Schoolyard Ponds for Wildlife

In order to support and sustain local wildlife, Schoolyard Habitats sites must include areas for wildlife to find a variety of food, water, cover, and places to raise young. The ways in which sites provide or enhance water range from installing a birdbath, to restoring the native vegetation along the banks of a local creek.

An increasingly popular option is to install a pond as part of the Schoolyard Habitats project. Educators recognize working with their students and community to provide a pond not only helps to support a greater diversity of wildlife, but also expands opportunities for hands-on teaching and learning. Students with access to ponds learn directly about everything from aquatic insects to water quality to physical science.

In addition to bathing and drinking, many species of animals rely on water bodies to provide cover and places to raise young. Many birds and amphibians rely on insects that spend part or all of their life in the water. Observing ponds will help students learn about the characteristics, life cycles and habitat requirements of locally native aquatic plants and animals.

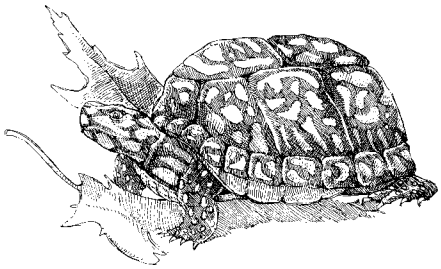
The first step in creating a pond is to observe where water flows on the property. The best time to do this is right after it rains. Where have puddles formed? Where is water from the down-spout heading? This is where the pond should be located. Precipitation and run-off can naturally replace water lost by evaporation.

Make sure the site will not be receiving excess nutrients from compost piles or fertilizers, as these will contribute to alga blooms in the water.

Also, choose an area that receives some shade or provide shade by planting trees. The shade will cool the water for invertebrates and fish that are intolerant of high temperatures.

One of several options available for creating pond structures is to use a commercially available flexible liner. First, create a basin. Excavate the soil, making sure the sides are not too steep, so that amphibians can leave and enter the pond easily. Help them by providing a gradually sloping beach area. Also be sure to include different levels or shelves at the sides of the basin; doing this will allow species that require a range of water depths to all thrive in the pond. Many sites choose to provide an overflow "wetland" area next to the pond to provide greater educational opportunities and a place for water to flow during excessive precipitation.

Before laying the liner, pad the hole with a layer of sand or old carpeting, and then put the liner in place. Secure the liner with rocks and fill with water. Check to see if your municipality uses



chlorine or chloramine. Chlorine will dissipate in about a week, but you will have to buy a neutralizer to adjust the chloramine levels.

Cover the surface of your pond with a layer of leaves. These will sink to the bottom and form an organic layer to boost naturalization and provide habitat for microorganisms. Place plenty of plants, rocks and tree branches in the pond as emergent structures so wildlife has a place to sun and escape predators.

A good way to mimic nature's recipe for a healthy pond is to add a bucket of water from a nearby natural pond. **Do not stock your pond with fish**. Wildlife will eventually find your pond on their own. If aquatic plants are added, be sure to add only native species. Native species will offer the maximum benefits to local wildlife. Avoid exotic ornamentals, which can be invasive and often provide little habitat value to local wildlife.

Common Concerns

Many schools and organizations are concerned with the **liability issues** of having open water on their site. Before you begin planning your pond, check school district and municipality guidelines. These are usually easy-to-follow regulations regarding the size, depth, and location of water features.

The most important thing that can be done to make a pond a safe place is to educate students about the risks and teach responsible behavior. Student-made educational signs posted close to the pond are a great way to call attention to the presence of water.

Many sites have found that placing low fences or benches around the pond help to slow traffic down and create a boundary to the water area. Small ponds may also be created in courtyards where students are always visible. Another solution is to create a deep basin, and then back-fill much of the basin with large rocks. Spaces between the rocks will provide room for small animals, but the pond will be shallow and safe for children. Sites, which are unable to create a pond, may choose instead to create or restore a wetland on their Schoolyard Habitats site.

Though some may see them as a nuisance, **mosquitoes** do help support many natural predators such as bats and dragonflies. In healthy ecosystems with plenty of native vegetation, mosquitoes usually do not pose any problems. If mosquito larvae are a concern, eliminate standing water by installing a circulating pump.

Many sites have dealt with the problem of **muddy students (and muddy hallways!)** by providing a set number of rain suits and rubber boots designated for use near the pond. This solution is also a good way to limit the number of students around the pond at one time. Other sites have built wooden walkways or platforms, so students can take water samples and make observations without getting their feet wet.

Many of the 1500+ certified National Wildlife Federation Schoolyard Habitats sites have installed ponds. Whether they have ripped up a concrete courtyard, or simply converted an unused corner of grassy lawn, they are all now enjoying the wildlife who visit and make their homes in these ponds, and this new and engaging instructional tool.

Still have questions? We encourage schools to pose questions, and share ideas and information on the Schoolyard Habitats On-Line Discussion Forum (to subscribe, email syhintern@nwf.org).

Resources

- Local Soil and Water Conservation Districts - Listed in government pages of phone books.
- Greening School Grounds: Creating Habitats for Learning, edited by Tim Grant and Gail Littlejohn, New Society Publishers, 2001. www.greenteacher.com 416-925-3474.
- The Natural Water Garden: Pools, Ponds, Marshes & Bogs for Backyards Everywhere, Brooklyn Botanic Garden, Brooklyn, NY. www.bbg.org 718-623-7286.
- The Pond Doctor, Helen Nash, Sterling Publications, 1997.
- Lilypons Water Gardens: Offers grants that will match every dollar spent on merchandise from Lilypons' water gardening catalog. 1-800-825-5459.
- POW! The Planning of Wetlands: An Educator's Guide, Karen L. Ripple and Edgar W. Garbish. Environmental Concern, Inc. 2001.

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