mystery science

Grades K-5
Mini-Lesson: “What’s the biggest shark that ever lived?”

VIDEO TRANSCRIPT

VIDEO 1

Hi, it's Danni! I've always been curious about mega-sized creatures. Like this supersized African land snail, or this massive rabbit in England. Oh, and check out this cat named Barivel. It's one of the world's biggest house cats. So cool. Someone named Austin is curious about really big animals too, the kind that live in the ocean. Let's give Austin a call now.

[Video Call]

- Hi, Danni!

- Hi, Austin!

- I have a question for you. What is the biggest shark that ever lived?

- Ooh, that's a great question.

It's a surprisingly hard question to answer because there are hundreds of sharks living in the ocean. Sharks that can fit in your hand like this Dwarf lanternshark. And sharks with huge mouths like this Megamouth Shark. There are even some sharks with interesting-looking faces, like this Goblin shark. and the number of sharks in the ocean isn't the only problem when it comes to finding the biggest shark. The fact is, sharks aren't all that easy to measure. Think about it. It's not like you can just go up to a shark and say, "Hey stay still for a second so I can measure you." So is it even possible to answer this question? I mean, how do we even know

how big sharks are? Before I move on, I'm curious. How do you think scientists measure sharks?

VIDEO 2

I don't know what you answered but some of you might have said, you can capture them to figure out how big they are. And you're right. One way scientists have used to figure out how big a shark is is to capture it, measure it, and then throw it back in the water. But that's not always easy to do. I mean, some sharks are really big and strong, and heavy, and they don't appreciate being pulled out of the water. Like this great white. Great white sharks are super strong, strong enough to hunt whales that are twice their size. And they're really big, they can grow up to 23 feet long. That's almost the length of six second graders laying head to toe, which means they're really hard to catch. So scientists have invented other tools to measure sharks more accurately, like this camera. When this special video camera is attached to a computer, it can measure how big a shark is when they swim by. Tools like these have allowed scientists to measure even bigger sharks than the great white. Sharks like this one. You're looking at a whale shark. You can tell by the white spots all over its body. I got to swim with whale sharks in Mexico once, and let me tell you, they were huge. Whale sharks can grow as long as 46 feet, which is almost as long as 12 second graders laying head to toe. Whoa! That makes the whale shark the biggest living shark in the ocean today. But notice I said living. What about sharks that aren't around anymore, sharks that swam the seas millions of years ago? Were any of them bigger? Hmm, that's a really tricky question to answer. I mean, scientists can't measure sharks that aren't around anymore with special cameras, and they definitely can't catch them. Now you might be thinking, we could measure ancient shark fossils, like scientists have done with other extinct

creatures like dinosaurs. But here's the thing, shark bodies are mostly made of soft cartilage, the same thing your nose is made out of. And that cartilage falls apart after the shark dies. So prehistoric shark skeletons are almost impossible to find. But luckily, scientists have figured out a way to estimate the size of sharks that aren't around anymore by looking at something that doesn't break apart, shark teeth. Check this one out. Isn't it huge? You're looking at the tooth of a shark that scientists think could have been even bigger than whale sharks. It's called the megalodon. Now, no one's ever found a megalodon skeleton, but by comparing the size of their teeth to sharks that are alive today, scientists have been able to estimate that they may have grown up to 60 feet long, which is like an incredible 15 second graders laying head to toe. Wow, that would make the megalodon the biggest shark that ever lived. So in summary, it's not easy to measure how big a shark is because they're big and strong, and they don't leave a lot of fossils behind to measure. But by using special tools, like shark measuring video cameras attached to computers, and by studying ancient shark teeth, we've been able to figure out how big sharks are without ever having to take them out of the water. That's all for this week's question. Thanks, Austin, for asking it!