mystery science

Grades K-5
Mini-Lesson: “Do fish sleep?”

VIDEO TRANSCRIPT

VIDEO 1

[Video Call]

- Hi, Doug!
- Hey, Felipe!
- I have a question for you. Do fish sleep?
- Oh, that's a great question.

It's such a great question, right? People sleep, and I'm sure you've noticed lots of pets and other animals sleeping, too. Dogs sleep, cats sleep—they sleep a lot, actually. Hamsters sleep, birds sleep. Even lizards close their eyes and sleep. But fish? I mean, you probably never saw a fish sleeping, did you? It's not like you see a pet fish go snuggle into a little fish bed at the bottom of its tank and rest its head on a little fish pillow. In fact, fish don't even have eyelids. I think that's what makes this especially interesting. How would we even know if a fish is sleeping? Like, say you had a fish tank there in front of you—what would you look for to try to figure out whether a fish ever sleeps?

VIDEO 2

See, with a dog or a cat, not only do they lay there with their eyes shut, just like we do when we sleep, but you can even sometimes see them moving their legs in their sleep as if they're

running. It seems pretty clear that dogs and cats not only sleep like we do, but they probably even have dreams like we do. Fish do none of these things. In fact, many people who keep fish as pets will tell you the best you can tell with most pet fish is that, sometimes, the fish seem to stop swimming all over their tank. They just kind of float there for a bit, not moving much at all. Maybe that's when they're sleeping? Or maybe that's more like they're taking a quick nap?

The truth is, if fish do sleep, it's not something that's really obvious to us the way that it's obvious that dogs or cats sleep. There are some kinds of fish that move constantly, their whole lives. Most fish that live in big schools do this. Day or night, these fish are always swimming, and they never take a break. Scientists think that these fish might never sleep their entire lives. Think about that. Can you imagine what it would be like to always move around and never sleep?

Now, that said, there are certain other kinds of fish, like many fish that live in a coral reef. These fish go into little hiding places at night, and they stop moving once they're in there. And there are other fish that even dig into the sand like this at nighttime and stay there.

Scientists have discovered that some fish, like the bluehead wrasse, when it's hiding at night, won't even react when a scientist nearly lifts it out of the water. It's as if these fish are in some kind of trance at nighttime where they're not paying any attention to what's going on around them. That sounds an awful lot like sleep. So maybe some kinds of fish do sleep.

If it seems like this question doesn't have one simple answer, that's because we actually don't even have one simple idea of what sleep is. With our own bodies, we know that sleep is something really important for us. If we don't go into a nice, deep sleep each night, we start to

become forgetful. We even have trouble thinking. If a person goes too long without sleep, they might even fall over until they do sleep.

Fish don't seem to need sleep, at least not deep sleep the same way that we do. Their bodies won't start to have problems if they don't sleep. Still, that doesn't mean fish don't sleep at all. Based on what we can observe, it seems like perhaps many fish just sleep lightly.

That's all for this week's question. Thanks, Felipe, for asking it!