

## But Why: A Podcast for Curious Kids

### Are Jellyfish Made of Jelly?

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[00:00:20] This is “But Why: A Podcast for Curious Kids” from Vermont Public Radio, I'm Jane Lindholm.

[00:00:28] On this podcast Melody Bodette and I help answer questions from curious kids all over the world just like you. You have sent us hundreds of questions about animals.

[00:00:37] Sometimes there are enough questions to do a whole episode about just one animal like our episode about cats or our one about dogs, or to spend a lot of time on how chickens lay eggs or why flamingos stand on one leg. We've done episodes about all of those things, but sometimes you send us a question that doesn't really fit into another episode. And so today we're going to answer a few animal questions that haven't made it into other shows. And Melody is here to help answer the questions today. Hi, Melody.

[00:01:06] Hi, Jane. Let's get started with this question.

[00:01:11] Hi, my name is Tracy. I'm six years old and I'm from Orono, Maine and this is my question: Why are jellyfish so jiggy?

[00:01:18] My name is Karin I'm six and a half and I live in Brooklyn. My question is why are jellyfishes made of jelly or are they made out of jelly? Why do they have stingers! and I want to touch one!

[00:01:35] [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 95 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.

[00:02:44] [Child] Hi, my name is Omani and I'm eight years old and I am from Fairbanks, Alaska. And my question is: how do jellyfish survive with no heart, lungs or even a brain?

[00:02:58] [Child] Hi, I'm Annabel. I'm eight years old. I am from Lewis Creek, North Carolina. Do jellyfish have brains or heads?

[00:03:07] [Jo Blasi] Jellyfish do not have a brain, no brains. And they don't have a heart. And they don't have lungs. They do have a stomach. They like to eat. Jelly is like to eat a lot.

[00:03:17] [Jane] That's Jo Blasi. She works at the New England Aquarium in Boston. And she's answered a lot of great questions for us over the years. She knows more about jellyfish than I do.

[00:03:27] [Jo] They just move on instinct. They don't really have to think about where they're going or where they need to find food. Their food, a lot of time, sort of runs into them, or they carry little plankton that can make food for them. But they don't have a brain. They don't have to do a lot of thinking.

[Jane] So, if you get stung by a jellyfish, it's not targeting you. You just happen to be in the wrong place at the wrong time.

[Jo] Yep. You just got bumped into by a jelly. And some jelly is actually don't have stinging cells at all. But if you get stung by a jelly, it's not because he was trying to be mean, it's just because those tentacles just happened to get in the way.

[Jane] If you get stung by a jellyfish, is it really true that you should pee on it?

[Jo] Don't pee on it. No. Depending on the type of jelly, if you pee on it, it can make the sting worse. And you've also just been peed on, which nobody wants that. So, the best thing to do if you get stung by a jelly is just to rinse it off with saltwater. So that way you don't set off the additional stings. And then to go see go see a doctor because sometimes people can be allergic to jelly stings.

[00:04:30] [Child] Hey, "But Why?" My name is Adrian. I'm five years old. I live from Colorado. And my question is: do fish stink in the water or on land?

[00:04:48] [Jane] On land. When a fish is dead, bacteria and enzymes in the fish start to break down a naturally occurring chemical in the fish. And that's what causes that fishy smell. Now, some might argue that it doesn't really smell bad or stink. It just smells fishy. But I'll leave that to you. That's a matter of opinion. As for whether fish stink in the water, it's pretty much impossible for humans to smell underwater because you have to inhale air in order to smell. So even if fish stink in the water, we wouldn't be able to smell them. And live fish don't really have that fishy smell to begin with. So, we can't really smell underwater and live fish in the water don't smell fishy. So, if we think fish stink, they stink on land. By the way, fish can smell. I mean, like smell things. They have a sense of smell and they use that sense to find their prey. Here's another fish question.

