Lesson: “How can the Sun help you if you're lost?”

VIDEO TRANSCRIPT

EXPLORATION VIDEO 1

Hi, it's Doug! Have you ever gotten lost before? It can be scary. Let me tell you a story about when I got lost—well, almost lost. Where I grew up, on the edge of my neighborhood was a forest—or we call them the woods. I loved to play in there and explore. It seemed like the woods went on forever. Now, I said it seemed like the woods went on forever, but they didn't actually go on forever. And I knew that because my friend lived in a house somewhere way on the other side. I decided one morning that I was going to walk, all by myself, to my friend's house. So here was my plan. Here's my house. And here's the woods next to my house. Now, there's no pathway through the woods, and it's so easy to get lost in the woods. All the trees look alike. But my dad told me that my friend's house on the other side was in the same direction that the sun comes up every morning. So I realized that I could use the sun as my pathway. As long as I could see the sun in the forest and just keep walking towards it, eventually, I'd reach my friend's house. Makes sense, right? So the morning of my adventure, I ate my breakfast as fast as I could. I was going to leave early. I was so excited. As I left my house, I looked for where the sun was. I could see it right above the trees. And so I just walked in that direction into the woods. Now, the whole time I was in the woods, I just made sure to keep walking towards the sun. I walked, and I walked, and I walked in that direction towards the sun. Eventually, I got there. I reached my friend's house. It really worked. The sun led me all the way there. I thought, how

cool. Now, my friend and I, we hung out for a long time. We played, we had lunch, we played some more. And when my friend's dad started making dinner, I realized, uh-oh. I better get home while it was still daytime. So I headed back into the woods to go home. I figured as long as I walked in a straight line directly away from my friend's house, I'd get home. But as I got farther into the woods, that's when I realized, uh-oh, I had a problem. It wasn't easy to walk in a straight line. All the trees look the same. And I had to go around fallen trees, and I had to go over a creek. And I had to go up some hills. Now, I was lost. Did I get turned around? Was I still walking towards my house? I wasn't sure which way to go. And this was really bad. If I chose the wrong way, it might mean I walk in the wrong direction, and so get farther from home. Could I use the sun to get home? Remember, I had used the sun to get to my friend's house. Should I keep walking toward the sun to get home? Or walk in the opposite direction from the sun to get home? Or maybe somewhere totally different? If only I knew how the sun's place in the sky changed during the day. Maybe then I'd know which way to go. What do you think? If you were me, what would you do?

EXPLORATION VIDEO 2

To get to my friend's house, I walked in the direction of the sun all morning. I did that because I knew that my friend's house was in the same direction as the sunrise. Then in the afternoon, I went to head home. I walked away from my friend's house, trying to go in a straight line. But once I was deep in the woods, I couldn't stay in a straight line very easily. I think that I got all turned around, but I wasn't sure. I needed something to guide me. So should I walk toward the sun or away from the sun or something else? I really wish I knew more about how the sun changed its place in the sky. After sunrise, does the sun just go straight up and then start coming down again in the same spot where it came up, like this? Or does the sun do something

totally different? How can we figure out what the sun does each day? Well, here's one way. I can take a sped-up video and show you what the sun does all day. Now, this is looking right before the sun comes up, in the very early morning, when it's still dark out. This won't hurt your eyes to watch. Are you ready? Here's what the sun does every day. Comes up in the morning, and now it's moving over to that side of the sky. So I got to turn my head and see, in the afternoon it goes down. Let's see that again. Here's sunrise—comes up, up, up, and then we have to turn our head and over there, it goes down, down, down. There's sunset, and now it's evening. And if we watch it the next day, it does the same thing. Over and over and over every day, the sun does the same thing. Each morning, the sun always comes up over here on one side of the sky, and then it appears to move across the sky and goes down over here on the opposite side of the sky. This side of the sky where the sun comes up, we might call it the sunrise side of the sky. But there's another word for this, a word you might have heard before, and that's east. The sun rises on the east side of the sky. The word east actually comes from an old word that had to do with sunrise. The side of the sky where the sun goes down, you might call that the sunset side of the sky. But there's another word for this too, a word you might have heard before, and that's west. The sun sets on the west side of the sky. West comes from an old word that meant evening, because the sun sets in the evening. Now that you know what the sun does each day, could this help me find my way out of the forest? Remember, I got up in the morning and walked toward the sun to my friend's house, then I headed back to my house in the afternoon, but I got lost as I did that. So let's ask the question again. To get home in the afternoon, should I walk toward the sun or away from the sun?

ACTIVITY INTRODUCTION VIDEO

In today's activity, you're going to make a Sun Finder. It's sort of like a picture that you can move to show where the sun is at any time of day. Your Sun Finder will help you figure out where I should go. Using it, you can see the path that the sun takes between sunrise, over here, and sunset, over here. To make your Sun Finder, you'll need one of these. It's called a paper fastener. It connects two pieces of paper in a way that lets them spin like this. Okay, I'll tell you how to make a Sun Finder, step by step.

ACTIVITY STEP 1

Get these supplies. You need a handout, a pair of scissors, and a paper fastener. When you're done with this step, click the arrow on the right.

ACTIVITY STEP 2

Cut on the thick black lines, like this. When you're done, you'll have two pieces. The big piece of paper shows the forest, and the small one shows the sun.

ACTIVITY STEP 3

Poke the paper fastener through the top hole, then turn the paper upside down like this. If you need help, work with someone.

ACTIVITY STEP 4

Turn over the paper with the sun on it. Slide the hole over the paper fastener, like this.

ACTIVITY STEP 5

Spread the prongs and flatten them like this.

ACTIVITY STEP 6

Trace the word east. That's where the sun rises every morning. Then trace the word west. That's where the sun sets every evening.

ACTIVITY STEP 7

Practice making the sunrise over my friend's house, the white one. And practice making the sunset behind my house, the gray one.

ACTIVITY STEP 8

Turn and talk. How can the sun help me get back to my house in the afternoon? Should I walk towards the sun or away from it?

ACTIVITY STEP 9

Here's what I figured out. Now, remember, I told you how I got to my friend's house—by walking from my house through the forest all morning in the direction towards the sun. I hung out for a while at my friend's house. And then needed to head back home in the afternoon. But once I got into the forest, I lost my way and didn't know which way to go. So what should I do? Should I follow the sun? Wouldn't that just take me back to my friend's house? Well, in the morning, the sun comes up over here in the east. It's the same direction as my friend's house. But while I

hung out at my friend's house for a few hours, past lunchtime, all the way in the afternoon, the sun changed its place in the sky. During that time, the sun would now move to being over here in the sky. It would be in the direction of west. So by the afternoon, the sun was over my house. So I should just keep following the sun in order to get home. See? You can use the sun to help you if you're lost. Stay curious and see you next Mystery!