mystery science

Grades K-5
Mini-Lesson: “Do dogs sweat?”

VIDEO TRANSCRIPT

VIDEO 1

Hi, it's Esther! Have you ever seen a dog do this? Or how about this? When a dog spins in circles or races around the house like this, some people call it the zoomies. And if you've ever been around a dog, you might know that they can get zoomies when they're excited, or after they've taken a bath, or even when they're bored. Zoomies are a great way for dogs to get rid of extra energy. Looks tiring, doesn't it? Someone named Benny is curious about dogs. Let's give Benny a call now.

[Video Call]

- Hi, Hi Esther!

- Hi, Benny!

- I have a question for you. Do dogs sweat?

- That's a great question.

When dogs go on long walks, or play outside in the summer sun, or do zoomies, they can get pretty hot. I mean, imagine if we did zoomies, we'd get hot too, and probably get sweaty, but why is that? Before I go on, I'm curious: why do you think we sweat when it's hot?

VIDEO 2

If you've ever gone swimming, you might already have a clue as to why we sweat when we're hot. Think about it for a second. Have you ever hopped out of a pool or lake and felt your wet skin get really cold even when it was hot outside? Maybe you even started to shiver. Brr. That chill you feel is because of the water drying. When water dries off your skin, it doesn't just disappear. It actually turns into an invisible gas and moves into the air. And when it does, it takes some of the heat from your body into the air with it. When water turns into a gas like that, we call it evaporation. And evaporation is what makes us feel cooler when we get wet. Okay, but what if there's no pool or lake or hose around to get wet? How are we supposed to cool off then? This is where sweat comes in. Sweat is one of the main ways a human stays cool. We make sweat all over our bodies when we get hot, and when that wet sweat evaporates into the air, it takes heat with it and cools us off just like the lake or pool water does when it evaporates off our skin. So, is sweat how dogs cool off, too? Well, yes and no. Dogs can sweat like humans do, but here's the thing: they can't make sweat all over their bodies like us. This is the bottom of a dog's paw. See those pads? That's one of the only places dogs can sweat. Now, sweaty paws can help keep a dog cool, but only a little. I mean, look at these paws. Not very big compared to the rest of its body, are they? The sweat that comes from a dog's paws is definitely not enough to keep a dog cool. In fact, some animal experts think that sweaty paws help the dog grip the ground more than they help the dog keep cool. Okay, so if sweat doesn't keep a dog's body very cool, what does? I'll give you a clue. Check out this dog. Can you tell that it's hot? How do you know? Yep. It's panting. And panting is one of the main ways a dog stays cool. Look at the inside of this dog's mouth. It's pretty wet. You might have noticed this with dogs you know. Dogs' mouths and throats are wet with saliva, and when they open their mouths wide like that, they're

letting some of that wet saliva evaporate. And when it does? You guessed it: it takes some of their body heat with it, the same way our sweat does when it evaporates, and that cools a dog down. But panting isn't the only way a dog stays cool. On really warm days, we may need to help them out a little. No, we can't make our dogs' paws sweat more or make them pant more, but there are things that we can do to help a dog stay cool. Like if you ever go out and play fetch with a dog, you can make sure to carry their ball or stick home for them. Dogs can't really pant with a ball or stick in their mouth, can they? So carrying their toys home allows them to pant all they want and helps them stay cool. It's also important to make sure that dogs have shade and cool water on hot days. Oh, and if it's really hot outside, take them on walks in the morning or at night when it's cooler. So, in summary, dogs do sweat on their paws, but that doesn't really cool them off much, so they have to rely on other ways to cool off, like panting. When a dog pants, it's letting the water in its mouth and throat evaporate into the air, taking some of the heat with it. That way, it can cool down and zoom around the house again. That's all for this week's lesson. Thanks, Benny, for asking it!