mystery science

Grades K-5
Mini-Lesson: “What is a heat wave?”

VIDEO TRANSCRIPT

VIDEO 1

Hey, it's Esther! Where I live, winters are cold and snowy, and summers are warm and humid. Personally, I prefer the heat. But one summer, we had some really hot days. Things I usually enjoy, like gardening, became a sweaty chore, and the inside of my car felt like an oven. When I checked the weather forecast, it said there was a heat wave going on. Someone named Grazi is curious about what that means. Let's give Grazi a call now.

[Video Call]

- Hi, Esther.

- Hi, Grazi.

- I have a question for you. What is a heat wave?

- That's a great question.

At first, a heat wave might sound nice. Warmer weather can mean all kinds of fun activities. And who doesn't love cooling down with a frozen treat? Imagine a typical warm day where you live, but now imagine waking up the next day, and the weather is even warmer. And the next day, it's even hotter. This heat is not what you're used to. Think about how hotter-than-usual weather might change the things you usually do. Can you think of any problems it could cause?

VIDEO 2

When the weather is suddenly different from what you're used to, parts of your usual routine can become more difficult to do. The unusually hot weather where I live made it harder to garden, but my friend who lives in the US state of Texas is used to handling the heat. For her, unusual weather looks more like this: a snowstorm. It's a small amount of snow compared to what I'm used to, but my friend explained that even a little snow could cause big problems where she lives. People plan ahead for the weather that's typical where they live. My friend plans ahead for hotter weather, and many buildings where she lives have big fans and air conditioning to help cool people down. But because snow is not a typical part of life there, many people don't have the typical tools to handle it, like snow shovels or snowplows. That makes it harder to adapt to an unusual change in the weather. The same thing can happen with a heat wave. A heat wave is when the weather is unusually hot for a particular place and stays that way for several days. Weather that might be typical in one place can be a heat wave someplace else where the weather is usually cold. In the country of England, for example, the weather is typically much cooler than Texas. So instead of air conditioning, houses there were designed to hold heat in. But during a heat wave, that makes it harder for people to cool down. Getting around can get harder too, when roads start to look like this. It's actually melting in the heat. These roads weren't built for unusually hot weather, and it can damage them. A heat wave damaged these plants, too. Notice the dried-out leaves? Hotter-than-usual weather can be harmful to gardens and farms, which means less food gets grown. Even in places where hot weather is common, a city may not be ready for the changes a heat wave can cause. Like, picture this: During a typical hot summer, some people run their air conditioning to cool off. But

during a heat wave, lots of people run their air conditioning for longer. Powering it takes more electricity than usual. And sometimes that can lead to this. Woah, notice how all the lights just went out? This is a blackout. A blackout is when part of a city or town's power system stops working. That means no electricity for lights or air conditioners or refrigerators or other things we use every day. Engineers work quickly to fix blackouts when they happen, but they can be a big problem, especially when people need to cool down. Being overheated is more than uncomfortable. It can be seriously harmful. That's why it's important to cool down and drink extra water during a heat wave, even before you feel thirsty. And make sure pets have extra water too. Heat waves also affect wild animals. You might spot squirrels doing this.
Lying flat in the shade is a way they cool off. And check out this massive moose. It's using a lawn sprinkler to cool down. Unfortunately, heat waves are happening more often and in more places than in the past. But the good news is that many communities are working together to plan ahead for hotter-than-usual weather. For example, your community may have designated cooling centers. These are places like a public library or a school gym where you and your neighbors can take a break from the heat. People are also taking steps to keep temperatures from spiking, like planting more trees that add shade and help cool things down. So, in summary, a heat wave is several days in a row when the weather is unusually hot for a particular place. We plan for the weather that's typical where we live, and it can be hard to adapt to unusual changes. A heat wave's hotter-than-usual temperatures are more than uncomfortable. They can cause serious damage and harm. But like other kinds of severe weather, there are things that we can do to be safer, like drinking plenty of water and working as a community to plan ahead and help each other stay cool. That's all for this week's question. Thanks, Grazi, for asking it.