mystery science

Grades K-5
Mini-Lesson: “Does any place not have fall?”

VIDEO TRANSCRIPT

VIDEO 1

Hey, it's Jay! I grew up in the US State of Wisconsin. Fall there is beautiful. The forest fire house would turn a rainbow of autumn colors. Someone named Sawyer has a question about the fall season. Let's give Sawyer a call now.

[Video Call]

- Hi, Jay!

- Hi, Sawyer!

- I have a question for you. Does any place not have fall?

- Great question.

Have you ever seen season symbols like these before? They're a good match for the seasons in Wisconsin. There's a snowflake for the cold winter, a flower for spring—the warming up season where new plants grow, then a sun for the hot summer, and of course, a colorful leaf for fall, the cooling down season when leaves change. Seasons are based on changes in nature that repeat year after year. For example, in Wisconsin, snow falls around the same time each year. That change in weather is part of the winter season. Now I live in the state of Florida. You might know that Florida is warm. A winter day here can feel as warm as summer in Wisconsin and it almost never snows in most of the state. The seasons in Florida don't look like these

symbols. But it's not hot summer sun all year either. Florida does have seasons, including a fall season when things cool down. The changes that show its fall are just different from Wisconsin. Before I go on, I'm curious if you live someplace with a fall or cooling down season. What are some of the changes that show its fall where you live?

VIDEO 2

Maybe you know it's fall where you live because it's time for warmer clothes. Or maybe fall is when it's finally cool enough to play outside without getting too sweaty. Maybe you have weeks of colorful fall leaves like Wisconsin. Here in Florida, many leaves don't change. But we do have colorful fall wildflowers. Or maybe you've heard that some birds travel south in the fall to spend the winter in warmer places. In Wisconsin, a fall change is seeing them leave. And in Florida, it's seeing them arrive. Like me, you might live someplace where these symbols don't really match the changes each year. In fact, lots of places on Earth don't match these symbols. Maybe you can think of some. Like, how about this rainforest in the Amazon? Look at how green it is, and it looks pretty much like this all year. Or check out this incredible forest in the country of Malaysia. It's green all year round too. In Wisconsin, as the weather changes from hot to cold each year, forests go from summer green to colorful fall, to bare winter branches. These forests don't really do that because the temperature doesn't change much in these places. Instead, there are other big changes throughout the year. Like this. Rain. Around the Amazon, there's wet weather for just over half the year and dry weather the other half. It goes from wet to dry, and back year after year. Malaysia also has wet and dry times of year. Except it's more like wet and wetter. There are usually two really rainy times of year called monsoon season, with less rainy seasons in between. And look at this. These are baobab trees during the dry season in the country of Senegal. As the Baobab's fruit gets bigger, that's assigned to some farmers that the wet season

is on its way. On a map of Earth, the Amazon rainforest is here in South America. Here's Senegal. And here's Malaysia. They're kind of in a row across Earth's middle. This middle area is called the tropics. Places throughout the tropics have big changes in rainy and dry weather that repeat each year. Living here means planning for wet seasons and dry seasons. You might still talk about fall or a cooling-off time. But it's not as big a change. The seasons look different in really cold places too, like around Earth's north and south poles. There, a big change that divides up the year is sunlight. Winter near the poles is dark. The sun doesn't appear in the sky for weeks or even months. It's the opposite in summer. This is what midnight looks like. The sun stays up for most of the day and night. The temperature warms up a bit too, but the big change is all that light. Some people say that places near the polls have two major seasons. Sun-filled summer and dark winter. So in summary, every place on Earth has changes in nature that repeat year after year. To keep track of those changes, we divide the year into seasons. Winter, spring, summer, and fall is one way of dividing the year into seasons based on big changes in temperature. But it's not the only way. In the tropics where there are big changes in rainfall, you can divide the year into wet and dry seasons. And near the north and south poles, big changes in sunlight divide up the year. Because the changes happen again and again in the same order, the seasons make a pattern. With a pattern, you can tell what's coming next, like how monsoon season is followed by a dry season. Understanding the pattern of seasons in a place helps us plan ahead for what to wear, how to stay safe, and have fun! In fact, to me, the best thing about fall in Wisconsin is knowing snowboarding comes next. That's all for this week's question. Thanks, Sawyer for asking it!