

School Monarch Waystation Garden Design



Description:

This Monarch Waystation design and guidance is for creating a garden at a local school. These gardens have been established and certified as waystations at Smarts Middle School, Farmwell Station Middle School, Sterling Elementary School, and others.

Getting started:

Develop your garden plan by selecting the garden site and size. Talk with other teachers and with parents to build support for the garden. Discuss the project with your Principal. Develop your site alterations request (see information below). Your Principal will need to sign off on the application and submit it to Facilities and Services.

Caution: Don't Let Your Garden Be Mowed! Work with your principal and if needed, complete the application to remove your garden area from County-wide maintenance or school maintenance. Ensure that all maintenance works are aware of your plantings. Certify your garden as a Monarch Waystation with Monarch Watch and post the waystation sign as further reminder.

Develop Your Partnerships:

Create a support network of other teachers, with one main contact person. Work with school committees, such as your "beautification" committee. Contact your PTA to solicit support, both financial and gardening. Reach out to teachers at other schools who are creating waystations or who have successfully set them up.

Sample Timeline #1:

April/May: garden planning and approval

May/June: planting

June, July, August, September: maintenance – watering (first year), weeding

Sample Timeline #2:

April/May: garden planning and approval

September/October: planting, maintenance – minimal watering needed and minimal if any weeding

Considerations:

Be sure to pick a location that has both full sun and easy access to water. While the plants are becoming established, they will need frequent watering. Create a team of parents/teachers to water weekly (or as needed) for the first few months. After plants are established, they do not require such care.

The garden should be in a prominent location for easy viewing and use by classes. Provide a designated pathway as well as a defined garden edge. Protect the garden from foot traffic while enjoying it up close!

Size:

There is no minimum size for Monarch Waystations. It will depend on your site. The important thing is to include both host plants for the caterpillar (milkweed for Monarchs) and nectar plants for adult butterflies. For a simple waystation, plant at least 10 milkweeds and 10 nectar plants that include asters and goldenrods. Milkweeds are both host and nectar plants. It blooms May – August. Asters and Goldenrods bloom in the Fall and are an important nectar source for the final generation of Monarchs that migrate to Mexico. A list of 15

recommended plants are provided on the Loudoun Wildlife Conservancy website and through this link: [Plants for Waystations](#).

Design:

Plant taller plants towards the back of your garden and shorter ones in front. If your garden is circular, plant the taller plants in the center and shorter ones on the edge. Use the proper spacing between plants to allow space for growth. Also, create a mass of color by grouping together many plants of a single species.

The Common milkweed and goldenrod are similar in height and could be placed at the back or center of your garden. New England aster is shorter and would go well at the base/perimeter of the garden. Information on the height, width/spacing, bloom time, and color can be found online.

Soil preparation:

For best results, plants must have good drainage, adequate nutrients and available water. If you are creating a new garden bed, begin by removing grass and weeds. Start by "peeling away" about two inches of the surface and "skimming" the grass off with a spade. You can also use the approach called "Lasagna Gardening" which can be found online.

Till the area to be planted to break up hard soil. Spread 3" inches of organic matter such as compost (up to 4 inches if the soil is very poor) over the planting area and thoroughly dig in or till to a minimum depth of 6" inches to incorporate compost. This will improve drainage in heavy clay soil and will help sandy soil hold moisture longer. Break up clods of dirt and remove rocks. Rake the soil level and remove any large clumps. Use leaf mulch to deter weed growth. Leaf mulch breaks down quickly and enriches the soil further.

Milkweed Plugs:

You will be eligible to receive a donation of common and swamp milkweed plugs from Loudoun Wildlife Conservancy. Eligibility will be determined by providing evidence that at least 10 nectar plants (that include goldenrods and asters) will be purchased, perhaps by your PTA or your principal.

Other components:

Monarchs need a place, such as flat stones, to rest and bask in the sun. Include water. Monarchs congregate on wet sand and mud to "puddle," drinking water and obtaining minerals. Place coarse sand in a shallow pan and insert the pan in the soil of your garden. Monarchs also sip from bird baths; be sure to change birdbath water every other day to avoid breeding mosquitoes.

Remember:

Perennial gardens take time to become established. Your garden will: **sleep** in the first year; **creep** in the second year; and **leap** in the third year!

Sources for pesticide free native plants:

We have set up relationships with a couple of nurseries in Loudoun that agreed to stock native, pesticide free plants. Because Monarchs cannot survive on pesticide treated plants, please buy your plants from any one of these nurseries. They are listed at the bottom of the plant list and on [our website](#). Loudoun Wildlife Conservancy members receive a 10% discount!

