

Pollinator Gardening at Your School

A BASIC GUIDE TO GETTING STARTED





How to Use This Guide

Congratulations on starting your school pollinator garden project! In the following pages you'll find resources and helpful hints to assist you at various stages. This guide is primarily focused on resources in Minnesota, in step with the Melinda Vaughn School Pollinator Fund's mission to support Minnesota K-12 schools. Thank you for all you're doing at your school to protect the pollinators!

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Garden Design

Designing a garden with pollinator plants <u>native to</u> your eco-region is better for Minnesota's pollinators and the environment. Because pollinators are active in the early spring and into the fall, a key consideration should be including a variety of flowers to provide blooms from April to October. See the Xerces Society for Invertebrate Conservation's Native Plants for Pollinators - Great Lakes region tip sheet for a list with bloom period, soil conditions, and other information. The Bee Lab at the University of Minnesota has a Plants for Minnesota Bees webpage with bloom times and sun requirements. Blue Thumb - Planting for Clean Water's <u>Plant Finder</u> lets you search for plants by light exposure, bloom months, and more. By including some native grasses in your garden design like big bluestem, you can also provide nesting and overwintering habitat for pollinators.

DESIGN IDEAS & TEMPLATES

Involving students in the garden design can be a great way to increase student engagement with pollinator-related lessons in the classroom and with the garden itself. If your students are in grades 3-12, see the "Designing a Habitat Restoration" activity in the Pollinator Habitat Guide created by the Earth Partnership at the University of Wisconsin-Madison for step-by-step instructions and important elements to consider in the design. One tip is to plant in clumps of the same plant species, which also makes weeding easier. For a checklist of pollinator-promoting actions during the design process, see page 4 in the Xerces Society's Habitat Assessment Guide for Pollinators in Yards, Gardens, and Parks. If students are interested



in designing a garden for monarch butterflies, see the Monarch Joint Venture's <u>Schoolyard Butterfly</u> <u>Gardens</u> guide for helpful hints. The National Wildlife Federation's <u>Native Plant Finder</u> lets you search by ZIP code to find plants that host the most butterflies and moths where your school is located.

Need some design ideas? See the Minnesota Board of Soil and Water Resources' <u>templates for creating</u> <u>pollinator habitat</u>. You'll also find pocket planting design recommendations in their <u>Planting for</u> <u>Pollinators</u> guide. Blue Thumb also offers several <u>design templates</u>, and the Minnesota DNR has provided a variety of <u>butterfly garden designs</u>. When you're ready to move beyond the design phase, check out the Xerces Society's <u>Organic Site</u> <u>Preparation</u> guide.

GET HELP

Need some questions answered during the design process? Reach volunteer <u>Master Gardeners</u> at the main Ask a Master Gardener line: 612-301-7590, <u>submit your question online</u>, or direct your question to a <u>Master Gardner in your community</u>. Master Gardeners also can help show students how to plant at the school. <u>Your local Minnesota chapter of Wild</u> <u>Ones</u> also can help provide recommendations for native plants and assistance with planning.



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Plant Sourcing

Spring plant sales hosted by Master Gardeners, the Friends School, Spark-Y, and the Minnesota chapters of Wild Ones and the North American Association for Environmental Education offer a variety of native plants for pollinators while allowing you to invest in your community. Try to seek out plants that were sourced locally. Suppliers specialized in native plants also offer a great selection and can help you ensure your school's garden project is creating pollinator habitat with native plants. Pollinator Friendly Alliance created a list of Pollinator-Friendly Plant Suppliers and Landscape Services in Minnesota and Wisconsin, Neighborhood Greening assembled a list of Regional Native Plant Resources, and the Minnesota DNR provides lists of native plant nurseries and native vegetation consultants organized by regions of the state. To make shopping easy, Wild Ones created this handy Shopper's Guide for a 10' x 10' Native Pocket Prairie Garden in Minnesota. Blue Thumb also created a list of plants for the rusty patched bumblebee, Minnesota's endangered state bee.

INTERESTED IN STARTING FROM SEED?

For starting native pollinator plants from seed, find helpful tips from the Minnesota Board of Soil and Water Resources, Xerces Society, and Blue Thumb in their <u>Planting for Pollinators</u> guide and from Blue Thumb in their <u>Winter Seed Sowing Guide</u>.

