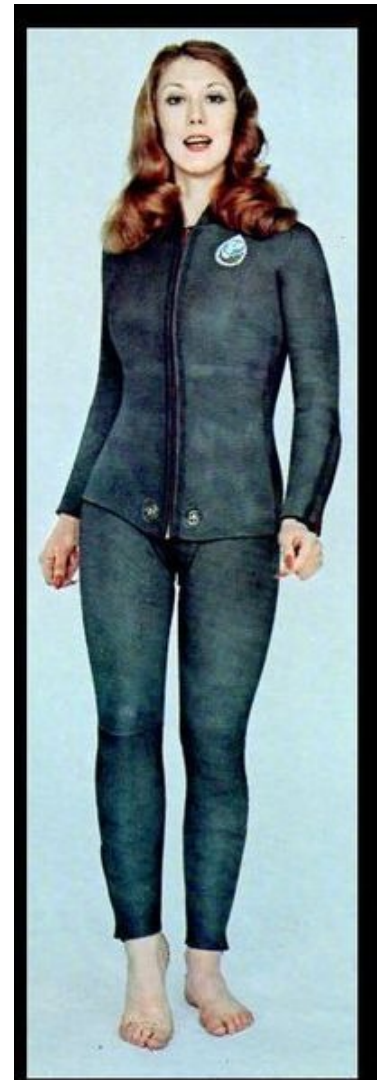
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shark closeup

A shark's skin is covered in tiny scales called denticles. Denticles, or "little skin teeth," help the shark move quickly in the water. The denticles are shaped in a way that allows water to flow past the shark. They are also rough, which makes it difficult for algae and barnacles to grow on them.

Scientists have been inspired by shark skin. They have been working to invent a swimsuit made out of artificial shark skin. Would you want a sharkskin swimsuit? It's likely that these suits will be too expensive to afford for a while. It is also expected that these suits will be banned from major swimming competitions. It is estimated that the suits would reduce swimming time by 3 to 5 percent. This would give an unfair advantage to anyone wearing one in a race.

Scientists also believe that an artificial shark skin material would be ideal for ships. This material would allow the ship to move through water more quickly and efficiently. It would also stop any algae and barnacles from growing on the ship. As a result, the shark skin ship material would cut down on oil costs and on clean-up costs.



Photograph of a sharkskin wetsuit

Name: _____ Date: _____

1. What do denticles on a shark's skin help the shark do?
 - A. They keep other animals from biting or bothering the shark.
 - B. They help the shark change direction while swimming.
 - C. They help the shark move quickly through water.
 - D. They attract fish and animals for the shark to eat.

2. The text describes how a shark's skin helps it. What is one way a shark's skin helps the shark?
 - A. It helps sharks rest efficiently.
 - B. It keeps barnacles from growing on sharks.
 - C. It helps sharks' teeth stay healthy.
 - D. It keeps other fish away from sharks.

3. The text says, "Swimsuits made of artificial shark skin would help swimmers move through the water more easily." What evidence from the text best supports this conclusion?
 - A. "Denticles, or 'little skin teeth' help the shark move quickly in the water."
 - B. "It is likely that these suits will be too expensive for anyone to afford for a while."
 - C. "This would give an unfair advantage to anyone wearing one in a race."
 - D. "Scientists also believe that an artificial shark skin material would be ideal for ships."

4. The text says that if a ship were made of artificial shark skin, it would cut down on clean-up costs. Why might this cut down on clean-up costs?
 - A. Denticles would make the ship move easily through water, so it would get washed constantly.
 - B. Denticles would make the ship stay cleaner, because barnacles and algae would not be able to grow on it.
 - C. Denticles would produce a special kind of soap to keep the ship cleaner as it moves through the water.
 - D. Denticles would help make the ship surface smoother, which would make it easier to wipe off while cleaning.

5. What is the main idea of this text?

- A. Sharks have rough skin that helps them swim fast and keeps barnacles from growing on them.
- B. Scientists are studying denticles on sharks' skin to learn more about how to swim quickly.
- C. Ships are likely to become stronger, faster, and cheaper with recent scientific developments.
- D. Scientists are developing swimsuits and ship-building material inspired by sharks' skin.

6. Please read the following sentences from the text. "Scientists also believe that an artificial shark skin material would be **ideal** for ships. This materials would allow the ship to move through water more quickly and efficiently."

As used in these sentences, what does the word **ideal** mean?

- A. an idea
- B. fast
- C. strong
- D. perfect

7. Please choose the answer that best completes the sentence below.

The tiny scales on sharks' skin, called denticles, help the shark swim fast, ____ they keep the shark from becoming covered in algae and barnacles.

- A. then
- B. first
- C. and
- D. but

8. Why will sharkskin swimsuits most likely be banned from swimming competitions?

9. Why do scientists believe that artificial shark skin would be ideal for ships? Use evidence from the text to support your answer.

10. What other products could be made of artificial shark skin? Use evidence from the text in your answer.