The following provides guidance for completing the request for alterations at your school:

Monarch Waystation Garden at _____
Requesting Approval of Alterations to
School Buildings and Site

#1. Description

A Monarch Waystation Garden is proposed at _____ to be located _____ the school (see attached map). The garden will be approximately ____ square feet in area. It will be planted with a variety of perennial flowers and grasses.

#2. Beginning and Completion Dates:

The garden site will be prepared in early May, with the actual planting to occur in late May or June.

#3. Estimated Cost:

There will not be any cost for milkweed plants; Monarch host plants (milkweed) will be supplied by the Loudoun Wildlife Conservancy if _____ School demonstrates the ability to provide at least 10 nectar plants that include goldenrods and asters. The cost for nectar plants, mulch and top soil is estimated to be \$_____ (depends on the size of the garden). (Discounts from local merchants?)

#4. Sources & Amounts of Revenues:

Details about the Loudoun Education Foundation 2013 Spring Teacher Grant Program including eligibility, award criteria, and application form are attached or can be found at www.loudouneducationfoundation.org.

PTA?

Principal?

#5. Volunteer Help

Volunteers in the form of teachers, students, parents would account for 100% of the total project implementation. Project maintenance would require 100% volunteer help.

#6. Coordinator

_____ teacher would be the school's coordinator.

#7. Individual to secure permits and compliance with current zoning and code requirements

N/A

#8. Permits

N/A

#9. Business Office of LCPS review for additional insurance.

#10. Signature of school principal and agency initiating request to alter site.

SUPPORT SERVICES
COMMUNITY USE OF FACILITIES
REGULATION

§6-27 Use of School Facilities

Procedures for Requesting Approval of Alterations to School Buildings and Sites

A. All requests from principals, individuals, community organizations or other agencies to alter existing school facilities shall be forwarded to the Assistant Superintendent for Support Services following the format listed below. Approval, disapproval or requests for additional information will be made in a timely manner and communicated to the originator.

B. Procedures

1. Prepare a conceptual schematic of the facility alteration/addition or site change along with a brief written description describing the purpose and scope of the proposed project. Please include total square footage of the project. If individuals need assistance in preparation of the requested documents, they should contact the office of the Assistant Superintendent for Support Services 571-252-1150.
2. Please provide estimated beginning and completion dates for the project.
3. Provide estimated total cost of the proposed project to include:
 1. Construction Cost \$ _____
 2. Site Cost _____
 3. Loose Equipment _____
 4. Utilities _____
 5. Architect/Engineer Fees _____
 6. Contingency _____
4. Identify all sources and amounts of revenue for the project.
5. If volunteer help is to be used, please estimate the amount of work to be done by volunteers as a percentage of the total project.
6. Name the individual who will coordinate the project through completion.

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SUPPORT SERVICES
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§6-27 Use of School Facilities

Procedures for Requesting Approval of Alterations to School Buildings and Sites
(continued)

7. Name the individual who will secure all applicable permits and compliance with current zoning and code requirements.
8. Submit copies of all permits received to the office of the Assistant Superintendent of Support Services, followed by certification of occupancy and/or final inspection when received upon completion of the project.
9. The Business Office of Loudoun County School will review all applications to determine if additional insurance will be required.
10. Signature of school principal and the president of the community organization, or head of agency initiating the request to alter building or site.

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Middle School VA. SOLs related to Monarch Butterfly Waystations

Grade Six

Resources

6.9 The student will investigate and understand public policy decisions relating to the environment.

Key concepts include

- a) management of renewable resources (water, air, soil, plant life, animal life);

Life Science

LS.4 The student will investigate and understand that the basic needs of organisms must be met in order to carry out life processes. Key concepts include

- a) plant needs (light, water, gases, and nutrients);
- b) animal needs (food, water, gases, shelter, space); and
- c) factors that influence life processes.

LS.5 The student will investigate and understand how organisms can be classified. Key concepts include

- b) the distinguishing characteristics of major animal and plant phyla; and
- c) the characteristics of the species.

LS.11 The student will investigate and understand that ecosystems, communities, populations, and organisms are dynamic and change over time (daily, seasonal, and long term). Key concepts include

- a) phototropism, hibernation, and dormancy;
- b) factors that increase or decrease population size; and
- c) eutrophication, climate changes, and catastrophic disturbances.

LS.12 The student will investigate and understand the relationships between ecosystem dynamics and human activity. Key concepts include

- a) food production and harvest;
- b) change in habitat size, quality, or structure;
- c) change in species competition;
- d) population disturbances and factors that threaten or enhance species survival;