But Why: A Podcast for Curious Kids

‘Are Llamas Ticklish?' And Other Silly Questions

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[Jane] This is *But Why: A Podcast For Curious Kids* from Vermont Public Radio. I'm Jane Lindholm. On this show, we take your questions about anything, and we find answers. Sometimes we talk about really serious things, and other times we like to answer your fun and funny questions. This week, we're answering a bunch of questions that put a smile on our faces, and we hope they make you chuckle, too. Plus, you might actually learn something from some of the answers.

We'll start out with a question from Lily.

She asks:

[Lily] Why do pickles and cactuses look like each other?

[Jane] I will admit, Lily, I've never thought about the fact that pickles kind of resemble some cacti, but now that you mentioned it, they do. And if you've ever picked a cucumber straight from the garden, you might know that some varieties of cucumber have little spikes on them, just like a cactus. If you're wondering, pickles are just cucumbers that have been pickled in a vinegar brine. You can make other kinds of pickled vegetables, too. But let's just keep it simple and assume Lily's talking about pickled cucumbers. To make things even more confusing, there's actually a cactus called a cucumber cactus. And I think *that* cactus looks less like a cucumber than some other kinds of cactus.

But back to the question: cucumber and cactus are both plants, but they're in different plant families; they're not very closely related. Cucumbers are in the gourd family related to things like pumpkins, squash and watermelon. Cacti —that's the plural of cactus—cacti are succulents, plants that store water. Not all succulents are cacti, but that's the family they're in. So, I guess the fact that both of these plants look kind of alike is random. But there are actually, in nature, a lot of reasons that things that aren't related look alike. Sometimes it's because there are patterns that repeat through nature, and we see them in all kinds of objects. Another reason is something called “convergent evolution,” where different organisms like plants or animals develop similar

traits— similar looks or ways of doing things—even though they're not related. Often, it's because they have had to adapt to similar environments, and they both did it in the most effective and efficient way, even though they were doing it separately. I don't know if that's what's happening with pickles and cacti, but I think it could be. I'm going to keep thinking about this, and maybe we can circle back around to it in a future episode if we find out anything interesting. At any rate, really good observation, Lily.

[Declan] Hi, my name is Declan. I live in Starksboro, Vermont. I'm four years old, and I would like to know what are boogers made out of.

[Jane] Yeew, Declan! Don't tell anyone, but I actually don't think your question is all that gross. It's always good to know what's in your body, right? Put simply, boogers are just dried or congealed snot. So, what's snot? Snot is more politely and scientifically known as mucus. Producing mucus is one of the ways your body stays healthy. Your body produces a liter of mucus every day in your nose, your sinuses and your digestive tract. Mucus is sticky, and it helps to keep all the dirt, dust and pollen out of your lungs. So, the mucus in your nose likes to hang around and stick to the little hairs on the inside of each nostril. That's how it can catch some of that dust and dirt that you're breathing in, so you don't get it deeper into your body. And sometimes, that mucus kind of dries up there, and it forms boogers. Mostly, it's okay to just leave the boogers alone, you know? But if you need to get rid of them, use a tissue.

[Jane] Here's a question from Bennett:

[Bennett] I’m four years old and I live in San Carlos, San Carlos, California. And my question is: How do fish see underwater without goggles?

[Jane] Our answer comes from Jo Blasi of the New England Aquarium in Boston.

[Jo] So, animals have eyes that are built in a way that is best for their environment. So, your eyes are designed to see in air. And that's the way that they work best. So, [when] you swim underwater with no goggles, your eyes can't see really well. So, what happens when you put on goggles, there's a little teeny, tiny bit of air that's trapped in the goggles with your eyes so you can still see underwater. Now, fish don't need goggles because their eyes are

designed to work under water. They still have the same parts that you do: There's a cornea and an iris and a pupil. The way that the light gets in and bounces around and then transmits a signal to their brain so they can see things. And some fish can actually see really well—considering they're fish. But their eyes are designed to work much better in a water environment, rather than an air environment.

[Jane] One of the reasons that humans blink is to keep our eyes wet. So, do fish need to blink at all?

[Jo] They don't—because fish don't have eyelids. So—no blinking necessary.

[Jane] Whoa. Fish don't have eyelids! Cool. Now, on to skunks.

[Chiansian] Hi, my name is Chiansian. [I'm] seven years old. I live in Milburn, California. My question is: Do skunks like the smell of themselves?

[[Jane] That's a good question. And we found just the right person to answer it. Mary Holland is a naturalist, and she was actually the very first guest on *But Why* more than three years ago.

