mystery science

Grades K-5
Mini-Lesson: “What is dust?”

VIDEO TRANSCRIPT

Hey, it's Esther! Do you help with any chores? One of my chores growing up was vacuuming. Sometimes I'd look at everything that got sucked up and wonder, what is that? There was all this powdery stuff. I didn't see it while I was vacuuming, but there it was. Where did it come from? Someone named Deago has a question about something we clean. Let's give Deago a call now.

[Video Call]

- Hi, Esther!

- Hi, Deago!

- I have a question for you. What is dust?

- That's a great question.

Where I live, I often find dust on my ceiling fan. It's a layer of powdery, fuzzy stuff that I can sweep up with my fingers. Maybe you've noticed dust like that too. And you may have guessed that the powdery stuff in my vacuum was also dust. It seems like dust gets everywhere. That's because dust is small enough and light enough to float around in the air. Sometimes, you can even see specs of dust drifting by. Eventually, the dust settles someplace like on my fan or the floor. Now, here's a view of dust you may not have seen before. This is dust up close. Look at that. Pieces of dust have different shapes. Some are round, some are crinkly, some are long and skinny. It makes me think maybe dust could be a lot of different things, but what and where

does it come from? Before I go on, I'm curious, what do you think? Where does dust come from? Now would be a good time to pause the video and discuss. Okay, you ready? I don't know how you answered, but maybe you said dust is dirt. It's bits of stuff from outside that get inside, and you're right. That's part of the answer. Dust includes tiny bits of sand, dried mud, and other things from outdoors. If you've ever played in the sand or had fun in the mud, you can probably guess how bits of outside stuff get inside. They come in on our shoes, clothes, and bodies. While some get washed away, other tiny bits fall or float off and join the dust inside. Now, I'm not saying you should never get dirty outside. It's awesome. But even if you did, outside stuff would probably still get inside. The wind can blow bits of sand and other outside stuff in through windows and gaps around doors. Plus, dust isn't just stuff from outside. There's more. Remember that closeup picture of dust? There were so many shapes, like this one. It looks kind of like a string or thread, right? Well, it is. This piece of dust came from something like a T-shirt or a towel. It's a tiny bit of fabric. You might have noticed that things made of fabric can wear down, like when a sock gets a hole. Maybe you wondered where that fabric went. As you move around, tiny bits of fabric break off from your socks and other clothes, as well as the carpet and furniture. Those bits of fabric can become dust. And have you ever eaten something that broke apart and made lots of crumbs? You probably notice those crumbs, but you might not notice the bits of paper that break off as you read a book, or the specs of black soot when you blow out a candle. Yet, those bits of food and paper and soot can all become dust. In fact, tiny bits of everything around you becomes dust. Even your body makes dust. Bits of skin come off your body in flakes. You might be able to spot some on your clothes, but even if you don't see them, every one of us sheds millions of tiny bits of skin each day, really. Some of those skin flakes go down the drain, but a lot of them, you guessed it, become dust. If you have pets, flakes of their skin, fur, and dried spit become dust too. Hey, it's just something bodies do naturally. So, that

powdery fuzzy dust you see is actually bits of sand and other stuff from outside, and bits of fabric, food, and other things around you inside, and flakes of skin from your body. All of that added together is what indoor dust is made of. When I think about the dust in my home, I'm sure there are bits of dirt from my garden outside. There's probably fuzz from my favorite sweater. And I'm always sweeping up fur from my cats and crumbs from their food. The dust in my home is tiny bits of all the things around me. And the dust in your classroom comes from a different combination of things. Because dust is tiny bits of all of the things that make up a place, scientists have discovered they can learn a lot from dust. Homes that are in the city have dust that's different from homes that are in the country. By studying a sample of indoor dust, they can figure out where in the United States someone lives. They can also tell pretty well if someone lives with a dog or a cat. Dust is full of clues. It's tiny bits of things that make each place unique. That's true for dust in nature too. Dust from the Sahara Desert in Africa is tiny bits of the rocks, plants, and animals found there today and in the past. Scientists can track that unique dust from the Sahara as it blows to other places, like rainforests in South America and mountains in Europe. Even outer space has its own unique dust. Space dust includes tiny bits of exploding stars. Isn't that incredible? So, in summary, dust is tiny bits of the different things that make up a place. It's tiny bits of what's outside and what's inside. And since the combination is unique to each place, that makes the dust where you live one of a kind. That's all for this week's question. Thanks, Deago, for asking it!