



Newsletter of the Life Lab Science Program, Fall 1996 Vol. XIII No. 1

A Garden in Every School

"Once a culture begins to move toward a wage economy, no longer directly in touch with food production, wild and agricultural resources are taken for granted. Children no longer absorb the details, make the connections, understand the whole."

—*The Geography of Childhood*
Gary Paul Nabhan and Stephen Trimble

Absorbing the details, making the connections, and understanding the whole is at the heart of the Life Lab Science Program. Since creating the first Life Lab Garden in a dirt parking lot in 1977, Life Lab has advocated the use of school gardens for exploration of the natural world and helping children create a sense of season and place.

In sync with Life Lab's philosophy, California State Superintendent of Education Delaine Eastin has launched a new initiative to create "a garden in every school." Sponsored by the California Department of Education (CDE) and the U.S. Department of Agriculture (USDA), the project's goal is to help California's school children make the connection between their food and where it comes from.

While a recent CDE survey shows that more than 13% of all public schools in California are already "in bloom," that still leaves about 87% who have not yet experienced the joy of gardening. There's work to be done to cultivate that interest. That's where you come in. As experienced Life Lab teachers, you have your garden's history to draw

from—let us hear from you. What's worked, what hasn't, what hints and resources can you pass on to those who might feel overwhelmed by the prospect of starting a school garden? Your experiences can help fuel this state-wide effort.

How? The California-wide project plans to build on the state's long history of school gardens, and work with existing organizations to compile resources for schools, parents and communities, and to create partnerships at the state and community levels.

At Life Lab we applaud the efforts of all teachers who, in using school gardens, are helping to nurture children's natural curiosity about the world around them. By caring for a garden, children see first hand the connections inherent in a healthy ecosystem. They learn the relationship of the parts to the whole, and the importance of stewardship. As the seasons change, they become aware of cycles of life in the garden.



Please send your ideas and comments to "Life Lab Gardens" via Lifelab@zzyx.ucsc.edu.

The concept of school gardens has been around for as long as there have been schools. The educational reformer and theologian Comenius (1592-1670) declared, "A school garden should be connected with every school where children can have opportunities for leisurely gazing upon trees, flowers, and herbs, and are taught to enjoy them."

Perhaps by helping children make early connections with the natural world and feel a sense of belonging, we will help them grow up to be adults who respect and care for the earth. ✨

Harvest Hotline



Q. What outdoor activities can my class do to stay connected with the garden this winter?

A. What happens in the garden in winter? At Life Lab schools across the country, compost piles steam under snow, children harvest radishes, snails nibble on lettuce, birds peck at milk carton feeders, and the rain gauge fills with passing storms. Depending on where your garden grows, winter may be a time of continued harvest, or a time when much activity in the garden has quieted. In either case, understanding what happens in the garden in winter is an important part of studying the cycles of nature.

This winter spend some time exploring and observing the winter garden with your class. Here are some ideas for investigations: Have students find out when the first frost in your area usually occurs. Monitor your site with



thermometers and compare when it happens in your garden. Hold a Temperature Hunt to find the warmest and coldest spots in your garden, and observe what makes these areas extremes. Dig into the compost pile and see what is going on in there. Count how many plants still have leaves on them if any. Note which plants have died back completely, and which still look green when you scrape the stem. Look for insect activity around the site, keep notes and compare with early spring. Celebrate the solstice on December 21st—the beginning of winter and the year's shortest day—by harvesting the last winter greens for a salad or by planting bulbs indoors to “light up” the winter days ahead. There are 89 days plus one hour of winter all together. Be sure to make the most of them! ☆

CD Review



Peterson Multimedia Guides™
North American Birds
Houghton Mifflin interactive
Somerville, MA 02143

Recommended System Requirements: •486 or higher IBM-compatible PC; •8MB RAM; •Windows® 3.1 or higher; •DOS 3.1 or higher; •SVGA display (256 colors); •double-speed CD-ROM drive; •MPC-compatible sound card; •10 MB hard disk space; •mouse

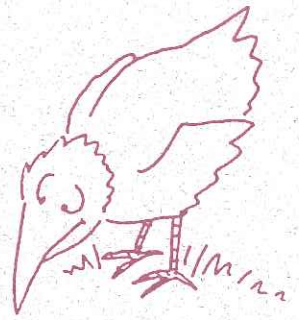
North American Birds offers you a definitive guide to nearly 1,000 species of birds found in North America. Lavishly illustrated with artwork from the well-known Peterson Field Guides™, this CD-ROM is an excellent reference that's easy to use, even for a novice birder. The search tools are self-explanatory (i.e., Range, Habitat, Nesting, etc.) and simple to use (point and click). Other features include: range maps showing range and migratory habits; text explaining the conservation status of the bird; an audio file with the species' most common songs and calls, along with a verbal description; and stunning photos of each species in its natural habitat.

In addition to its reference materials, this CD offers skill building tests to improve your birding skills, and a lifelist tool to record your bird sightings. And, to top it off, a video tutorial with Roger Tory Peterson, himself.

We found this CD prompted some lively discussion as a small group crowded around the computer screen and tried to make an identification based on a verbal description from one birder. While we didn't make a positive ID, we did eliminate lots of contenders and got it down to two possibilities. We've noticed one flaw in the nesting section of the *Birds of Prey*. Typos seem to have crept in so that birds lay “35 eggs, sometimes 26” rather than “3-5 eggs, sometimes 2-6.” In spite of this, we found this CD to be an excellent reference. ☆

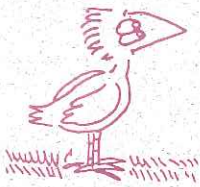
Nutty Bird Treats

Even though your garden may be “quiet” now, resting through the winter, there are ways to bring life to your garden area. Your feathered friends could use a little help this time of year. Birds use up lots of energy finding food, and you can make their lives a little bit easier by putting out some bird feeders. It’s a win-win situation—you provide the birds with food resources, and the birds will provide you with a resource for science activities—right there in your own backyard (or school garden). And, don’t worry about all of the stray birdseed that lands in your garden turning into weeds. A simple way to prevent germination is to bake the seeds before feeding them to the birds. Spread a thin layer of seeds on a cookie sheet and bake for 8–10 minutes at 350°F.



