



Ecology in Classrooms & Outdoors

SIGNS OF FALL OBSERVATIONS TEACHER GUIDE

Introduction

Autumn is a time for change. As the days become shorter and cooler, what do you notice happening around you? What do you notice happening in yourself? In this lesson, students will make observations about the changes they notice in the outside world, and learn why some leaves change colors each fall. Then, students will take their observations inward and do a body mapping activity, reflecting on how their inner thoughts and emotions may also be undergoing change.

Materials

- Activity sheet: Changes in Nature, Changes in Self (2 pages)
- Videos:
 - Elementary school: [Autumn is Here!](#) By Scholastic
 - Middle school: [The Real Reason Leaves Change Color in the Fall](#) by MinuteEarth
- Pencil
- Colored pencils, markers, or crayons
- Body scan script (page 3)

Lesson Length

30min synchronously, 30min asynchronously

Standards

SEL Core Competency

Self-Awareness - the ability to accurately recognize one's emotions and thoughts and their influence on behavior.

NGSS

3-LS1-1 From molecules to Organisms: Structures and Processes
Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.

MS-LS1-6 From Molecules to Organisms: Structures and Processes
Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.



Lesson Procedure

1. MAKE OBSERVATIONS OUTDOORS

Begin by inviting students to go to a safe place outdoors or look through a window and use the first page of their activity sheet titled Changes in Nature to observe what is going on in nature. The activity sheet will guide students to use all of their senses (except taste) to make observations, with options to draw, label, color, and record their findings.

Encourage students to spend at least ten minutes quietly observing. It is possible they may be able to see/hear squirrels, birds, or insects, notice changes in the sky, or find interesting plants or fungi if they allow themselves to be patient and look closely.

2. SHARE WITH THE GROUP

Invite students to share and discuss what they recorded on their activity sheet with the group.

Give each student an opportunity to share. You may have them create a post using Google Classroom, SeeSaw, or another method of digital sharing.

Ask questions to guide the discussion. For example, what did you see, smell, touch/feel, or hear? What colors caught your attention? Did anything look or feel different than it did during the summer?

3. WHY DO LEAVES CHANGE IN AUTUMN?

Of course, students may have noticed that the leaves of some trees are beginning to change color. They may have started to fall to the ground! This is because the leaves of deciduous trees undergo a chemical change when the days become shorter in the fall and there is less sunlight.

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Lesson Procedure, continued

Have students watch a short video explaining why leaves change color in the fall. For students in grades K-5, we recommend *Autumn is Here!* By Scholastic (~3min). For students in grades 6 or higher, we recommend *The Real Reason Leaves Change Color in the Fall* by MinuteEarth (~2.5min), as it includes more specific details about the chemical processes occurring in green leaves.

4. WHAT CAN WE LEARN FROM TREES?

Bring students back together as a group. Explain that, just like the changes occurring in the leaves, we go through changes during this time as well. It is clear that nature has a lot to teach us. What can we learn from trees?

Ask students to take a few minutes to think about changes they may be going through now. Perhaps they feel their emotions changing as they go back to school, especially during a school year that looks very different than usual. Or, they are finding their voice and learning more about what makes them unique individuals. Maybe, like the leaves on trees, they are thinking about letting go of something they do not need or have energy for anymore, such as old toys, clothes that no longer fit, or activities they are no longer interested in, creating space for something new.

Being sensitive to your particular group's comfort level and feelings of safety, use any combination of these ideas to introduce the next activity.

5. BODY MAPPING ACTIVITY

Explain to students that they will be using the back of their activity sheet, titled *Changes in Self*, to create a body map. A body map is a way to reflect on your own inner thoughts and feelings using colors and words. A body map never has a right or wrong answer, as it is completely unique for each person.

Before starting the body map, practice some mindful breathing with the students. Begin by asking students to get into a comfortable, seated position and either close their eyes or pick one spot to look at with a soft gaze. Everyone should place one hand on their belly and one hand on their chest. Allow the students a few moments to breathe at their own pace and then invite them to start taking longer breaths by prompting them, "inhale," waiting a few seconds, and then "exhale."

After a few of these longer breaths, guide students through a body scan, encouraging them to explore their feelings and emotions as they check in with their bodies. Start at the top and work down. Use the script on page 3 of this guide, or come up with your own. Some questions to consider: What does my head feel like? What's happening in my heart? What feelings are coming from my tummy/stomach?

Students will begin working on their body map by choosing which colors will represent their different feelings and recording them using the body map key. Students may need a little guidance. Feel free to complete this activity alongside the students and give examples like, "Today, my head feels excited, but also fuzzy. To me, that looks like orange. To represent the fuzzy feeling, I'm going to color outside the lines." Encourage students to use patterns and mix colors.

Students may share their body maps, or keep them to themselves.

6. CLOSING REFLECTION

Explain that as we move through autumn into winter, there are many more changes to observe outdoors. The temperature will cool down, and there will be less and less sunlight, until the winter solstice.

As a group, invite students to brainstorm a list of changes they think will occur in nature in the next few weeks that they may be able to observe and record. Some ideas include temperature, daylight hours, weather patterns, or animal behavior. Then, encourage students to select one or more items to observe on their own, making a plan to share findings with the group.

Students may also choose to observe internal changes, such as their mood, energy, or emotions. After a few weeks, have students do another body map to check in with themselves and notice any changes that have occurred within.



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Body Scan Script

Read at a comfortable pace with plenty of time to pause in between each statement, giving students time to let the statement sink in.



Start by imagining a bright light touching the very top of your head. The light can be any color you want.

Let this light start moving down slowly, noticing how each part of your body feels as the light washes over it...

What does your head feel like?

What are the muscles in your face doing? Is your jaw clenched or relaxed? Notice your tongue, your ears, your eyes...

Move the light down your neck to your shoulders... Are they relaxed? If not, drop them down away from your ears...

Move down one arm, then the other...

Notice how your hands feel, all the way to your fingertips...

Now the light is in your chest, your lungs, heart... into your tummy...

Take a moment to notice any moods or feelings that come up. Where in your body do you feel these moods or feelings?

Now the light is moving down from your middle toward the ground.

Notice how your legs feel. Notice your knees, ankles, feet, all the way to the tips of your toes...

Imagine the bright light going down through the soles of your feet into the earth, sending grounding energy to all those around you.

Open your eyes.