[00:05:42] [child] Hi, my name is Kai and I live in Maryland. Now I'm five years old. I want to know where fishes sleep.

[Melody] So, Kai is asking, where do fish sleep.

[00:05:57] [Jane] In the water! Some fish have to keep swimming while they sleep to keep the water moving over their gills. Some will find a safe hiding place to sleep in. But the bottom line is fish need to live in the water to breathe. So that's where they sleep.

Now, here's a question about chickens.

[00:06:14] [Child] My name is Sonia, I live in Oakland, California. I'm six years old. And my question is; do chickens have tongues?

[00:06:24] [Melody] So, hi, Sonya, this Melody and I'm going to answer your question today, because I happen to have somebody living in my backyard to make it easy and that would be seven chickens.

[00:06:34] All right. Let's open the door and see who we can find. Well, I found a couple eggs. And the thing to know about chickens is that they don't see very well in the dark. And, so, I waited until it's just about dark to make them easier to catch. So, we can check out and see their tongue. All right. So, sitting on my lap now, I have my friend Grayland, who is a Lavender Orpington so she's kind of a purply color. She's really pretty. All right, let's see. We're going to open Grayland's mouth and we're going to see what we have going on in here. (*chicken sounds*)

[00:07:08] Chickens have beaks, and their beaks are a little bit pointy. And there it is, tah-dah! A tiny little tongue, a little pointy tongue. It's actually very different looking than our tongues.

[00:07:21] What chickens do with their tongues is maybe a little bit different than what we do with ours. They don't really use them for talking the way that we do. They do make some noises, but that's mostly with their throat. Some animals, when they drink water, they use their tongue. Chickens will tilt their beak into the water and then roll their head back to let the water go down their throat. So, it's a little bit unclear what they're using their tongues for.

[00:07:43] I'm watching some of them eating grass right now and they don't really seem to be using their tongue for that either. So, what the chickens do with their tongue is a little bit of mystery, but they do have one.

[00:07:57] And so, the sun is about to set. And as soon as that happens, the chickens go right inside their coop because they don't see very well at night. And, so, they have to get up on something called the roost. They like to sleep on high place where they feel like they're safe from predators and they don't move at night. They stay in one spot because, as I said, they can't see.

OK, here's a question from Zoe, who's 4 and lives in Little Rock, Arkansas.

[00:08:21] [Child] Can spiders sleep or not?

[00:08:25] [Jane] Yes, most animals cycle through periods of activity and inactivity throughout the day. And spiders do this, too. They have active periods, followed by inactive periods where their metabolic rate drops. Whether they're more active at day or night depends on what they hunt for.

Coming up, snakes, Springboks and zebras. We'll have more short answers to your animal questions.

[Sponsor blurb]

[00:09:10] This is "But Why: a podcast for Curious Kids". I'm Jane Lindholm. In this episode, Melody and I are answering a few short questions about animals. Our next two questions are related.

[00:09:22] [Child] My name is Paula. I am nine years old. I live in Dublin. My question is; how many types of animals are there in the world?

[00:09:37] [Child] Hi, my name is Lila. I'm from Rutland, Virginia. I'm five years old. I want to know if there's more persons or animals in the world?

[00:09:46] [Jane] There are around 1.2 million species of animals in the world. That's the number of types of different animals. So, there are many more actual individual animals than that. Let me give you an example. There are five species or different types of penguins that live in Antarctica, but there are twelve million actual individual penguins running around there. Now, what about animals versus humans when it comes to numbers? There's only one species of human on the planet and there are 7.7 billion individual humans. That's a lot. But there are 18 billion domestic chickens in the world. So, there are definitely more animals than people. Also, technically, we should say humans are animals. Now, remember, we're just talking about Antarctica and the penguins? Here's an Antarctica question from Ann Louise.

[00:10:42] [child] Hi. My name is Ann Louise. I ran in South Carolina and I'm five and my question is: do snakes live in Antarctica?

