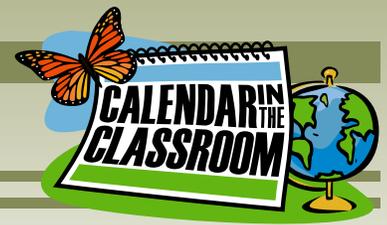




Finding Nature's Alphabet



Overview

Let's find letters of the alphabet in the outdoor areas around the school! Students review letter names and sounds, arm themselves with sharp eyes and digital cameras and journals and head outdoors to record their discoveries which will, over the course of the year, be compiled into their own class book. Later chapters in their "book" can focus on numbers, shapes and patterns.

Standards/Benchmarks*

- With prompting and support, read informational texts appropriate for grade 1 and select texts for personal enjoyment, interest, and academic tasks. ELA (1.2.10.10)
- Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text. ELA (1.2.5.5)
- When asked "How do you know?" students support their answer with observations. Science (1.1.1.1.1)
- Recognize that describing things as accurately as possible is important in science because it enables people to compare their observations with those of others. Science (1.1.1.1.2)

Background

Phenology is the branch of science dealing with the relationship between climate and periodic seasonal occurrences in nature, such as the blooming of flowers, changing leaf color, bird migration, ice-out on lakes. Students will become aware of these events as they have seasonal outings in search of their alphabet shapes.

The Activity

Warm Up

1. Read aloud from the *Minnesota Weatherguide Environment™ Calendar*, Jim Gilbert's Phenology Nature Notes for the month. This will prepare your students for what they might see when they go outdoors.
2. Review/chant the alphabet chart noting both the sounds of the letters and also their shapes; noticing triangles, squares, and any other visual shapes and patterns.

Day 1

1. Read aloud *Minnesota's Hidden Alphabet* by Joe Rossi and/or provide pictures from the calendar that show natural conditions illustrating the visual patterns of our alphabet. Let these serve as models for what the students will photograph or draw.

Time:

- Day1: 45-60 min./any season
- Day 2: 30-45 min./any season

Skills:

- Critical thinking
- Observing
- Recording
- Writing creatively
- Team building
- Interpreting

Vocabulary:

- phenology
- digital camera
- observation
- record
- caption
- close-up

Materials Needed:

- *Minnesota Weatherguide Environment™ Calendar*
- Journals
- Digital cameras 1/student or team
- Art supplies
- Alphabet chart
- Sample twig showing the letter 'V', 'Y', etc.

2. Do a guided discovery, modeling how to use a digital camera and discussing your expectations of proper digital camera use. If you do not have cameras available suggest the students draw the letters they see in their journals.

3. Explain to the kids that real photographs of nature were taken to make the *Minnesota Weatherguide Environment™ Calendar* and the book *Minnesota's Hidden Alphabet*. Tell them they are going outdoors to see if they can find alphabet images in the natural areas by the school. They will be the artists, illustrators, photographers and creative writers for the “book” written by all the children in the class.

4. Show an example of something like a small stem and branch that makes a letter like a V or a Y and the photograph or drawing you prepared ahead.

5. Model how to take a close-up picture that fills the frame to capture the alphabet shape.

Explain that when they go outside they may not see every letter but as a class you will try to cover the entire alphabet. Review expectations for proper behavior in the outdoors.

6. Because the students may only see a few letters of the alphabet, spend time outside noticing the small things in nature, photographing as many letters and other interesting items as possible. If “letters” are scarce focus on shapes: circles, ovals, lines, angles, stars, or numbers. (Perhaps create chapters: Numbers, Shapes and Letters of the Alphabet and Patterns.

Day 2

1. Prior to the student's work time print out a photograph of any of the 26 letters of the alphabet. Have them add the caption and description to the photo. Have students write a creative word that begins with the letter. Then, write a sentence using that word. Begin assembling a class book and have each student share his or her page. Challenge students to make this an ongoing activity so that, by the end of the school year the book will be filled with student pictures and captions. Some letters will be easy to find, like the letter “O” or “I”, “Y” and “V”. This will be helpful in ensuring that every child is successful at finding something to print. Upper and lower case letters add variety.

2. In each season of doing this project; compare and contrast the changes in nature; noting the seasonal and weather changes. Add a single photo to their science notebooks each season and have the students record their observations of the season and weather. Have the students observe, record, and predict similarities and what the next season's changes will bring.

Wrap Up & Assessment

Read aloud your students' published book. Highlight the fact that first graders can be published authors! This project is of extended duration. Did every child discover a letter – even if there were repeats of the easy letters such as “Y” or “V”?

Questions

- Which letters were easy to find? Which letters haven't been found – yet?
- Are there other patterns in nature besides the alphabet shapes? Yes, for example we might find numbers, geometric shapes, and patterns such as spirals, alternate and opposite branching.

Extensions

Finding Nature's Numbers - Create chapters in the book for numbers, shapes and patterns.

Resources

Books: Rossi, J.: *Minnesota's Hidden Alphabet*

Castella, Kristina and Brian Boyl: *Discovering Nature's Alphabet*

Web: http://www.pbase.com/emcnally/floral_alphabet

<http://discoveringnaturesalphabet.com/index.html>

*** Minnesota Academic Standards**

Standards Met:

Subject	Code	Standard	Benchmark
ELA	1.2.10.10	Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	With prompting and support, read informational texts appropriately complex for grade 1, as well as select texts for personal enjoyment, interest, and academic tasks.
	1.2.5.5		Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.
Science	1.1.1.1.1	Scientists work as individuals and in groups to investigate the natural world, emphasizing evidence and communicating with others.	When asked "How do you know?," students support their answer with observations. <i>For example:</i> Use observations to tell why a squirrel is a living thing.
	1.1.1.1.2		Recognize that describing things as accurately as possible is important in science because it enables people to compare their observations with those of others.