[Mary] Do skunks like the smell of themselves? As often as I've encountered skunks—and even been sprayed by one—it has never occurred to me to wonder how the smell affects the skunk. I've always been more concerned with how it affects me. According to Dr. Jerry Dragoo, an expert on skunks and head of the Dragoo Institute for the Betterment of Skunks and Skunk Reputations, skunks do not enjoy the smell of their own spray— or the spray of other skunks. Skunks rarely spray each other or other animals. They only have a certain amount of spray inside them. And once it is all used up, they must go several days without it while their body manufactures more. During this time, they are defenseless—so they only spray another animal if they are seriously threatened.

[Jane] So, if you don't want to get sprayed. Mary says it's best not to scare a skunk. They don't want to spray you.

[Mary] Prior to spraying, a skunk will give ample warning to its enemy by stamping its front feet. If this is ignored, then the skunk will spray as a last defense. When skunks spray, they rarely get any on themselves. Though

they can tolerate their own smell, they do not appreciate getting it in the face and eyes from another skunk. A skunk's sense of smell is even stronger than a human's. So, if anything, the skunk suffers more than anyone who has had the misfortune of being sprayed. If a skunk does encounter the spray of another skunk, it will rub its face in the dirt, sneeze, or try to groom itself to get rid of the spray's odor.

[Jane] Coming up, more answers to your fun questions. Do pigs poop? Are elephants afraid of mice? Are llamas ticklish?

This is *But Why: A Podcast for Curious Kids*. I'm Jane Lindholm. This week, we thought it might be nice to just relax and be a little silly and get answers to some questions that are just plain fun. Here's a question we just got that we didn't know the answer to.

[Addie] My name's Addie. Hi. I'm four years old. I live in Phoenix, Arizona and my question is: Are llamas ticklish?

[Jane] Shannon Joy is gonna help us out with an answer. She and her mom, Lori Gregory, run Mountain Peaks Therapy Llamas & Alpacas. They go all over the Vancouver, Washington and Portland, Oregon area with their animals for therapy and education. Here's what Shannon figured out about Addie's question.

[Shannon] Hi, Addie. Thank you so much for such a fun question. It's so funny because llamas don't laugh. I never consider whether or not they're ticklish. So, as soon as we got your request, my mom actually went outside and began tickling one of my llamas. No, he didn't really do much, it seems as though they aren't ticklish in the sense that they laugh. But, I have noticed that when flies touch their nose or land on their tails, they tend to swoosh the fly away—showing that perhaps they're ticklish on their faces and their tails. That's a pretty fun concept.

The other questions we often get about llamas are whether or not they spit. This is very common that people often think that llamas are mean and spitty animals. But, in fact, they are similar to dogs. How dogs bite when they are afraid or when they're upset is the same reason why llamas might spit because they are uncertain about you. So, just as you should ask an owner of a dog whether it's okay for you to pet them, you should always ask an owner

of a llama if you can pet their llama—because some llamas love to be touched and are very social and very friendly. But some llamas prefer their personal boundary space—and these are the ones that tend to spit on us. Thank you so much for such a fun question about llamas.

[Jane] Thanks, Shannon. Up next, a question about jellyfish.

[Karen] My name is Karen. I'm six and a half, and I live in Brooklyn, New York. And I'm gonna start first grade . . . And my question is: Why are jelly fishes made of jelly - or *are* they made out of jelly? And why do they have stingers? I wanna touch it!

[Jane] I love all the places your mind went in that one question. Jellyfish are not made of jelly. Well, at least not the kind you might eat on toast or in a sandwich. Jellyfish are actually ninety-five percent water. That's what allows them to float around in the water currents. The National Ocean Service says jellyfish are made out of three layers: an outer layer called the epidermis—which is the same name as our outer layer, our skin, by the way. The middle layer is where most of the stuff that looks like jelly is. It's called the mesoglea, and it's actually a thick elastic jelly-like tissue—not really jelly. The inside layer is called the gastrodermis. And that's where digestion happens. They have stingers so they can catch and paralyze their prey—the things they eat. So, while you might want to touch them and they might look nice and soft and squishy and slimy, it's really not a good idea. Those stings can actually be quite painful—or even dangerous. I was actually stung by jellyfish—lots of them—when I was snorkeling in the Galapagos Islands off the coast of Ecuador once. And I can attest those stings *really* hurt! And now a question about much bigger land animals and their very small frenemies.

[Lucas] Hi, my name is Lucas. I'm six years old from Kennesaw, Georgia. And my question is: Why are elephants afraid of mice?

[Karina] Hi. My name is Karina. I'm five years old. I live in Westwood, California, and I want to know why [is] elephants scared of mice.

[Jane] Are elephants afraid of mice? Our answer comes from Peter Wrege; he works with the Elephant Listening Project. That's a group based at the Cornell Lab of Ornithology in New York State.

[Peter] Elephants. . . afraid of mice? Only in the cartoons. Elephants aren't afraid of very much except humans.

[Jane] And with good reason. Humans are one of the biggest threats to elephants and their habitat.

[Yawn] Now it's time to tackle this question from Amalie.

