Rain Garden Maintenance

Activity Overview
Students learn about plant and garden care while managing a newly planted rain garden.

Objectives
Students will

1. Understand plant needs for growth and survival
2. Learn basic land care principles
3. Participate in a service-learning project

Subjects Covered
Science and Health

Grades
3 through 12

Activity Time
50 minutes

Season
Spring, Summer, and Fall

Materials
Gardening gloves (optional; buckets, wheelbarrow or plastic garbage bags; water source, recycled milk jugs or equivalent.

State Standards
Science

Describe reasoning to make conclusions (B.8.4)

Use data to answer questions (C.4.5)

Communicate results (C.4.6)

Support conclusions with logic (C.4.7)

Ask new questions (C.4.8)

Use inferences and observations (C.8.4)

Use knowledge, models, and theories to explain results (C.8.5)

State learning from investigations (C.8.6)

Background

A native rain garden planting is not maintenance free and will regularly need some maintenance to remove weeds and dead plant material. Fortunately, time spent caring for the garden decreases over time. Native rain garden plants do not need fertilizers, winter protection or irrigation. Native plants are adapted to the climate and soils and can tolerate excessive heat, bitter cold, drought, and flooding.

The first two years require the most care while the plants are establishing themselves in the garden. As they are maturing during the first year, they need regular watering to encourage good root development. Irrigate the plants so that the water soaks deeply into the ground, which is equivalent to a one-inch of rainfall. Short sprinkles of water encourage the roots to grow along the surface. When roots grow along the surface plants are less hardy during droughts and freezing temperatures.

Pull weeds to reduce competition for space, light, and water. Most weeds are pioneer species, which means they can grow very quickly. They fill in the open spaces and often can crowd out new rain garden plants. Additionally, they give the garden a messy, unkempt appearance. Spreading a three inch layer of wood chip or leaf mulch around the new planting helps control some of these uninvited species.

Much of the maintenance during the establishment years occurs during the summer months. Therefore, before summer vacation, enlist volunteers to monitor, water, and weed the garden during summer vacation. Local garden clubs, summer school students, scout troops, families, Wild Ones members and Master Gardeners may be willing to volunteer during the summer. Most potential volunteers will say, "yes," when asked.

Activity Description

Specific instructions for rain garden care follows:

<u>Year 1</u>
Watering

1. For the first three weeks after planting, water the rain garden once per week. It is not necessary to water during a given week if one–inch of rain accumulates.
2. Water the garden during droughty periods in mid-summer, if needed.

Weeding

1. First identify what is a weed and what is a rain garden plant. Rain garden plants may be marked with planting stakes. Once the weeds are identified, assign a specific weed for each student or group of students to hand

Rain Garden Maintenance (cont.)

Science (cont.)

Explain data & conclusions (C.8.7)

Use computer software to organize data (C.8.8)

Evaluate questions, hypotheses, conclusions (C.8.9)

Discuss results (C.8.10)

Identify further questions (C.8.11)

Present results (C.12.6)

Evaluate articles & reports using scientific criteria (C.12.7)

Explain survival and population growth of species (F.8.9)

Health

A.4.5, A.12.3, A.12.8, C.4.4, F.4.3

pull. This way ensures only the weeds are removed. Have students look closely at the weed to become familiar with its leaf shape and arrangement, current height and other noteworthy features.

2. Remove plants carefully in order not to disrupt the rain garden species. Pull from the base of the plant. It is easier to pull weeds when the weeds are young and small.
3. Keep track of how many different weeds are pulled and how many of each kind.
4. Take the pulled weeds to a compost pile.
5. Return to the classroom and make a chart of the weeds pulled. Save the chart to compare with future weeding sessions. Take note how numbers and types of weeds change over time.

Check status of weeds and pull them, if necessary, once every three weeks during the summer. A layer of mulch helps to reduce weed growth, therefore, weeding time.

<u>Year 2</u>

General maintenance

- In spring when new growth begins, cut off dead plant material. (Keep stems and seedheads on during winter for visual interest, winter lessons, wildlife cover, and food for birds.)

Watering

- Water only if in a drought.

Weeding

- Continue weeding as needed. Rain garden plants will fill in the spaces and form a dense root mass, which will significantly reduce weeding over time. It is still worthwhile to monitor the garden for weeds once every three to four weeks during the summer.

<u>And Beyond</u>

General maintenance

- Each spring when the rain garden plants begin to grow, go out to the rain garden and clip last year's growth.

Burning

- If desired, and permitted in your community, burn the rain garden in spring. Burning is not necessary for a healthy rain garden community.

Litter Removal

- Periodically remove litter that may blow into the rain garden.

Extensions

- Create a field guide of the rain garden plants and weeds.
- Identify and research the rain garden and weed species. Find out if the weeds are native or non-native. Learn about their history and life cycles.

Additional Resources

Web sites

- National Gardening Association: http://www.garden.org/home
- Kids Gardening: http://www.kidsgardening.com/
- Weed Library: http://www.garden.org/weedlibrary/

Assessments

- Develop a poster describing the importance of weeding.
- Write a management plan for how to care for a new rain garden.

2006 Institute participants are removing Sweet White Clover (Melilotus alba) at Prairie View Elementary School, Oregon, WI. Photo: Libby McCann