mystery science

Grades K-5
Mini-Lesson: “Why do cats purr?”

VIDEO TRANSCRIPT

VIDEO 1

Hi, it's Doug! My niece, Madeline, recently got her first cat. His name is Harry Winston. It turns out he's a talented piano player—and he looks great in a sweater.

Someone named Jaelynn has a question about cats. Let's give her a call now.

[Video Call]
- Hi, Doug!
- Hi, Jaelynn!
- I have a question for you. Why do cats purr?
- Ooh, that's an interesting question.

If you have a cat at home, then you're probably so used to what purring is, but growing up, my family only ever had dogs, and I remember really clearly the first time I got to be around a cat. I was staying over at a friend’s house and I remember because the cat came right up to my head and all of a sudden, I heard this loud rumbling noise. I was like, what is that? Wait, that's your cat? Whoa, what's wrong with your cat? Your cat's vibrating.

It's not just any sound. I mean, I knew that cats made sounds like "mew" and "meow" and all that, but with a purr, the whole cat vibrates. It's like a motor going off inside the cat's throat. Why do cats do this? What do you think?

VIDEO 2

Well, one of the things that makes this such an interesting question is that we can't just ask a cat, "Hey, cat, why do you purr?" We don't really know what's going on inside a cat's head, but what we can do is we can watch it. We can observe when a cat purrs and look for any pattern. Maybe that will at least give us some ideas of why cats might purr.

And one of the things that any cat owner can tell you is that most of the time when a cat purrs it's when it's doing things that seem like it's happy. Cats purr when they're getting their chin rubbed, which they love. They purr when they're cuddled up on your lap. They purr when they're kittens snuggling with their mother. So, it seems that purring must have something to do with being happy.

But that said, some people have observed that cats will purr in other situations, too. Situations that aren't very happy at all, like when a cat is hurt or sick or seems nervous about something. Wait, so maybe purring isn't all about being happy.

So, why do cats purr? Well, here's another clue. It's something else you can observe about cats and it's one of my favorite things that cats do. Sometimes, when a cat is purring and looking happy, you'll also see it doing this. It's called kneading or, as some cat owners call it, making biscuits because it's the same motion someone does when they're kneading dough to make bread. When cats do it, I like to imagine them with a little chef's hat on.

Although making biscuits might seem really silly, it turns out to have a pretty clear reason why cats do it. Making biscuits is a movement that cats start doing when they're just tiny kittens. Kittens do it when they're nursing milk from their mother. Scientists have figured out that this causes the mother to produce more milk for her kittens.

So, why would grown-up cats still make biscuits? They don't drink milk from their mothers anymore. One idea is that making biscuits is a type of soothing behavior, something that makes the cats feel calm and safe. Something that maybe reminds them of the warm, fuzzy feeling of cuddling next to their mother back when they were tiny kittens.

Purring itself might be one of these soothing behaviors. If so, that could explain why cats purr, not only when they’re happy, but also when they’re sick, hurt, or nervous. It might be that the cat is purring in order to help itself feel happy again.

That's all for this week's question. Thanks, Jaelynn, for asking it!