mystery science

Grades K-5
Mini-Lesson: “Where do bugs go in winter?”

VIDEO TRANSCRIPT

VIDEO 1

Hi, it's Doug! What's the most colorful insect you've ever seen? Well, a couple of years ago, I visited the state of Florida and I was amazed to see these things. They're some of the most colorful grasshoppers I've ever seen. They're called *lubbers.* And what was strangest of all? It was the middle of December when I saw them. Florida doesn't ever get very cold in the wintertime, so you can see lots of insects there all year.

Someone named Kylie has a question about insects. Let's give her a call now.

[Video Call]
- Hi, Doug!
- Hi, Kylie!
- I have a question for you. Where do bugs go in winter?
- That's a great question.

If you live somewhere with cold, snowy winters, you might have noticed this too. Just a few months earlier in the year, you could find all kinds of insects around you—butterflies, ants, bees, and lots more. But then winter comes and they're just gone. And it's weird, too. I mean, it's not like there are no animals out in winter. For example, you might still see deer or squirrels, even a

few birds, like if you get a chance to watch a birdfeeder. So where do all the insects go? What do you think?

VIDEO 2

Well, I grew up somewhere cold and snowy, and I used to wonder this myself. But before I tell you about where insects go in winter, let me give you a clue involving a very different kind of animal. These—frogs! You see, I'm kind of obsessed with frogs and one of my favorite places to visit when I was younger was this pond that was near where I lived. I looked for frogs there. I actually got to be pretty good at catching the frogs, showing them to my friends and family, and then releasing them again into the pond.

But every winter, the pond would freeze over and the frogs would disappear. It wasn't just the frogs either. I started to notice there were never any turtles around in winter and never any snakes either. It was kind of sad for me, actually. I missed seeing all these creatures I would find in the summer.

One winter, while walking around the edge of the frozen pond, I was bored. I saw this rotten log sitting there. Nothing too unusual. But since I was bored, I decided to flip it over. As I flipped it over, I was totally shocked by what I saw. There, under the log, nestled into the freezing cold mud, was this frog in the middle of winter. It was just lying there, barely moving. Whoa! Wait a second—the frogs were there the whole time?

That's when I learned that frogs do something kind of like hibernation. They go into a long sleep in winter, burying themselves in the mud when it first starts to get cold in the fall. I'd heard of hibernation before, but I thought it was something that only bears did. And it turns out, it's not

just frogs and bears, but turtles do this as well, and snakes. In fact, some snakes, like these, will actually all gather in a big pile, like in a cave underground, which helps them to stay warm. Oh, yeah. I never thought about where the snakes went.

So now, what about insects? Could it be that they hibernate during the winter too? I'll be honest with you, when I first heard this question, where do bugs go in winter, I thought you might be really disappointed by the answer because the first things I thought of were insects like these, praying mantises. Praying mantises are one of many insects that—well, the answer is—they don't survive the winter—they die. While it's sad, it's part of their life cycle. Every fall, praying mantises and lots of other insects too will lay eggs that do survive. So even though the adults don't survive the winter, by spring, babies will be born and their life cycle will go on.

But as I started to research more about this question, I was pleasantly surprised to find out that not all insects die in the winter. Now, I know that some insects, like monarch butterflies, will actually escape the cold by flying thousands of miles farther south to reach warmer places. They migrate, just like many birds do.

But what about hibernation? Are there any insects that can do something similar to what frogs, turtles, and bears do, where they stay alive all winter, but just aren't very active? In fact, there are. Like these. Ladybugs are a good example. And just like the snakes you saw earlier, ladybugs will often gather together in a big pile in a warm place. Sometimes, they even try to stay warm by sneaking their way into people's houses. If you live somewhere cold in winter, you might be able to notice ladybugs doing this, too.

So in summary, insects and other bugs have different ways of surviving cold, snowy winters. Some of them fly south to warmer places. Others die but lay eggs. And still, others are able to survive all winter. They do something similar to hibernation.

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