



## Rain Garden Curricular Sampler

A Publication of the  
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2008

Thanks to the Wisconsin Environmental Education Board  
for funding the development of this publication.

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## Rain Garden Curricular Sampler: Introduction

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Earth Partnership for Schools (EPS) collaborates with K-12 teachers, students, and other school community members to enhance learning through the process of restoring native habitats as outdoor classrooms. Schoolyard ecological restoration provides meaningful learning opportunities to students as they plan, plant, manage, monitor and study their native plantings. In science, social studies, language arts, fine arts, and music classes, students are learning about the cultural and natural history of local ecosystems by applying their work to these real-life projects. In addition to interdisciplinary, hands-on learning, the process of planning and planting native habitats may be one of the few opportunities students have to experience and connect with the natural world.

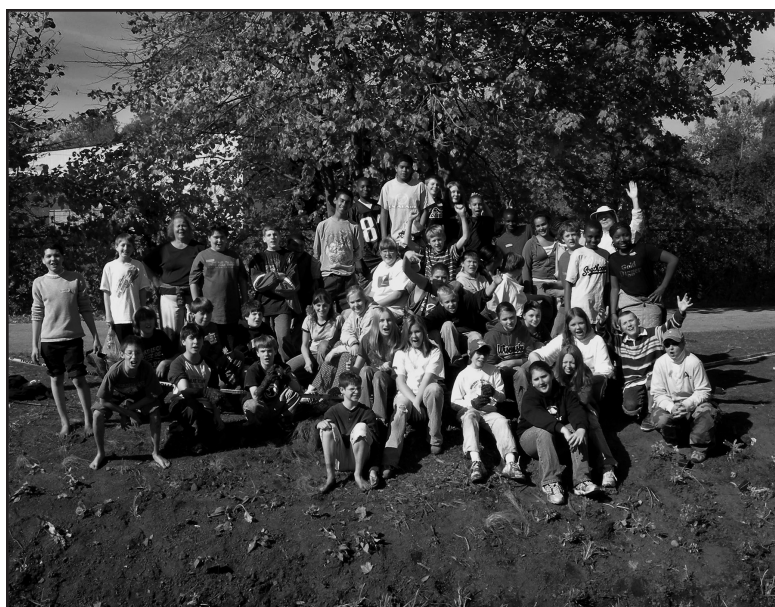
As the EPS program evolved, we became aware that schoolyard ecological restoration has the potential to improve the natural environment on a larger scale. Native plantings can actually improve the ecological functioning of the school grounds and enhance the health of the landscape and water quality beyond the schoolyard boundaries. How? One way is by planting native species in rain gardens. A rain garden is simply a garden planted in a shallow depression that slows down and traps runoff after a rain. EPS programming related to rain gardens led to the creation of this curriculum sampler.

In undisturbed, natural areas, water flows over a vegetated landscape with much of it soaking into the ground before ever reaching a body of water. Movement of water through the land helps to keep water clean and reduces serious flooding. In built environments, including school grounds, rainwater flows over hard surfaces such as parking areas, roof tops, and compacted lawns. The rainwater picks up debris: gas, oil and other contaminants from cars; pesticides, fertilizer and sediments from lawns; and residue from roofs; it then flows into storm sewers. This untreated water often flows directly into lakes and streams, threatening their ecological integrity. Rain gardens collect rainwater from roofs and paved areas and allow the water to infiltrate the school ground. As a result, some of the natural hydrology on the school landscape is restored and water pollution is reduced. Students' involvement in creating rain gardens provides opportunities to be active participants in lessening storm water impacts.

This Rain Garden Curricular Sampler is a collection of 15 activities aligned to WI state standards. The sampler is set up to follow steps in building a rain garden. The steps include: 1) learning about the value of rain gardens; 2) performing site analysis to study site conditions and where water flows; 3) planning and designing a rain garden, determining its size and shape, and selecting species; 4) preparing and planting the site; 5) maintaining a rain garden initially and for the long-term; and, 6) making community connections to inform the community about the project, to seek assistance, and to educate the community about the value of rain gardens.

This curricular sampler does not provide an activity for grading the site. However, the complementary guidebook, *Rain Gardens: How-to Manual for Homeowners*, provides basic instructions for grading a rain garden. The manual is listed in the Resource section and can be downloaded at no cost from the Web ([www.dnr.state.wi.us/ORG/WATER/WM/dsfm/shore/documents/rgmanual.pdf](http://www.dnr.state.wi.us/ORG/WATER/WM/dsfm/shore/documents/rgmanual.pdf)).

Transforming a schoolyard to an environmentally healthy landscape is an exciting way for students to learn. Students come to know that they are improving the ecological functioning of the school grounds and improving water quality in their community. We hope you enjoy this process of building a rain garden with your students!



*Whitehorse Middle School students photographed with their newly-planted rain garden, Madison, WI. Photo: Kit Rittman.*

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# Rain Garden Curricular Sampler

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## Why Build Rain Gardens?

Students learn how rain gardens improve water quality and lessen impacts from storm water in their local watershed.

Activities:

A Rain Garden Year	1-1
Bimodal Botany Bouquet	1-2
Conjunction Function	1-3

## Perform Site Analysis

Students investigate their school grounds and collect information for developing a rain garden.

Activities:

Noting Notable Features	2-1
Follow the Drop	2-2
Identifying Your Soil for Rain Gardens	2-3
Infiltration Test: Exploring the Flow of Water Through Soils	2-4
Measuring Slope for Rain Gardens	2-5

## Plan a Rain Garden

Students locate and design their rain garden including determining its size, shape, and species composition.

Activities:

Sizing a Rain Garden	3-1
Designing a Rain Garden	3-2
Rain Garden Species Selection	3-3

## Prepare and Plant a Rain Garden

Students lay out and plant their garden.

Activities:

What's a Square Foot Anyway?	4-1
Planting a School Rain Garden	4-2

## Maintain a Rain Garden

Students care for and maintain their rain garden.

Activities:

Rain Garden Maintenance	5-1
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## Make Community Connections

Students prepare outreach materials to inform the community about their project.

Activities:

Getting the Word Out	6-1
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Rain Garden Examples	7-0
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Resources	8-0
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Glossary	9-0
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