mystery science

Grades K-5
Mini-Lesson: “Do any plants eat animals?”

VIDEO TRANSCRIPT

VIDEO 1

Hey, it's Esther! Have you ever noticed how many plants there are around us? We're surrounded by so many plants, that sometimes, we don't even see them. Try to think, for a second, about the plants you pass every day on your way to school or the store, or on your way to visit a friend. You probably see some trees, maybe some flowers, or even some grass. You might even be able to see plants outside your window right now. Plants are everywhere, and some of them look pretty cool. See how the flowers look like hearts? And check out this Rafflesia plant. Isn't it huge? The Rafflesia is the world's biggest flower. But you probably don't want to smell it because it's also one of the stinkiest. It smells like rotten food. Yuck! Someone named Addison has a question about plants. Let's give Addison a call now.

[Video Call]

- Hi, Esther!

- Hi, Addison!

- I have a question for you. Do any plants eat animals?

- Ooh, that is a great question.

You might have seen animal-eating monster-looking plants on TV, like Carnivine in Pokemon, or in video games like this one. But are there plants like this in real life? Before we go on, I'm curious. What do you think? Have you heard of any plants that eat animals?

VIDEO 2

I'm not sure what you answered, but maybe you thought of a plant like this. This is a plant called a Venus flytrap. It's what artists use to create some of the plant monsters we see in movies. Watch what happens when a bug touches one of its leaves. Whoa, the Venus flytrap snaps shut and the bug can't get out, it's trapped! Eventually, the bug dies and the plant begins to soak up the nutrients from the bug's body, kind of like how a sponge soaks up water. But trapping a bug isn't as easy as it looks. Since carnivorous plants like the Venus flytrap don't have legs to chase after prey like an animal would, they have to find ways to get the bugs to come to them. Now, if you were a bug near this Venus flytrap, you would be able to smell it, and it would smell like something pretty sweet. And that's one way the Venus flytrap can attract bugs. It smells good to them. But that's not the only way to attract bugs. This is an Australian sundew plant. See the raindrops on the stem? The drops attract thirsty bugs who want to drink, but here's the thing, those drops aren't for drinking, they're for sticking, kind of like glue. See, attracting a bug isn't the only problem a carnivorous plant has. They have to keep it trapped long enough to eat it, which is hard to do without any arms or paws. So once a bug lands on the sundew's sticky leaves, it gets stuck and trapped by the plant's long tentacles. Sticky glue is one-way bug-eating plants keep their prey stuck long enough to eat, but it's not the only way. Here's another one. Doesn't it look like a cobra? The cobra lily attracts bugs in the same way a Venus flytrap does, with a sweet smell, but they don't have sticky stems like the Australian sundew does. So how do

they keep the bugs trapped? By confusing them. Once a bug climbs into the tube-like top, the light shining through the tiny windows in the leaves makes the bug think that the exit is at the bottom, so it starts to climb down and down, looking for a way out. And slippery walls make it really hard to crawl out. Eventually, the bug gets super tired and falls into a pool of liquid at the bottom of the tube where it drowns and gets eaten. Okay, so we've talked about some plants that eat bugs, but are there any carnivorous plants that actually eat bigger animals, not just insects? Amazingly, there are. Take a look at this one. Isn't it huge? The giant montane pitcher plant is the largest carnivorous plant in the world. It's called a pitcher because its big, bowl-shaped flower fills up with water, like a water or lemonade pitcher. The montane attracts bugs and animals with a sweet smell, like the Venus flytrap, but when the animals try to eat some, they slip on the slippery leaves and fall into the water. And when they do, they can't escape and get eaten by the plant. Usually, the montane only eats ants, but every once in a while, it eats bigger animals like lizards, birds, and even mice. The giant montane is the closest plant we have to the drooling chomping monster plants we see in the movies and in video games, but plants like the giant montane, or even the Venus flytrap don't actually chomp down on their prey in one gulp like on TV. In fact, carnivorous plants don't gulp down their prey at all. That's because carnivorous plants aren't really eating the animals as food like you or I would eat pizza. They're just absorbing nutrients from the animal's body and those extra nutrients help it survive. So in summary, there actually are plants that catch animals in order to absorb the nutrients from their bodies. But since these carnivorous plants aren't able to chase after their prey like animals do, they rely on other ways to attract and trap animals, like sweet-smelling nectar, or sticky drops that look like water, or even by trapping them in a pitcher of water like the giant montane. One of the coolest things about carnivorous plants is that you can actually buy smaller plants like the Venus flytrap and cobra lily to keep at home. They're not easy to take

care of, but if you treat it carefully like a pet, you can actually see how they trap bugs yourself.

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