[00:10:51] [Jane] No, there are no snakes in Antarctica. Snakes can't live in places where the ground is frozen all year round. So, there are no snakes in Antarctica and there aren't any snakes at the North Pole either.

[00:11:04] [Melody] OK, here's a question from Ryan.

[child] Hi, my name is Ryan from Arlington, Virginia. I'm 6 years old. And my question is: is a springbok faster than a grizzly bear?

[00:11:15] [Melody] is a Springbok, faster than a grizzly bear?

[Jane] A Springbok is a type of antelope that lives in Africa. Springboks are pretty fast. They can run up to 55 miles an hour. That's as fast as your car might go on the highway. Grizzly bears are a type of brown bear found in the United States and Canada. They're big animals, but they can also run surprisingly fast, 35 miles an hour. Maybe what Ryan wants to know is if you put a Springbok and a grizzly bear on a running track, who would win? Or maybe he's actually thinking about a predator/prey situation. Could a Springbok outrun a grizzly bear if the grizzly bear was chasing it and wanted to eat it? And the answer is the Springbok would likely win. But because they live on different continents, they're pretty unlikely to ever encounter one another in the wild.

[00:12:21] [Child] My name is Duncan Oliver. I live in Virginia. I'm eight years old and my question is: are zebras white with black stripes, or black with white stripes?

[00:12:30] [Jane] The zebra's coat is actually black and white fur. But according to National Geographic, their skin is black underneath their coat. You know, it's not actually known why zebras have black and white stripes, but it does turn out that zebras in warmer climates have more stripes than those that live in cooler climates. So perhaps the stripes help zebras cool down. Another theory is that the stripes on a zebra kind of confuse insects that might want to bite the animals and suck their blood. In fact, in a study that just came out, researchers put zebra like stripes on cows. They just painted them on the cows

and studied if those cows got fewer insect bites. And they did! Cows with the painted-on zebra stripes had about half the insect bites as their regularly cow-colored buddies.

Here's a question about another black and white animal.

[Child] Do skunks have big tails or small tails?

[00:13:27] [Melody] That question was from Victor, who's 4 and lives in Austin, Texas. I think what Victor is asking is whether that tail is a big bone or a small bone. So, if you look at a skunk skeleton, it's actually a long, skinny bone inside some fluffy fur. If you've ever felt the tail bone of a big fluffy cat, it's kind of like that. Skunks and cats are somewhat closely related and big fluffy cats are safer to feel their tail than a skunk. Not only will a skunk probably spray you if you grab their tail, it's really never a good idea to touch a wild animal. Keep that in mind, Jane.

[00:14:02] [Jane] Melody knows me all too well. I really struggle with that. Let me run this by you. So, in some ways, I know that touching wild animals is not a great idea. They're wild and they deserve to stay wild and not have people touching them. And also, sometimes, I mean, you never know, a wild animal is not a pet, could not be safe. But I also know that sometimes getting up close and personal with an animal, even a wild animal, if you can ensure that it's safe, is a great way to learn more about that animal, and then to care more about preserving its habitat and making sure it can survive. And it's a great way for kids to get to know more about different animals and start to learn. So, I'm torn. I don't quite know what the right thing to do is, although I agree with Melody that by and large, for the most part, you should avoid touching wild animals. How do you think about this ethical conundrum? Let us know. But in the meantime, that's it for this episode.

[00:14:58] As always, if you have a question about anything, truly anything, you can have an adult record it for us. It's easy to do on a smartphone or a tablet using a voice recording app. Then you have the adult email the file to us at [Questions@ButWhyKids.org](mailto:Questions@ButWhyKids.org). We definitely can't answer every question we get, but we love to hear your voices and know what's on your mind. "But Why" is produced by Melody Bodette and me, Jane Lindholm, at Vermont Public Radio.

[00:15:27] Our theme music is by Luke Reynolds. We'll be back in two weeks with a whole new episode. Until then, stay curious.