Science Activity Tips:

Feeder Watchers: You and your class can become bird feeder watchers. Make a class list of children’s ideas and questions about what birds eat. Try to figure out what food different birds prefer to eat and why. Set up feeders with different kinds of seed. Keep track of which bird eats which seed. Is one type of seed more popular than another? Keep a “guest list” of all the different kinds of birds that visit your feeders. How many different kinds did you see? Does the weather or time of day affect their feeding patterns? Do all birds feed at the same time of day?



Bird Seed “Cookies”

Peanut butter is a great winter food for birds—the fat and protein give the birds an extra boost to help them through the cold weather. But be careful, birds can choke on peanut butter unless you mix it with other food to break up its stickiness.

What You Need

- 6 slices of bread
- Knives
- Cookie cutters
- Peanut butter
- Floral wire or paper clips
- Ribbon (optional)
- 2 cups of mixed bird seed
- Newspapers (for the mess)

What You Do

1. Spread newspaper out over your work area.
2. Place a slice of bread on the newspaper-covered work space.
3. Use one of the cookie cutters to cut out a shape in the bread. Save the “cookie” and use the bread scraps to make bread crumbs.
4. Spread a thin layer of peanut butter over one-side on the cookie.
5. Press a thick layer of bird seed into the peanut butter.
6. Use the floral wire to make hangers for the “cookies.” Push one end of a 7-inch piece of wire (or unbent paper clip) through the top of each cookie.
7. Form a loop with the wire and twist the ends together.
8. If you wish, tie a ribbon over the twisted wires.

Peanut Strings

Attract jays and woodpeckers with peanut strings.

What You Need

- Peanut butter
- string or wire
- peanuts in the shell

What You Do

1. String the peanuts, end to end. Use thin wire or heavy-duty thread and a needle to string the nuts.
2. Dangle the string of peanuts outside. You may find that a few squirrels show up to feed with your birds.

Peanut Butter Pinecones

Stuff pinecones with a peanut butter and bird seed mix.

What You Need

- Knives
- Peanut butter
- Pinecones
- Rubber spatula
- Bird seed mix
- 1-2 well-crushed eggshells (for calcium)

What You Need

1. Mix the peanut butter, seed mix, and eggshells.
2. Use the rubber spatula to stuff the pinecone. Fill every crevice.
3. Loop a string through the pinecone and dangle it from a tree. ☆





On the Move:

• **Be on the look out** for Life Lab's new web page, coming to you in late 1996. The page will serve as a resource for Life Lab educators and those interested in finding out more about the program. Keep abreast of what's new at Life Lab, meet other Life Lab teachers, check out sample lessons and receive updates on current workshops. Direct links will help you network with other organizations and resources. We'll print our address in the next issue of *The Growing Teacher*, until then, use your search engine and the key words "Life Lab" and "Gardens."

• **Welcome** to our new Life Lab schools in California, Nevada, North Dakota, Oklahoma, Oregon and Washington, D.C.!

• **Science Grants available:** Toyota TAPESTRY grants will be available to science teachers nationwide. Application Deadline January 22, 1997. Write to NSTA/TAPESTRY, 1840 Wilson Blvd., Arlington, VA 22201-3000. Telephone: 1-800-807-9852, or e-mail: eric.crossley@nsta.org.

• **Mark your calendars for the following events:** National Science Teachers Association (NSTA): *Eastern Regional*, November 21-23, 1996, Toronto, Ontario; NSTA *Global Summit on Science and Science Education*, Dec. 27-29, 1996, San Francisco, CA; NSTA *National Convention*, April 3-6, 1997, New Orleans, LA.

Exploratorium Inquiry Leadership Seminar, May 7-10, 1997, San Francisco, CA and *Exploratorium Introduction to Inquiry Workshop*, June 23-July 11, 1997, San Francisco, CA. Applications due March 10. For more information, call the Exploratorium at: (415) 563-7337.

American Horticultural Society Annual Meeting: "*Celebration of the American Garden*," April 24-26, 1997 San Francisco, CA. Contact Bridgette Flint at 1-800-777-7931, ext. 24.

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Call for Presentations: "*Education in Blossom: The School Garden-Community Partnership*" a symposium presented by SUNY Cortland and Cornell University, July 30-August 1 1997, at SUNY Cortland, Cortland NY. For information, contact Marcia Eames-Sheavly, School Garden Symposium, 124 Plant Science Building, Fruit and Vegetable Science, Cornell University, Ithaca, NY 14853. ✧



Book Review

From the Life Lab bookshelves:

The Geography of Childhood

by Gary Paul Nabhan and Stephen Trimble

Beacon Press, Boston, MA © 1994

In this very thought-provoking collection of essays, two of America's acclaimed nature writers engage in explorations of the importance of a child's relationship with nature. Drawing from their personal experiences, Nabhan and Trimble start with the premise that children do need wilderness and that contact with wilderness "...can nourish a lasting attachment to the earth, and, in turn, nurture self-esteem."

The questions the authors pose are of a personal nature, while the implications are more circumspect. What will human culture be like if it continues to be deprived of a relationship with the natural world? How will we define who we are, where we came from and, and where we live? A must-read book. ✧

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