
Phenological Nature Walks

Activity Overview

Students observe and record seasonal changes on a self-guided walk in a natural area at different times of the year.

Objectives

Students will:

- Practice observation skills
- Perceive seasonal and/or phenological changes in a natural setting
- Collect data

Subjects Covered

Language Arts, Science, and Environmental education

Grades

K through 12

Activity Time

30 minutes, 4 times a year

Season

Any

Materials

Nature hike field sheets, pencils, clipboards, and field guides (optional)

State Standards

Language Arts:

Create or produce writing (B.4.1, 8.1, 12.1)

Plan, revise, edit, & publish writing (B.4.2, 8.2, 12.2)

Science:

Use scientific vocabulary & themes (C.4.1)

Ask questions, plan investigations, make observations, predictions (C.4.2)

Investigate how organisms respond to internal/external cues (F.4.2)

Find connections among living and non-living things (F.4.4)

Understand an organism's internal and external regulation (F.8.6)

Background

“If you want an adventure, take the same walk that you took yesterday, and do so again tomorrow.”

John Burroughs

Phenology is defined as the study of natural events that recur periodically in relation to climate and seasonal change such as bird migration and fall leaf color. The word “phenology” comes from the Greek words “phainestain” (to appear) and “logos” (to study). A person who studies phenology is a phenologist. People have been practicing phenology since ancient times. Before weather stations, humans needed to keep track of natural cycles to predict when to hunt, gather edible fruits and nuts, and plant their crops. Many native peoples linked natural events with cycles of the moon. Today, people observe and record natural events to stay in tune with the seasons and keep time with the natural order.

The discovery of the first bloom of a plant was an event treasured and recorded by conservationist Aldo Leopold. In his work *A Sand County Almanac*, he wrote, “Every week from April to September there are, on average, ten wild plants coming into first bloom. In June, as many as a dozen plants may burst their buds on a single day” (1949: 44). Leopold kept daily journals of observations wherever he happened to be in the natural world. These journals held the keys to understanding patterns among plants, animals, weather, water, soil, and land. By recording natural events on a regular basis, particularly those events occurring on their family walks, Leopold and his children would compare changes from year to year, as they learned about the natural world.

It is not necessary to travel to distant natural areas to study phenological changes and the wonders of nature. Taking a walk along the same route will tune your senses into the discovery of nature’s cycles and help you become more aware of seasonal change. A schoolyard, restored prairie, local park or empty lot all provide information for budding naturalists.

Activity Description

Take a sensory nature hike once each season. Walk the same route. What changes do you see from hike to hike? Consider questions such as: “What is the weather like? What sounds do you hear? What do you smell? Feel? What is different about this walk compared to the others? Use the Nature Hike Field Sheet to record what you see, hear, smell and touch. On a separate sheet of paper, summarize your observations and changes you observe throughout the year. Explain what influences these changes and how plants and animals adapt based on your observations.

Phenological Nature Walks (cont.)

Understand an organism's behavioral adaptations (F.8.7)

Understand how sensory & nervous system react to environment (F.12.12)

Environmental Education:

Make observations, ask questions, plan investigations (A.4.1)

Collect information, make predictions, offer explanations (A.4.2)

Develop answers, draw conclusions, revise understanding (A.4.3)

Communicate understanding (A.4.4)

Use critical thinking strategies (A.8.4)

Develop answers, draw conclusions, revise understanding (A.8.5)

Communicate results & defend answers (A.8.6)

State & interpret results, consider other explanations (A.12.4)

Communicate results (A.12.5)

Explain interactions among organisms (B.8.8)

Source

My Nature Journal: Explorations of the Natural World Using Phenology (see *Additional Resources*)

Extensions

- Draw a picture of something you find interesting on your nature hike.
- Create a poem inspired by your phenological discoveries. The poem could be a haiku, cinquain, diamante or other appropriate form.
- Create a phenology journal of your experiences.
- Take a walk in different ecosystems; compare the similarities and differences.
- Develop a web page or computer database to record your observations over time.
- Design a phenology calendar and record observations throughout the year.

Additional Resources

- Bates, J. (1997). *A northwoods companion: Spring and summer*. Mercer, WI: Manitowish River Press.
- Bauer, C. & M. Smith Fry. (2000). *My nature journal: Explorations of the natural world using phenology*. Madison, WI: University of Wisconsin-Madison Arboretum.
- Curtis, J.T. (1959). *Vegetation of Wisconsin*. Madison, WI: University of Wisconsin Press.
- Leopold, A. (1949). *A sand county almanac*. New York: Oxford University Press.
- Levine, C. (1995). *A guide to wildflowers in winter*. New Haven: Yale University Press.
- Locker, T. (1995). *Sky tree*. USA: Harper Collins Publishers.
- Weber, L. (1996). *Backyard almanac*. Duluth, MN: Pfeifer-Hamilton Publishers. From *My Nature Journal: Explorations of the Natural World Using Phenology*.

Assessment

- Students present their observations to peers.
- Students create a phenology journal for a specific time frame.
- Students write a short story that describes seasonal changes they observe.
- Define phenology and describe at least four seasonal changes.

Phenological Nature Walk Handout

Date: _____ Time: _____

Where are you? _____

Who is walking with you? _____

What is the weather? _____

What evidence of animals, birds or insects do you see or hear?

What is special about the plants that you see? _____

What do you smell? _____

What do you hear? _____

Find things that are soft, hard, smooth, scratchy, fuzzy and waxy. What are they?
