How can we tell what season it is?

Welcome to NSTA's Daily Do
Teachers and families across the country are facing a new reality of providing opportunities for students to do science through distance and home learning. The Daily Do is one of the ways NSTA is supporting teachers and families with this endeavor. Each weekday, NSTA will share a sensemaking task teachers and families can use to engage their students in authentic, relevant science learning. We encourage families to make time for family science learning (science is a social process!) and are dedicated to helping students and their families find balance between learning science and the day-to-day responsibilities they have to stay healthy and safe.

What is Sensemaking?
Sensemaking is actively trying to figure out how the world works (science) or how to design solutions to problems (engineering). Students do science and engineering through the science and engineering practices. Engaging in these practices necessitates students be part of a learning community to be able to share ideas, evaluate competing ideas, give and receive critique, and reach consensus. Whether this community of learners is made up of classmates or family members, students and adults build and refine science and engineering knowledge together.
Introduction
Could it be we’re already beginning to see signs that fall is approaching? Stop, look, listen, and smell. Did you find any signs of fall? What were they? No matter where you live on Earth, you experience different seasons. Some of us experience four seasons, while others may only experience two (for example, wet and dry season if you live near the equator or winter and summer if you live nearer to the poles). In today’s task, How can we tell what season it is?, young children and their families read Tree: A Peek-Through Picture Book by Britta Teckentrup and begin to think about the seasons they experience where they live and notice a pattern in their occurrence.

Even if the seasons where you live don't match the seasons represented in the story, you might use the book to instill wonder in young children, their older siblings and maybe even the adult members of the family: Where do the people live who experience these seasons? Why don’t we experience seasons like this? Do other people experience even different seasons? Why aren’t seasons the same everywhere on Earth? What causes the season?

Experiencing Students in Exploring the Seasons
You might start with inviting students to do a read aloud or read along of the story Tree: A Peek-Through Picture Book by Britta Teckentrup. If you don't have access to the book, students can read aloud or read along with the Tree by Britta Teckentrup video.

As you read the story together, you might first stop on the page with the text Owl sits watching in his tree (winter) and ask students to make observations. When you reach the page with text Squirrels scamper here and there (spring), again stop and ask students to make observations. Then flip back to the winter page and ask students to notice things that are the same or similar between the two pages and things that are different. You might continue reading the story in this way, pausing when you reach summer and fall and comparing them to the previous season.

When you reach the page with text The trees are still, the snow lies deep near the end of the book, you might pause and ask your students to predict what they might find on the next page (what happens next). Ask your students, "Why do you think so?"

If you live in an area that experiences similar seasons, you might ask your students to consider which page in the story is most like the current conditions where you live. Ask students to share their thinking. Students might make connections between the story and where they live by comparing the colors of the season, the amount of leaves in the trees, and the kinds and numbers
of animals. Say to students, "The colors, leaves on the branches, and kinds and numbers of animals you shared are all ways we can tell it's [season] where we live. Do you think we could find other things that tell us it's [season] where we live?"

If you live in an area that experiences different or very different seasons, share with your students what the current season is where you live. You might ask students, "What are some things that are different between [season] where we live and [season] in the book?" You could then ask, "Do you think we could find other things that tell us it's [season] where we live?"

You might take your students outside and find a comfortable spot to sit together. Ask students to close their eyes and notice the sounds that they hear and/or odors they smell. Give them an opportunity to share the sounds and smells with a partner. Ask students, "If we came here tomorrow, do you think we would hear the same kinds of sounds? Smell the same kinds of smells? Why do you say so?" Then, ask students to think about an event that is familiar to all of them which occurs in a different season (but you don't need to name the season). Say, "If we came back here on [event] day, do you think we would hear the same kinds of sounds? Smell the same kinds of smells? Why do you say so?" You might together conclude the sounds and smells they observed today could be used to tell us it's [season] where we live.

You could also take a walk to a local green space and make and record (with assistance as needed) observations of the plants, animals or even colors (especially if you are working with very young students) you find there. You might ask the same type of questions as you did before. Could the different types and number of plants and animals you find there be used to tell us it's [season] where we live? Could the way the different plants and animals look (the color and amount of leaves, the presence of flowers, fruits, or vegetables, the color or thickness of coats of animals, the presence of baby animals) be used to tell us if it's [season] where we live? Could the colors we see be used to tell us it's [season] where we live?

Students might also notice they clothes they are wearing. You might ask, "If we came back to this place tomorrow (or next week) would we need the same kinds of clothes to stay warm (or cool or dry)? Why do you say so?" And then, "If we came back to this place on [event] day, would we wear the same kinds of clothes to stay warm (or cool or dry) Why do you say so?" Again, you might conclude that the kind of clothes we wear could be used to tell us it's [season] where we live. All throughout the investigation, students may share questions with you. You might record these questions and then record them publicly when you return indoors. Consider grouping like questions together and then asking students, "Did we answer any of our questions today?" and then, "How might we figure out the answers to these other questions?"

Create a Seasons Board
You might create a seasons board as a class or family project. Consider using Wakelet (free) or a similar digital tool that allows you to easily change, add to and share with other classes or families located in different place on Earth.

If you're new to Wakelet, you can watch this short Introduction to Wakelet video to help you get
Whether you create a seasons board for your family, local or global community, consider including the following information:

- **Season**
- **The months of the year this season represents**
- **Where on Earth you live**
- **Artifacts of the season**

Allow students/families to choose the artifacts of the season. Artifacts chosen will depend on the age and interest of the students in the class or family, but may include:

- pictures of the area (plants, animals, sky, clothes worn during the season, etc.)
- drawings or paintings (Younger children might represent the season using colors while older children might create scientific drawings of plants and/or animals they observe. How do we know what isopods do? [Part 1] provides guidance on how to support students in creating scientific drawings.)
- tree bark and leaf rubbings
- written descriptions of the sights, sounds, smells and feels of the season
- weather data represented in tables or graphs

Consider sharing your seasons board with others in your local or global community! One way to this is to share the link to your virtual seasons board in the NSTA Learning Center’s Earth and Space Science Community Forum. (You'll find specific instructions in the first post.)

- You can use your family board to observe changes over time and make predictions about the same season next year will bring.
- You might view other boards representing seasons in a place similar to the place where you live and look for similarities and differences.
- You could look for boards representing seasons for locations all over the country or world to look for similarities and differences and/or spatial patterns (patterns from north to south, east to west, land-locked to coastal, mountains to plains, etc.)
- You might come back to the boards at different times throughout the year to identify patterns over time.

Students' noticings may answer some of their questions and/or generate new ones. Do other classes or families have similar questions? How might we investigate?

**NSTA Collection of Resources for Today's Daily Do**

NSTA has created a How can we tell what season it is? collection of resources to support teachers and families using this task. If you're an NSTA member, you can add this collection to your library by clicking ADD TO MY LIBRARY.