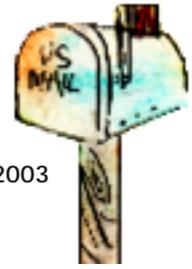


# Staying in Touch

News from the Center for School Change in Rural Minnesota

April 2003



## Greet spring with phenology study

*This month, B.J. Kohlstedt, curriculum director at North Shore Community School, rural Duluth, shares ideas about combining outdoor studies with many subject areas.*

By B.J. Kohlstedt

In spring, both students and teachers look for excuses to take learning outdoors.

Phenology is the perfect activity to combine science, technology, reading, writing and creative expression. But what, exactly, is it? And how can it be used?

Phenology is the tracking of the seasons through events in nature. Observers all over the world predict and record any natural event which is season dependent – the return of robins, flowering of dandelions, singing of frogs, leaves turning color, lakes freezing over, even the first mosquito bite of the year. They then share these data, along with weather and day length, with other observers, and make predictions and draw conclusions about everything from animal migration to global warming.

At North Shore Community School, an environmental charter school sponsored by Wolf Ridge Environmental

Learning Center, fifth and sixth grade students sign up for a phenology elective which meets once a week. At their first meeting, they learn the definition of phenology, then take a walk on the nature trail, making journal entries about observations they expect to change throughout the spring – like whether or not trees have leaves. Back inside, they work together to brainstorm a list of natural events they will watch for.

Finally, student phenologists develop ways to inform others in their school and community about phenological events and importance. At North Shore, a display and bulletin board is kept current with events to watch for and those that have happened, along with a map of Minnesota to show the progress of robins, monarchs or pussy willows blooming across the state. Students rotate through the three stations of observation, technology and education throughout the season. Each makes a contribution to science and service. And each learns that the earth speaks to us, but only if we listen.

*More phenology on back ...*

## Helpful Resources

Journey North, [www.learner.org/jnorth](http://www.learner.org/jnorth), includes a phenology data exchange where students can add data or read comments from others around the country. The site also offers a place to link up with other classrooms, as well as information about signs of spring.

Students may create lists of animals they've seen at [www.eNature.com](http://www.eNature.com). The site also includes online field guides with pictures.

Environmental education resources are plentiful at the Minnesota Office of Environmental Assistance Web site, [www.seek.state.mn.us](http://www.seek.state.mn.us). Follow *EE Links* to a list of Minnesota's environmental learning centers and lots of information about environmental topics.

The National Wildlife Federation describes a variety of habitat programs, educator resources and student projects at [www.nwf.org/education](http://www.nwf.org/education).

## Phenology

Tracking the Seasons Through Events in Nature

Winter	December <i>Lake freezes over</i>	January	February
Spring	March <i>Canada geese fly over Maple sap running First robin Deer ticks on dog Red-winged blackbirds</i>	April <i>Rhubarb breaking soil First thunderstorm First loons flying Ice out on lake</i>	May <i>Tree swallows here First hummingbird Mergansers with babies Trillium blooming</i>
Summer	June <i>Mallard ducklings Smallmouth bass on beds</i>	July	August <i>First maple leaves turn color</i>
Fall	September <i>Trees losing leaves</i>	October <i>Trees are bare First frost Snowflurries</i>	November <i>Ice on lake edges Mallards leave</i>

## Phenology Calendars

Students in the North Shore Community School phenology class use a calendar to list the kinds of seasonal events they will watch for.

The school also keeps a big poster where all students may record observations. The poster includes room for students' names, what they've seen and the date of their observations. Phenology students select significant events and list them on a large school calendar.

Individual calendars may also be used by students to keep records of happenings throughout the year. Calendars might be included in journals or used as the basis for math or science projects.

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