[Amalie] I'm nine years old, and I'm from Riverdale, New York. And my question is, is: Why, when we're tired, do we yawn?

[Maya] My name is Maya. I am 12 years old. I'm from California. Why is yawning contagious?

[Jane] And here's Olive, who's six years old and lives in Seattle, Washington. And she joins Maya in wondering:

[Olive] Are yawns really contagious?

[Jane] Our answer comes from pediatrician, Dr. Lori Racha.

[Lori] Even talking about yawning, up to 50 percent of people will yawn. Just hearing that someone's talking about yawning—so, it's really, really interesting. So, this question is actually one of the harder questions that I was asked ‘cause there's much that's not understood about yawning, and there's several different ideas of why people yawn. And so, I'm gonna share those with you, but I hope you're not disappointed if I can't give you: This is why for sure.

So, one thought is that there's some belief that even the very earliest humans—so, even before there was like a real communication system of language—that early humans would yawn and that maybe was a way for them to signal to each other that maybe their level of alertness, that they weren't going to be able to watch out for that big predator animals or something like that, or to signal that maybe it was then time for everyone to go to sleep. Maybe it was a way in early humans of coordinating some of their sleep activity.

[Lori] One theory also says that it may just be simply mimicking behavior. And so, I don't know if any of you have noticed that if you are. . .you see someone and they are smiling, that you are likely to smile back. Right? And so, that's just a simple mimicking behavior. I don't think we're telling ourselves—Oh, I really. . .This is one of those times I *must* smile. But just seeing the human face with a smile often causes us to smile back. And that's a very good reason for all of us to smile as much as we can, because I think it's important for all of us to do our part to try to keep people feeling positive and happy. Another factor is that your age plays a role. So, even though babies—as soon as they're born, they can yawn—they don't have contagious yawns. So, it doesn't seem that humans become contagious yawners until we're about age four.

The other interesting thing to know is that humans and other social mammals—so animals that kind of, you know, work together or have some kind of communication with each other—are the only living things that we know of that have contagious yawns. So, it does seem to be something important to our social structure, or how we are with other people, but I can't tell you exactly why that happens.

The last thought that I wanted to share with you was that some researchers feel that yawning may have a role in helping to keep the brain's temperature down. So, that sounds kind of funny how that could happen. But if you think about it, our bodies are about 98. . .98½ degrees Fahrenheit and our outside world is usually cooler than that. So, when we yawn, we bring in a lot of cool air into our mouth. Above our mouth is the palate, but above that is the sinuses and actually, then, the base of the brain. So, when you're bringing in cold air, you may be having a little bit of a cooling effect on the brain. Now, when I have a fever, I don't feel like I yawn more, but I don't know if I've really thought about that. But that's another interesting. . .interesting thought about what yawning could do.

[Jane] I find it amazing that just thinking about someone else yawning can make you yawn. Sometimes my dog yawns, and I've noticed that I yawn right back. I put on my muck boots and headed out to the barnyard to answer one last question in today's episode.

[Lila] I am Lila. I am four. And for me, my question is. . .[Lila, say your question!] How do pigs poop?

[Jane] [Ohh!] Sometimes you guys ask questions that surprise even your parents. But it's a good question, Lila. Pigs poop the same way we do—and for the same reasons. Pigs eat a lot of different things, and as their bodies process all the good stuff—the vitamins and nutrients they need to function—there's also, some stuff that's not absorbed by the body. It's basically garbage, and your body needs to take out the trash. So, after you or your favorite porcine—that means pig—friend, chew your food, it goes down into your stomach where some acid helps break it up into even smaller pieces. And then the food travels through the intestines—the intestines are like a long, skinny tube that twists and turns inside your body. As the food goes through your intestines, those good nutrients are getting sucked out, and by the time the food gets pushed through the end of the intestines, what's left is poop. So just like you, the pig gets the sensation that it needs to go to the bathroom and out comes the poop. One big difference, though. Pigs don't bother finding a toilet. They just go wherever they please.

That's it for this episode. We really wish, by the way, that we had the time and resources to answer all of your questions. Do you have any idea how many you've sent us? What's your guess? You all have sent us more than 6,000 questions since this podcast started! Oh, and you know what Melody and I just realized? It's our birthday! This show launched four years ago this week. So, happy birthday to us!

If you're new to our show and you haven't been with us for all the episodes we've made, there's a lot to choose from if you want to start listening back. And, as always, if you have a question, have an adult record it on a smartphone or some other recording device. If speaking is difficult for you, we are always happy to get an email. Send your audio file or your emailed question to: Questions@ ButWhyKids.org. Don't forget to tell us who you are. Just your first name, please, where you live and how old you are. And we will stay on the hunt for answers. *But Why* is produced by Melody Bodette and me, Jane Lindholm, for Vermont Public Radio; our theme music is by Luke Reynolds. We'll be back in two weeks with an all new episode. Until then, stay curious.