mystery science

Grades K-5
Mini-Lesson: “What's at the bottom of the ocean?”

VIDEO TRANSCRIPT

VIDEO 1

[Video Call]

- Hi, Doug!

- Hi, Rayne!

- I have a question for you. What's at the bottom of the ocean?

- Ooh, that's a great question.

Human beings have been wondering what's at the bottom of the ocean for thousands of years, but here's the thing. The ocean is really deep. And for a long time, we couldn't reach the bottom to find out. So people had to guess what was down there, and they didn't always guess right. Some ancient sailors guessed that the bottom of the ocean was full of things like mermaids and mermen. In ancient China, some people imagined underwater palaces ruled by dragon kings who were guarded by crabs and fish. But besides imaginary things like mermaids and dragon king palaces, what do you think is really down there?

VIDEO 2

Well, I'm not sure what you answered, but you may have thought of human-made things like sunken ships or even garbage. And you would be right. There are a lot of human-made objects

at the bottom of some parts of the ocean. Like this 200-year-old ship called the Nuestra Señora de las Mercedes. When divers found what was left of it, they discovered it was full of gold and other treasure. And check this out, it's the Egyptian city of Antirhodos. Once home of an Egyptian queen named Cleopatra. A long time ago, a massive wave buried the city and it's been at the bottom of the ocean ever since. These human-made objects were all found in the shallower parts of the ocean, where divers were able to reach them using special equipment that helps them breathe underwater. But did you know that there's a way deeper part of the ocean? A cold and mysterious place called the Challenger Deep. This deepest part of the ocean is so deep that you could fit all of Mount Everest inside of it and you'd still have room for another mountain on top of that. So what would you find if you could go to the very bottom of the ocean, the bottom of Challenger Deep? Would you find human-made objects? Would you find fish? Until recently, we had no idea. A lot of scientists thought that the bottom of the Challenger Deep was full of nothing but gooey, gray slime, a kind of mud. Now keep in mind, there's a lot of water in the Challenger Deep. And though you may not notice it when you're swimming or in the shower, water is heavy. In fact, at the bottom of the Challenger, Deep, there's so much water above you that any person that tried to go down there instantly would be crushed, even in a submarine. So a lot of scientists believed there couldn't possibly be anything living down there, but an ocean explorer named Jacques Piccard wanted to find out for himself. With the help of his father, Jacques built the Trieste, a super submarine built out of a special mega-strong steel. Would this submarine be strong enough to reach the bottom of the Challenger Deep? There was only one way to find out, to drop his submarine into the ocean and try.

Slowly, Jacques and his copilot sank into the part of the ocean where even the sunlight doesn't reach. It got really dark until they noticed strange-looking lights. Could these lights be coming

from fish? They were. This part of the ocean, a place called the midnight zone, was full of glowing creatures like this vampire squid that can see in the total darkness, thanks to its giant eyes and this strange type of jellyfish. It almost looks like a glow stick. The midnight zone was deep, but the Trieste still had a long way to go. So they kept going until they heard a loud crack. The window was starting to crack. Would their submarine get crushed? Should they escape back up to the surface? They felt they were too close to quit. They needed to reach the very bottom. They decided it was safe enough to keep going and, after many hours, they finally reached the bottom. But what was out there? They pressed their faces against the window and saw nothing. Everything looked gray and cloudy as if they were floating in a giant glass of milk. They were disappointed. Were the scientists right? Was there nothing at the bottom of the Challenger Deep but gooey, gray slime? But then they saw something moving in the mud. What could it be? Could something actually be alive down here? Whatever it was, this creature was strange and flat and it was definitely alive. There was life at the bottom of the deepest part of the ocean. Scientists still aren't really sure what kind of sea creature they saw, but ever since the voyage of the Trieste, other explorers have gone down to the bottom of the Challenger Deep too, and they found even more animals. like this type of sea creature called a sea cucumber. This is a strange one. Its skin is see-through so that you can see the inside of its body and these shrimp-like creatures, called amphipods. We've only just begun to explore the Challenger Deep. There's still so much of it left to explore, including the rest of the deep ocean. You could be one of the people on a future submarine voyage who discovers entirely new life. That's all for this week's question. Thanks, Rayne, for asking it!