



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.

Standards/Benchmarks *

- Use observations to develop an accurate description of a natural phenomenon and compare one's observations and descriptions with those of others. Science (0.1.1.2.1)
- Sort objects in two groups: those that are found in nature and those that are human made. Science (0.1.2.1.1)
- Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. ELA (0.6.2.2)

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

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
- Clipboards or pieces of cardboard
- Student calendar title page and pipe cleaner or brads.

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!

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.

Resources:

- *The Reasons for Seasons* by Gail Gibbons
- *Minnesota Weatherguide Environment™ Calendar*
- 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 2013</i></p> <p><u><i>Student Name</i></u></p> <p>○</p>
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* Minnesota Academic Standards

Standards Met

Subject	Code	Standard	Benchmark
Science	0.1.1.2.1.	Scientific inquiry is a set of interrelated processes used to pose questions about the natural world and investigate phenomena.	Use observations to develop an accurate description of a natural phenomenon and compare one’s observations and descriptions with those of others.
	0.1.2.1.1.	Some objects occur in nature; others have been designed and processed by people.	Sort objects into two groups: those that are found in nature and those that are human made. <i>For example:</i> Cars, pencils, trees, rocks.
ELA	0.6.2.2	Text Types and Purposes	Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.