

Grades K-5**Mini-Lesson: "How do squirrels find the acorns they hide?"**

VIDEO TRANSCRIPT

MINI-LESSON VIDEO 1

Hey, it's Esther. Forgetting where you put something is so frustrating. You can think and search, but sometimes it's only after you find it again in the weirdest place that you finally remember putting it there. Someone named Devin is curious if squirrels ever have this problem. Let's give Devin a call now.

[Video Call]

- Hi, Esther.
- Hi, Devin.
- I have a question for you. How do squirrels find the acorns they hide?
- That's a great question.

Maybe you've seen a squirrel hiding acorns before. It digs a hole in the ground, drops in an acorn or some other tasty seed, then covers it up. Burying seeds is a way to save extra food for times when less food is available, like in the winter. It's kind of like how people store food to eat later. Saving enough food for the entire winter is hard work, especially when there are thieves around ready to steal seeds. That's why many squirrels are sneaky. Notice how this one is using leaves to disguise its hiding spot? Nothing to see here, thieves. Some squirrels also choose a variety of hiding spots. That way, even if some seeds get stolen or damaged, they still have

plenty saved in other places. It's kind of like how you might keep pencils at your desk, but also keep some in your backpack or with your art supplies so you always have one handy. For a squirrel, hiding seeds is only the first step. To have enough food all winter, it has to find them again. And one squirrel might hide hundreds or thousands of seeds. People used to think that maybe squirrels didn't keep track of the food they hid—they just used their great sense of smell to sniff out any hidden seeds, regardless of who hid it. But scientists made a surprising discovery. Even when several squirrels hid seeds in the same area, and there are plenty to sniff out, each squirrel is more likely to return to its own hiding spots. That's like finding your car among all the others in a parking lot. It looks like squirrels remember where they hide food. But how? To figure this out, let's imagine you are a squirrel. You're looking for food near your home when you spot it: the perfect acorn. You dash with it across the park over to a row of trees and decide that here, between these two, is the best hiding spot. Remember this spot because you want to find this acorn again. Okay. Weeks go by, and winter arrives. You're busy with other squirrel business when you start to get hungry. It's time to find that perfect acorn again. But how? The park looks different in the winter, and yet some things look familiar, like this big group of rocks. They're covered in snow now, but they're still in the same spot. What else do you notice is still in the same place?

MINI-LESSON VIDEO 2

Along with these rocks, maybe you noticed this bench is still in the same place. So is this wide open area, and this row of four trees, including these last two. And buried between them, yes, it's the perfect acorn, right where you hid it. Other things stay the same, too, like the things that are closer together or farther apart, and the direction of your home. Scientists think that squirrels can remember details like this. They have the ability to remember how things are arranged in a

space, like home is here, a good tree for acorns is here, and seeds are hidden here. Scientists think that squirrels get to know the area around their home so well that they form a kind of map in their minds. This ability is called spatial memory. You might not realize it, but you use spatial memory a lot like squirrels do. Like, if I went into your room and moved things around, I bet you'd notice. You know that space really well, just like a squirrel knows the space where it lives. Give this a try. In your mind, see if you can picture how to get from your classroom to your school's front door. Think about what's close by and what's further away. Maybe there's something that reminds you where you need to turn. You might not remember every detail, but you probably know the general path. And the next time you go that way, try to notice more. Like a squirrel, you're building a kind of map in your mind of where things are around you. So, in summary, while squirrels do have a great sense of smell, they seem to rely more on spatial memory to find the seeds they hide. They're able to remember how things are arranged in the space around their home and use that mental map to return to their hiding spots. You can practice thinking like a squirrel, too! Notice what's behind you right now. Then wait five minutes to try to describe what's there without peeking. See how much you can remember. While spatial memory is pretty amazing, sometimes you still can't remember where something is. That happens to squirrels, too. And that's a good thing! Hidden acorns that don't get found may grow into beautiful trees. That's all for this week's question. Thanks, Devin, for asking it.

This week, we have a special activity. We'll show you a trick that you can use to memorize all kinds of things. So check it out if you have time.