mystery science

Grades K-5
Mini-Lesson: “Why do zebras have stripes?”

VIDEO TRANSCRIPT

Hi, it's Doug! Did you recognize me? I've seen these masks you can get that are of a horse's head, and so I looked it up, and I found out you can get this kind too—a zebra. Zebras are fascinating to me—I mean… they look like a made-up animal. They look like they're from a story. Those stripes—they don't even look real.

Two people, Brenden and Tiago, have a question about zebras. Let's give them a call now.

[Video Call]
- Hi, Doug!
- Hey, guys!
- We have a question for you. Why do zebras have stripes?
- That's a great question.

You might have noticed before that many animals have colors that help them to blend in with the place where they live, so that they can stay hidden from the animals that want to eat them. Like this moth here—now it's a little hard to see—there, now you can see it better. It's the same color as the tree, which makes it hard to be found by the birds that want to eat it.

Or this toad. It looks just like the moss that it lives on, which helps it to stay hidden from its predators. You might know that this is called *camouflage*.

So what about zebras?

Famously, zebras have these black and white stripes. Could that be a form of camouflage? I mean, that seems odd, but let's think about it.

Zebras are from Africa. In the parts of Africa where they live, this is what it looks like. There's lots of grass, a few trees—it's mostly light brown colored. Nothing around here is black-and-white striped, so it would seem that zebra stripes do not help zebras blend in with their surroundings. If anything, it seems like their stripes make them stand out *even* more. Now, that's kind of crazy, isn't it? Wouldn't that make it easier for predators, like lions, to find zebras?

Well, here's an interesting clue that scientists have observed. If you ask yourself: "Why does a zebra have stripes?" it's hard to figure out the answer. It seems like they stand out easily to a lion. But zebras don't live alone. They live in big groups—they live in herds. So instead of asking: “Why does a zebra have stripes?” What we could try asking is: “Why does a herd of zebras have stripes?”

Take a look at this image, and imagine you were a lion. What do you think? Do you think zebras' stripes help protect them from lions? How?

Now would be a good time to pause the video and discuss.

Okay. You ready?

You might have noticed that when zebras are all running in a herd, their stripes make it really hard to pick out one zebra from all the others. You see, a lion has to single out one zebra to

hunt. It can't take down a whole herd. But if you're a lion, you'd have a hard time picking out one zebra. The herd all looks like one big mass of stripes. And even if you could pick out one zebra, when all the zebras are moving in different directions, lions often get confused by all these stripes moving. They can't tell the zebras' heads from their tails, or which direction any one zebra is going to run.

So in summary, camouflage isn't always about blending in with your surroundings. Zebra stripes show us that camouflage can also be about blending in with the herd, and so confusing a predator that way.

By the way, scientists think there might be other reasons why zebras have stripes. For example, they've noticed that every zebra has slightly different stripes. No two zebras are exactly alike with their stripes. So, some scientists wonder if that's one way that zebras recognize each other. If so, that might help baby zebras recognize the stripes of their mother and father.

So when we ask: "Why do zebras have stripes?" there could be more than one reason. It's not just about helping them avoid lions.

That's all for this week's question. Thanks, Brenden and Tiago, for asking it!