mystery science

Grades K-5
Mini-Lesson: “Why do animals come back after going to warm places in the winter?”

VIDEO TRANSCRIPT

Hi, it's Doug! If you're from North America, you probably recognize this. When I was growing up, these were the butterflies that always got the most attention. They're big, they're bright, they're orange—they're called *monarchs*. We'd only see them in the warm summer months, though. By winter, they were gone.

Someone named Erin has a question about animals that fly to warm places in winter. Let's give her a call now.

> **[Video Call]**
> - Hi, Doug!
> - Hi, Erin!
> - I have a question for you. If animals stay in warm places in winter, why do they come back?
> - That's a great question.

As it gets close to wintertime, monarch butterflies go south to spend the winter somewhere warm. And it's not just monarch butterflies that do this. Lots of other animals do, too, like a lot of different kinds of birds, even a few different kinds of whales—they'll actually swim south, leaving places like Canada and the United States, and heading down to warmer places. Places like this,

Mexico, where it's nice and warm even during the winter months. Then, in spring, when the weather warms up back north, all of these animals head back again. This whole process of going back and forth like this once each year—it's called migration.

But now here's the thing. A warm place like Mexico, it's actually warm there all year, so what's the point of ever going back north? Why not just stay in the places that are warm year-round? Keep in mind, too, it's a lot of work for an animal to migrate. It's not like they can hop on an airplane to get there. To go from Canada or the United States to Mexico can be as much as 3,000 miles. Imagine having wings and having to flap your wings constantly that far. What do you think? Why don't migrating animals just stay where it's warm?

Now would be a good time to pause the video and discuss. Okay. You ready?

Well, you can look for clues by noticing what some of these animals do after they get back from their winter trip. For example, when monarch butterflies return to the United States and Canada, they start to lay eggs on the leaves of plants. But not just any plant. They only lay their eggs on the leaves of this plant. It's a plant called milkweed. It turns out lots of milkweed grows in Canada and the US during summer. And milkweed is the only kind of plant that monarch caterpillars will eat. If monarch butterflies don't lay their eggs on milkweed, then when the caterpillars hatch, they'll actually starve.

So you see, monarch butterflies come back north because their caterpillars need a certain kind of plant that grows in the north.

Or here's another good example. This bird is called a purple martin. It spends its winter down in the warm countries of Central and South America. But then in the springtime, it flies back north

each year just in time for when lots of insects start to hatch. Purple martins love to eat flies, mayflies—any kind of insect. If the birds had stayed down in Central and South America, they'd miss out on all that food. So you see, one reason animals don't stay in warm places has to do with finding certain kinds of food that they need.

But these aren't even the only reasons that some animals migrate. Check out this video. It's hard to believe what you're seeing, but those are fish literally swimming across a road to get to the other side. It's a flooded road. These fish are called salmon, and they do this every year. Salmon spend their adult lives out in the ocean. But every year, once each year, they migrate. Not south to stay warm, but instead, inland up into rivers. They actually have to wiggle their bodies constantly in order to swim upstream. It's incredibly hard work. They're so determined, they swim so hard, they'll even jump up over waterfalls if they need to.

Why would they work so hard just to migrate up a river? Well, their goal is to reach calm, shallow pools of water high up in the mountains where they lay their eggs. It turns out, when baby salmon hatch in these shallow pools, they're much less likely to get washed away or eaten by predators than if the eggs had been laid in the ocean.

So, in summary, lots of animals travel long distances back and forth once each year. It's what we call migration. Even though migration is a lot of hard work, and can even be dangerous for the animals that do it, it's worth it to them in order to meet their needs or the needs of their babies.

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