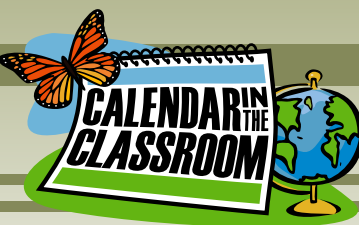




# What's Happening



## Overview

Beginning in September, the children create a monthly picture calendar by drawing the natural events they observe occurring on the school grounds.

## Background

Phenology is the branch of science involving the study of the relationship between climate and seasonal events in nature such as the migration of birds, the blooming of flowers, ripening of fruit, changing of leaf color. Data is recorded as scientists make note of the first or last date that an event occurs. For example: the first crocus bloom, the arrival of the first bluebird in spring, the first snowfall, the date of freeze-up and ice-out. Students become phenologists as they observe and record the natural events occurring on their school grounds each month. Begin this activity in September and continue collecting picture data each month. Create a title page and explain to students that each month they will add a new picture to their hand-made calendar.

The *Minnesota Weatherguide Environment™ Calendar* offers a beautiful monthly photograph. In addition, on the back of each monthly calendar page there is a wealth of data including a week by week description of common phenological events. Use this information to help you anticipate what may be seen occurring on the schoolyard.

## The Activity

### Warm Up

#### Day 1

1. Review the four seasons with students. What are the general characteristics of each season?
2. Show students the *Minnesota Weatherguide Environment™ Calendar* photograph for the month of September. Ask: Which of the four seasons is depicted here? What are the clues or evidence?

#### Day 2

1. Explain that today the students will be going outdoors to create their own September calendar picture. Read the appropriate week of phenological information contained in the calendar. Which of these events do the students think they may observe on the school grounds?
2. Ask students to discuss their observations before beginning the drawing process. What is the weather like? Are any flowers blooming? Can they see any animals -- insects included? Each student will select a part of the schoolyard to draw.
3. Students show and compare their September drawings. Label the drawing with the date and time. Which objects in the drawings are natural and which are human made?
4. Give students a title page for their calendar. Tell them the exciting news -- each month they will draw and add a new page to their calendar!

## Time:

Day 1: 15 min.  
Day 2: 30 min.  
Monthly: 30 min.

## Skills:

Observing  
Describing  
Recording  
Comparing  
Inferring  
Critical Thinking

## Vocabulary:

seasons  
phenology  
phenologist

## Materials Needed:

- *Minnesota Weatherguide Environment™ Calendar*
- Drawing paper
- Crayons/colored pencils
- Clipboards or pieces of cardboard
- Student calendar title page and pipe cleaner or brads.

## Wrap Up & Assessment

Periodically review the pictures that students have added to their calendar.

## Questions for Discussion

- What season is September?
- What things in your picture show the season of the year?
- How will things look different next week?
- How will things look different next month?

## Extensions:

· Begin keeping weather records such as daily temperature and discuss changes that occur that are related to the weather conditions.

Suggested format: Title page for student calendar. Use brads, "O" rings, or pipe cleaners to attach the pages together.

<p>○ ○</p> <p><i>School Name</i></p> <p><i>Schoolyard Phenology Calendar</i></p> <p><i>School Year 20__ - 20__</i></p> <p><u><i>Student Name</i></u></p>
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## Resources:

- *The Reasons for Seasons* by Gail Gibbons
- *Minnesota Weatherguide Environment™ Calendar*  
online: <https://jeffersfoundation.org/programs/calendar-in-the-classroom/>

## Minnesota Academic Standards

### 3-D Science Standards

#### Science Practices:

2. Developing and Using Models
3. Planning and Carrying Out Investigations (investigate through observations)
8. Obtaining, Evaluating and Communicating Information

#### Crosscutting Concepts:

1. Patterns
2. Cause and Effect: mechanism and explanation
7. Stability and Change

#### Disciplinary Core Ideas:

LS1: From molecules to organisms: Structures and processes

1st Grade: Provide evidence to represent how plants and animals use their external parts to help them survive, grow, and meet their needs.

3rd Grade: Plants and animals have internal and external structures that impact survival

5th Grade: Requirements for plant growth

LS2: Ecosystems: Interactions, energy, and dynamics

3rd Grade: Strategies animals use to survive

ESS2: Earth's systems

K: Make seasonal observations of local weather conditions to describe patterns over time

2nd Grade: Describe typical weather conditions expected during a particular season

## Art Standards

Grade	Strand	Anchor Standard	Benchmarks
K	Create	Create original artistic work	1. Create art that communicates an idea using artistic foundations.
1	Create	Generate and develop original artistic ideas	2. Use observation and investigation in preparation for making a work of art.
2	Create	Create original artistic work	1. Create art that represents natural and constructed environments. For example: Landscapes versus architecture.
3	Create	Create original artistic work	1. Create visual representations of places or systems that are part of everyday life using artistic foundations.
4	Create	Create original artistic work	1. Create art that is representational and non-representational using artistic foundations. For example: Naturalism and abstraction.
5	Create	Generate and develop original artistic ideas	1. Generate and document an innovative idea for art making.