mystery science

Grades K-5
Mini-Lesson: “Why do we get head lice?”

VIDEO TRANSCRIPT

VIDEO 1

Hi, it's Doug! Back when I was a kid, a friend of mine came home from school with a problem. But it wasn't a math problem or even a friend problem. It was a bug problem. It turns out he'd gotten head lice. Now, if you've ever had head lice before, then you know they can be really annoying. His head was super itchy, plus he had to wash his hair with a special kind of shampoo. When the head lice were finally gone, he was so relieved. Someone named Paul has a question about head lice. Let's give Paul a call now.

[Video Call]

- Hi, Doug!

- Hi, Paul!

- I have a question for you. Why do we get head lice?

- Ooh, that's a great question.

In a second, I'm gonna show you what head lice look like up close. This is a head louse. Louse is what you call lice when there's just one. Head lice are teeny tiny insects about the size of a strawberry seed. They live hidden at the base of the hair on top of human heads, what we call a

scalp. But why? Why do these tiny creatures make our heads their home? I wonder what you think.

VIDEO 2

A human scalp might not seem like a very nice place to live. There's not a lot of space, all that hair thrashing around, and you have to go wherever the human goes. But imagine what it looks and feels like from the perspective of a tiny louse. To tiny head lice, a human's head isn't small at all. It's huge. And all of that hair provides an airy, protected place to hide. Think of it as kind of like the head lice version of a shaded forest. And there's something else a human scalp has that a head louse needs. It's warm. All living human bodies give off heat. And it turns out that heat is just the right temperature to keep a head louse healthy. See, head lice can't survive in high heat. But they also can't survive the cold for very long because their eggs can't survive without warmth. Human body heat makes a person's scalp a nice cozy place for a louse to live. For head lice, a human scalp is their habitat, the place they live because it has what they need to survive. A dolphin's habitat might be the ocean, where there's water to swim in and fish to eat. A lizard's habitat might be the desert, where there's plenty of sun to stay warm. And a head louse's habitat might be, well, the top of your head where there's plenty of warmth and protection. But how do head lice choose which heads of hair to live in? We know head lice prefer human scalps protected by some hair because they need a habitat that's warm and protected. But beyond that, head lice aren't very picky. They don't prefer scalps with long hair or short hair, because even short hair is enough to offer the protection head lice need to survive. And they don't prefer clean or dirty hair, because they can live just fine in either. They don't need clean or dirty conditions to survive. So that means you can't prevent or avoid head lice just by cutting your hair short or by keeping clean. So if it's so random, how do people get head lice

who didn't have head lice before? This is where it can help to know what a head louse can and can't do. Head lice can't hop or fly. They can only crawl. So, unlike mosquitoes which can fly, head lice can't spread through the air, and they can't travel very far. Head lice can only move to a new scalp if they get very close to it. Close enough to crawl directly onto it. That means only people with their heads pressed super close together can spread head lice from one scalp to the other. You may also be able to spread head lice by sharing a hairbrush or a hat with someone who has head lice. But this is pretty uncommon. And even if you do get head lice, there's still good news. Head lice are treatable. We know how to get rid of them. And even better, head lice have no lasting effect once they're gone. Luckily for people, head lice don't carry diseases or spread infections. A few scientists even did an experiment where they tried to infect head lice with illness-causing germs. But the head lice's bodies just killed the germs. That's actually pretty impressive if you think about it. Even very clean humans sometimes accidentally spread their colds or other germs to people near them. But head lice don't do that. They simply don't carry germs that can make people sick. The main problem head lice cause people is itchy bug bites. Super annoying, but not dangerous to your health at all. So why do we get head lice? Head lice use human scalps as their habitat. It has the warmth and shelter they need to survive. You can't prevent head lice by keeping clean, but head lice are treatable and they don't cause any serious health problems. So even if head lice give you the heebie-jeebies, remember, it's always better to know the facts about the things that make you nervous or even itchy. The more you know about head lice, what they can and can't do, and what they need to survive, the better you'll be able to keep them from bugging you. That's all for this week's question. Thanks, Paul, for asking it!