Lesson: “Have you ever watched a storm?”

VIDEO TRANSCRIPT

EXPLORATION VIDEO 1

Hi, it's Doug! I want to share a story with you about the weather. You see, when I was a kid, I grew up in a place that had summers like this: warm and sunny. When I'd play in the neighborhood, I'd look up into the sky and see just a few clouds here and there. But every once in a while, when I was out there playing, the sun would go away and lots of clouds would start to move above me. And then, I'd hear the sound of thunder and see dark clouds off in the distance. This is when my mom would say, “OK, Doug, time to come inside—there's a storm coming.” And I'd head inside to go play instead. It felt a little scary. But one day, my grandpa came to visit. I remember a storm was coming, so I started to head inside. Yet, my grandpa was out on the front porch. He said, “Doug, stay here. Come sit out here on the porch with me.” “But Grandpa,” I said, “a storm is coming.” “That's why I'm out here,” he said. “Come on, stand beside me. We're going to watch the storm together.” I was a little worried about this. “Is that safe,” I asked. He said, “The storm is still far enough away from us. We can sit here safely on the porch, at least for a little while, to watch it. But it's good your mother had you come in from the yard.” Then Grandpa leaned over and said softly, “This is exciting. It's your first storm you're going to watch. I want you to tell me what you notice.” As I sat there on the porch, I could see flashes of lightning off in the distance. I told him, “Look, it's lightning! And I can hear the thunder.” “What else do you notice,” Grandpa asked. Hmm. I didn't notice anything else at first.

But as I sat there watching more closely, I did notice something. I could see the tree branches moving and the leaves blowing around. I said, “Grandpa, I notice it's starting to get windy.” “I was wondering if you'd notice that,” he said. “That always happens before a storm. Now,” he said, “do you notice anything about how the air feels?” Well, now that he pointed it out, yeah. “It's a little more chilly than it was an hour ago,” I said. “I wish I had a jacket now.” I'd never paid much attention to the weather before. My grandpa smiled and said, “Doug, you're becoming a weather watcher.” “A what?” I asked. “A weather watcher,” he said. “You're becoming someone who pays attention to the weather because you're learning how many interesting things there are to see.” “Like watching lightning from the porch,” I said. “Exactly,” he said. “But even when it's not storming, there's so much more to see than most people realize, like the clouds,” Grandpa said. “If you weren't a weather watcher, you might say clouds are just clouds. But no, when you look carefully, you'll see that not all clouds look the same. Clouds can be very different. There are puffy clouds, and there are flat clouds. There are even clouds shaped like giant mushrooms, and lots of other kinds too.” I'd never noticed that about clouds before. “Well, it's not just clouds either,” Grandpa said. “Just now, as the storm is rolling in, you're seeing how the wind can change and how the air can start to feel hotter or cooler.” Hmm. My grandpa taught me to become a weather watcher. Anyone can be one. You can be one too. So, that's my story about the weather. Now, I have a question for you. I sent a letter to your teacher so that you can read it together.

EXPLORATION VIDEO 2

If you’re going to be a weather watcher, it's not enough to just say, “Oh, it's probably sunny outside,” or, “Oh, I guess it's cold outside.” You've got to go look. The best is when you can actually go outside to look. But even when you can't get outside, you can at least look out a

window. When you do this, here's something really important to notice about the weather: there is more than one part to the weather. I'm going to show you some pictures of different weather, and in each picture, I want you to see how many parts of the weather you can notice. Like, look at this picture. If you looked outside your window and you saw this, and then someone said, “Hey, what's the weather like today?”—what would you say? Well, you'd probably notice this, right? You'd say, “It's sunny.” That's definitely one part to the weather. Looking up and seeing what's in the sky—are there lots of clouds, or is it mostly sunny? But this isn't the only thing to notice about the weather. Look here, did you notice this? This boy is wearing a t-shirt and shorts. That tells you something else about the weather, doesn't it? That it's warm out. The air feels warm. So, those are two things that weather watchers look for. They figure out what's in the sky, like if it's sunny or cloudy, and they figure out the temperature, how warm or cold it is, like if people are wearing short sleeves and shorts. So, here the weather was sunny and the temperature was warm. Let's try another photo, though. Check out this one. What's the weather like here? Well, look, did you say it was cold? You probably noticed the snow there in the background. And what's this person wearing? Coat, pants, gloves. But don't forget, that's just one part of the weather. It's also sunny. You can't forget that. Hey, just because it's sunny out doesn't mean it has to be warm. You can see here, it can be sunny and cold. So, is that all there is to the weather, those two parts—what's in the sky and what the temperature is like? Definitely not. Let's try one more photo. Now, you do this one all on your own. What would you say the weather is like here? Remember, look for the two things we talked about. And can you think of anything else? I'll stop talking now so that you have a chance to answer. OK, you ready? Let's talk about it. What did you say? Right away, you probably noticed that it's a bit cloudy. But the temperature is also cool. How could you tell that? By what this person is wearing: they have on a jacket. And did you notice anything else? It's windy. How could you tell? Well, you might have

noticed that the flag on the flagpole is blowing. There's even another clue—look here: the grass is bending in the wind. So, you see, there are at least three parts to the weather: there's what's going on in the sky, there's the temperature—how hot or cold it is—and how windy it is. Three parts to the weather. Is there anything else? Well, yes, there's one more part. Do you want to guess what I'm going to say? I'll pause for a second if you want to. All right, ready? Look at this photo. It's raining, isn't it? We can't forget about that. That's the fourth part to the weather: if there's any rain falling from the clouds. And you might know that if it gets really cold outside, instead of rain falling from the clouds, you get snow that falls. And if there's no rain and no snow, then we just call that *dry*. So, to be a weather watcher, it means paying attention to all four parts of the weather. Can you remember all four parts? Go ahead and practice now. Describe what weather you see in this picture.

ACTIVITY INTRODUCTION VIDEO

In today's activity, you're going to be a weather watcher. First, you'll *observe* today's weather. That means carefully looking at it. And you'll do that by looking out the window or going outside. Then, you'll draw a picture to show exactly what the weather is like. Drawing pictures of the weather is not just an activity for kids: it's something that real weather-watching scientists do. One of the first weather-watching scientists was named Luke Howard, and he painted pictures of the weather more than 200 years ago. People can look at his paintings today and know what the weather was like on the day that he painted them. To draw a picture like a weather-watching scientist, you have to pay really close attention to what you see outside. Then, you draw what you see. That means paying attention to what the sky looks like and drawing that, and paying attention to what you wear outside to show how warm or cool it is. You also want to draw to show if it's windy and to show if it's dry, or raining, or snowing. Now, here in this drawing, you

can see that it was dry outside. Are you ready to make a weather drawing? I'll walk you through what to do, step by step.

ACTIVITY STEP 1

Get your supplies. If you draw outside, it's helpful to have a clipboard. When you're done with this step, click the arrow on the right.

ACTIVITY STEP 2

Write your name and the date at the top of your paper.

ACTIVITY STEP 3

Now, it's time to be a weather watcher. Go outside or sit by a window and draw a picture to show today's weather. Don't forget—when you draw, look for all four parts of the weather. That means paying attention to what's in the sky, how warm or cool it is, is it windy, and is it raining or snowing.

ACTIVITY STEP 4

When you're all done, put your picture somewhere safe. When the weather changes, you can draw another picture. Then you can look at both pictures to see how the weather changed. Have fun being a weather watcher, and stay curious!