mystery science

Grades K-5
Mini-Lesson: “How do magicians trick people?”

VIDEO TRANSCRIPT

[Video Call]

- Hi, Doug!
- Hi, Devyn!
- I have a question for you. How do magicians trick people?
- That's a great question.

The best kind of magic tricks are the ones that make you go, "What? How did this person change a penny to a quarter, and then back to a penny again?" Watch that again. Or here's one of my favorites—this person seems to float or levitate off the floor. How are they doing that? Now, lots of magic tricks like this are things anyone can do. But how do magic tricks work? Well, it probably won't surprise you that in every great magic trick, you are actually being tricked. In other words, what you think is happening, isn't really happening. So then how exactly does a great magic trick, trick us? What's the secret? One of the most common ways magicians trick us is by using, what we call, the art of distraction. In other words, saying something or showing you something that takes your attention away from what they're really doing. Take this simple example—a ketchup packet in a water bottle. It seems like this person can make the ketchup in the bottle go up or down in the bottle using some kind of invisible force from this hand. But now watch this clip again. This time, keeping in mind that it's a trick and the person performing the trick is distracting you. How are they distracting you? What are they doing? See if you can figure

it out. And if you've already figured this one out, have a look at the levitating trick again and see if you can figure it out.

The ketchup in a bottle trick is actually a great example of distraction. This person is drawing your attention to this hand making you think it's this hand that's somehow magically moving the ketchup packet up and down. But meanwhile, that means you're not as likely to notice what's going on with this hand. Watch again. You see that right there? You can notice the person is squeezing this hand ever so slightly on the bottle, pushing water up or down in the bottle as they squeeze, which is really what's causing the ketchup packet to go up and down. A similar thing is going on with the levitation trick, only instead of distracting you with their hands, this person is distracting you with their feet. They really are lifting their right foot entirely off the ground, but notice how you can't actually see what they're doing over there on their left foot. They've turned their body so that you can't see what's going on with their left foot. If you could, you'd find out that their left foot never fully leaves the ground. Instead, they only lift up their left heel. From your perspective, from where you're looking, this tricks you and makes you think that both feet are somehow magically off the ground. Since so many magic tricks involve distraction, the secret to figuring out how almost any trick works is to observe carefully. Try to notice everything you can. Don't get distracted. It's actually a lot like what a scientist does when they're trying to figure out a tough challenge.

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