mystery science

Grades K-5
Mini-Lesson: “What's the biggest apple in the world?”

VIDEO TRANSCRIPT

Hi, it's Doug! What I'm holding here is an apple, but it's not just any apple. It's my favorite kind of apple. It's a kind called a Pink Lady. And I get excited when I see these at the grocery store because they don't always sell these. A Pink Lady is somewhere between being sweet and sour; it's what people call tart.

Someone named Audriana has a question about another kind of apple. Let's give her a call now.

[Video Call]
- Hi, Doug!
- Hi, Audriana!
- I have a question for you. What's the largest apple in the world?
- That is a great question.

When you hear the word apple, you probably think of this. But you might know that there's different kinds, or varieties, of apples—like, there's also this. Have you had one of these before? It tastes really sour. It's a kind of apple called a Granny Smith. Now, at the grocery store, I'm guessing you've seen a few others. Maybe you even have a favorite. I know whenever I ask people, it seems like Red Delicious and Fuji seem to be a lot of people's favorites, at least in the U.S., where I live. Fuji is a kind of apple that tastes really sweet, but what if I told you that there are even more varieties of apples than what's sold at the grocery store? There are so many

different varieties of apples! There are apples that have different tastes, not just sour-tasting and sweet-tasting apples. They say this variety tastes a bit like a banana. There are apples that come in different shapes; these ones look almost more like a donut. There are apples that come in different colors, like this one with dark purple skin, or this one that's yellow, or even this one that's red on the inside. (What?) The main reason you can't find most of these apples at the grocery store is because there are just too many different kinds for the grocery store to keep in stock. How many different kinds of apples are there? Are you ready for this? The total number of different kinds of apples…there are more than 4,000 varieties of apples. But where do all these different kinds of apples come from? How did we even get different kinds of apples in the first place? What do you think? Now would be a good time to pause the video and discuss. Okay, you ready?

One idea you might have had—maybe you thought, "Well, different places in the world have different kinds of plants and animals. So maybe there are just different kinds of apples that grow in the different places on Earth." That would be a really great guess, but it turns out that nearly all of the different kinds of apples we eat today come from just one kind of apple tree, one that originally grew a long time ago only in Central Asia. So how do we have over 4,000 varieties of apples all from just one kind of tree? The answer is all thanks to people like these: apple breeders, people who plant and grow apple trees. You probably know that an apple tree grows from one of the seeds you find inside an apple. You can think of that seed as being a baby apple tree, and the tree that the apple came from was one of the baby's parents. Apple breeders know an important secret about apples and really all plants. They know that just like with people and with animals, baby plants get some of the same traits as their parents. When an apple seed gets planted, it's going to have some of the same traits as its parents—similar-looking flowers,

probably similar-looking leaves. But also, like with people and animals, just because a baby gets some of the same traits from its parents doesn't mean it's exactly the same as its parents. We all have differences, each one of us, that make each of us who we are. The same thing is true with apples. If you plant the seed from a big, sweet red apple, the baby apple tree that grows won't be exactly like its parents. It might still be red, but maybe a little more sour. Or it might still be sweet, but maybe a little smaller or more green. Using this knowledge, apple breeders have created so many different varieties of apples. It's a special process known as selection. Apple breeders have been doing this for so many years now that they've managed to create a huge range of apple colors, tastes, and sizes, including this—currently the biggest apple in the world. It's a variety called Hakuto, and according to *The Guinness Book of World Records*, the largest Hakuto ever grown was this one, grown in the country of Japan. It weighed over four pounds. That's the same weight as a small watermelon.

So in summary, using their knowledge of how apples pass on their traits, apple breeders have managed to create over 4,000 different varieties of apples, the largest of all being the Hakuto.

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