mystery science

Grades K-5
Mini-Lesson: “How did people clean their teeth before toothpaste was invented?”

VIDEO TRANSCRIPT

VIDEO 1

Hi, it's Doug! Have you ever wondered how astronauts brush their teeth in space? Well, it's pretty much the same as brushing your teeth down here on Earth. You grab a toothbrush, you add some toothpaste, and you start brushing. There's one big difference, though. Astronauts can't spit the toothpaste out. Otherwise, it'll float all over the spaceship. So you know what they do?

- They just swallow the toothpaste.

But don't try swallowing your toothpaste at home. It's really not that good for you. Someone named Julius has a question about keeping your teeth clean. Let's give Julius a call now.

[Video Call]

- Hi, Doug!

- Hi, Julius!

- I have a question for you. How did people clean their teeth before toothpaste was invented??

- Ooh, that's a great question.

Your parents have probably taught you to brush your teeth with toothpaste. Your teachers and dentists have told you to brush your teeth with toothpaste. Maybe even your dog has told you to use toothpaste. And that's a good thing. The flavor in toothpaste makes your teeth feel all fresh and clean, and toothpaste really does do a good job cleaning your teeth. Do you know how? You can't really see or feel it, but in toothpaste, there are small, rough pieces, almost like tiny grains of sand. The tiny rough pieces in toothpaste help scrape off food and germs from our teeth when we brush, kind of like the way sandpaper scrapes paint off of wood. Now, of course, the rough pieces can't be too rough. Otherwise, they'll scrape off more than just the food. They'll scrape off parts of your teeth, too. That wouldn't be good. So the rough parts of toothpaste are just rough enough to clean our teeth without damaging them, and that's why toothpaste is one of the best ways to keep our teeth clean. But toothpaste like we have today hasn't always been around. Have you ever wondered, what did people do before toothpaste was invented? Before I go on, I'm curious. How do you think people cleaned their teeth before there was toothpaste? Now would be a good time to pause the video and discuss.

VIDEO 2

Well, if you were like me, you might've thought that before toothpaste, people a long time ago must have had really dirty teeth, full of cavities. Maybe they even lost most of their teeth. But when I started looking for the answer to this question, I was really surprised to find out that thousands of years ago, many people actually had really clean and healthy teeth. For example, thousands of years ago, it seems that many of the people in the African country of Sudan hardly had any cavities at all. Whoa! And they weren't the only ones. This is the ancient Roman city of Pompeii in Europe. When scientists began to study the teeth of people that lived there long ago,

they were surprised. Most of the teeth they looked at were really healthy with hardly any cavities. Some people even had healthier teeth than a lot of people do today. But how was that even possible? I mean, they didn't even have toothbrushes or toothpaste, right? Well, many scientists think that the people of Sudan and Pompeii may have had really healthy teeth because they didn't eat a lot of this. The germs that cause cavities love eating the sugar that gets stuck to your teeth when you eat sugary foods, like candy or even bread. And since many people in ancient times ate a lot of vegetables and/or meat and hardly any foods with a lot of sugar in them, it makes sense that their teeth may have had fewer cavities. Okay, but it still would've been important to clean their teeth like we do, right? I mean, what if you get food stuck in your teeth? It's not like they could just go to the store and buy the same kind of toothbrush that you or I have. It turns out, they figured out other ways, like using these. Thousands of years ago, a lot of people used to clean their teeth with sticks. Seriously. Sometimes, they would even chew on the sticks and the edges would get frayed, just like what happens eventually with a toothbrush after you use it a lot. Okay, but what about toothpaste? Did they have any sort of ancient cream that was like toothpaste? Well, sort of, but it definitely wasn't like the toothpaste we have today. A long time ago, many people used tooth powder to brush their teeth. Remember how toothpaste has tiny rough pieces in it to scrape food and gunk off your teeth? Well, these tooth powders had rough pieces in them too, but the rough pieces were made of things like tiny ground-up rocks or seashells or even ashes from a fire. Anything that was just rough enough to scrape the food off but without causing pain and hopefully, no damage to their teeth. They would rub the powders around in their mouth, just like we do with toothpaste. And it seems it worked. So people in the ancient world really did care about clean teeth. For example, the ancient Egyptians cared a lot about having clean teeth and fresh breath. In fact, we think it was the ancient Egyptians who were the very first to ever use toothpaste. But it wasn't exactly

like the toothpaste we use today. Archeologists—those are people who study ancient times by looking at objects from the past—they found an ancient recipe for this toothpaste and discovered that it was made out of salt, pepper, dried iris flowers, and even mint for flavor. Hey, that's actually an ingredient in a lot of toothpaste we use today. Okay, now I don't want you to think that back in ancient times, everyone had perfect teeth, because some people definitely didn't. Even though many tried their best to keep their teeth clean, it wasn't always easy without toothpaste and toothbrushes like we have today. And we found that some ancient people had a lot of cavities, like the people who lived in a cave known as Grotte des Pigeons or Cave of the Pigeons, over 15,000 years ago. When archeologists studied their teeth, almost all of them had lost a lot of teeth because of really bad cavities. And it may have been because of food like this. These are acorns, and it turns out they would chew on the acorns as snacks. But the sticky insides of the acorn would get stuck to their teeth and eventually cause cavities. Now, archeologists found toothpicks in the cave as well, so the people of Grotte des Pigeons did try to clean their teeth. They just weren't that successful. Still, we've learned that thousands of years ago, many people really did care about their teeth and they found creative ways to clean them. Whether it was rough powders to get the food off or even twigs, they did their best to avoid cavities, just like we do today. That's all for this week's question!