mystery science

Grades K-5
Mini-Lesson: “What's the fastest ocean animal?”

VIDEO TRANSCRIPT

VIDEO 1

Hi, it's Danni! Want to see something really cool? Check these out. They're dwarf seahorses. Kind of hard to see, aren't they? That's because they're so small. Dwarf seahorses are one of the smallest species of seahorses in the world. And they're not just small; they're slow. In fact, they're the slowest-moving fish in the ocean. They're so slow that it would take them an entire school day just to cross your classroom. Whoa, I wouldn't want to be behind them in the lunch line. Someone named Thea is curious about ocean animals and how they move. Let's give Thea a call now.

[Video Call]

- Hi, Danni!

- Hi, Thea!

- I have a question for you. What is the fastest ocean animal?

- It's such a great question, and it's a really hard one to answer.

I mean, there are so many fast animals in the ocean, and they move in so many different ways, like this squid. Cephalopods, like squid and octopuses, are pretty fast because they use rocket power to get around. Okay, it's not really rocket power, but the way they move is kind of like a rocket. Squids suck water into a long tube called a siphon and then shoot it out. And that water

jet can launch them pretty quickly through the water, especially when they're trying to escape from an animal that's trying to eat them. Oh, and have you seen these? They're flying fish, and they really know how to zoom. Flying fish don't actually know how to fly, but they do know how to jump out of the water and glide through the air using their wing-like fins. Sometimes they even glide right onto boats. Oops. Now, most fish, like sharks or tuna or halibut, don't use their fins to fly through the air, right? They use them to swim, like this super speedy bluefin tuna, one of the fastest fish in the ocean. See how it's swishing its tail fin from side to side? That's how most fish move. Those side fins are to steer when it's speeding through the water. Now, bluefin and squid and flying fish are just a few of the speedy animals in the ocean, but there are a ton more, like different types of dolphins, and sharks, and stingrays. Whoo, there are just too many to list. But which one is the fastest? Is it an animal that uses water jet power, like a squid or octopus? Is it a fish that leaps out of the water, like a flying fish? Or could it be a fish, like a shark or tuna, that uses its fins to swim? Before we go on, I'm curious: what do you think? What's the fastest ocean animal?

VIDEO 2

I'm not sure how you answered, but you may have guessed a fish that's small and light, like the flying fish we talked about. And you're right, a lot of small fish are pretty fast. But check out this fin whale. It's the second largest animal on our planet. Now, it may be tempting to think that an animal that huge is super slow. I mean, it can weigh as much as 20 elephants. But guess what? They're not slow at all. In fact, the fin whale can swim five times faster than the speediest Olympic swimmers. Whoa! How is that even possible? It's all because of their powerful tails called flukes. Whales have huge, powerful muscles that move their flukes up and down, and they can push a whale's massive body so fast that they can launch into the air, like this. Unlike

fish that swish their tails from side to side, whales move their flukes up and down like paddles, and that helps them to swim up to 29 miles per hour, which is faster than even the fastest humans can run on land! So fin whales are pretty fast, but they're not the fastest. Check out this shortfin mako shark. Many scientists believe that the shortfin mako is the fastest shark in the ocean. It uses its powerful tail fins to propel itself through the water at speeds of up to 45 miles per hour. That's almost twice as fast as the fastest human runner. But it's not just its strong tail fins that make it so fast. What do you notice about how it's shaped? See how it's kind of like a torpedo? When something moves through the water, the water pushes back, and that push slows you down. You may have felt that push when you are swimming or walking through water. But a mako shark's special shape lets it cut through the water like an arrow, which makes swimming a lot easier and faster. There's an experiment you can try sometime on your own, which can help you see how this works. Next time you're in the water, try running your hand through it, like this. You'll notice the water pushing back. Now try putting your hand sideways, like you're karate chopping the water. The water's still pushing back, but you'll notice that your hand is slicing through water now like a mako shark does, and that makes it a lot easier. Now, having a special shape doesn't just go for sharks. All of the fastest animals in the ocean have special body shapes that help them cut through the water. Like this one. You're looking at a sailfish. The fish that most scientists think is the fastest ocean animal of all. It can swim nearly 70 miles per hour. That's 14 times faster than the fastest Olympic swimmers and faster than a lot of cars on the freeway! Not only does a sailfish have powerful muscles like a whale and a special body shape that cuts through the water like a shark, it has a special superpower. See its huge sail fin? When it wants to go super fast, it's able to fold that down so it can torpedo through the water even faster. And when it wants to slow down, it just pops the sail back up, kind of like a parachute slows down a race car. So cool. Oh, and get this. A lot of times the sailfish will leap

out of the water like a flying fish so it doesn't have to push through the water at all. So in summary, there are a lot of fast animals in the ocean, but the fastest ocean animals of all, like the sailfish, have powerful muscles and special body shapes that allow them to slice through the water better than the rest. That's all for this week's question. Thanks, Thea, for asking it!