QUESTIONS TO ASK

On the Garden Design page of this guide, you'll find resources with light exposure, bloom months, and



soil moisture for Minnesota pollinator-friendly native plants. If you don't have that information when you're shopping, asking questions about these three topics will ensure you find plants well-suited to your project and school site. The most important question to ask is whether plants are treated with systemic insecticides, which can leave pollinator-harming residues on or in the plant. The Xerces Society's <u>Buying Bee-Safe</u> <u>Plants</u> guide includes tips and questions to ask at the nursery. Recommendations include asking for USDA certified organic plants and seeds, avoiding plants grown with neonicotinoids and other similar insecticides, and shopping at nurseries that practice pollinator-friendly pest management.

FREE MULCH & GARDEN TOOLS

Many cities and counties in Minnesota offer free wood mulch at select yard waste sites, parks, and public works facilities. <u>ChipDrop</u> also lets you sign up for free and notifies local tree companies working in your area that you would like wood chips delivered. For gardeners, there is no fee for the mulch or the service.

For free used garden tools, check to see if there's a <u>Buy Nothing</u> group in your community – there are dozens in Minnesota – and if so ask the group for the tool(s) you need. Often people find they have more tools than they need or are looking to upgrade, or they might lend their tools out for a few days while you're working on your garden project. Many neighborhood organizations and county recycling centers also offer garden tool swaps.



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Safety

Taking the proper precautions will keep your students, project team, volunteers, and the pollinators safe. It's important to wear close-toed shoes, be aware of any allergies, have a designated area for first aid kits, provide drinking water, train students on the safe handling of garden tools, and wear sunscreen. The <u>"Safety in the Schoolyard</u> <u>Habitat"</u> Appendix of the National Wildlife Federation's Schoolyard Habitats Planning Guide is a great resource for additional considerations, as is KidsGardening's <u>Safe Gardening Guidelines</u>.

AVOIDING BEE STINGS

Bees are not aggressive, and in the cases where they do sting it's because they're confused or feel threatened. In their <u>Planting for Pollinators</u> guide, the Minnesota Board of Soil and Water Resources recommends planting habitat away from doors and heavily trafficked areas to lower the chances of negative encounters, and reminding students not to swat at bees – instead to remain calm and slowly move away from them.



The North American Pollinator Protection Campaign (NAPPC) also has the following recommendations for avoiding bee stings:

- Avoid wearing brightly colored or patterned clothing.
- Avoid walking barefoot.
- Avoid perfume or cologne when heading to a heavy bee area.
- Avoid sudden movements.
- Avoid leaving foods, especially sweets, exposed.

We encourage you to explore the NAPPC's brochure <u>"Inviting Bees to Your Property: No Fear of Stings!"</u> for more information.



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Garden Maintenance

Pollinator gardens with native plants generally are lower maintenance than other types of flower gardens, but they require more attention in the first few years while plants are getting established. Creating a maintenance plan will help ensure healthy plants and long-term project success. Consider short-term maintenance needs, including watering, mulching, weeding, and replanting, as well as longterm needs, including the care of signage. Who will weed and water? How will you plan for when teachers, parents, and students move on?

WATERING & WEEDING

When establishing a plan for summer months, make sure those who will be involved in maintenance know the location of tools and the water source, that they can identify weeds, and that they have the information for a contact person to call or email if there are problems with the habitat.

In the first year, native plants will need to be watered once weekly during the summer (twice in hotter conditions). Optimal times are first thing in the morning or in the evening. Watering should be done at the roots, slow enough to give it time to soak into the soil a few inches. Creating a watering plan will help ensure that duties are covered over the summer.

In the first year of your project, plan for weekly weeding. After that, weeding two to three times year – before weeds go to seed – will help ensure the success of the native pollinator plants you planted. University of Minnesota Extension defines a weed as "any plant that is considered undesirable, unattractive,



or troublesome, especially when growing where it is not wanted," and provides this <u>diagnostic tool</u> to help with weed management. Apps like PlantSnap and PlantNet can help you identify weeds while you're in the garden. As noted in this Old Farmer's Almanac list of <u>natural weed techniques</u>, weeds will be easier to remove when the soil is wet and when the weeds are young.

Consider hosting community days with parent volunteers for weeding, using an online sign-up sheet, or enlisting volunteer help from Scouts. Make sure everyone in your project commits to avoid using pesticides including insecticides and fungicides. If you have a budget for some maintenance help, <u>Metro</u> <u>Blooms</u> offers weed removal and management.

LEAVE THE LEAVES + WINTER PREP

In the autumn, pile fallen leaves around shrubs and perennials to provide winter cover for bumble bees and butterflies and under native trees to <u>support</u> <u>moth and butterfly caterpillars</u> during their next lifecycle stage.

As winter approaches, leave the garden standing to allow the birds to have seeds and give insects places to hibernate. This will also help snow gather around stems for hydration and insulation.

Don't clean up too early in the spring. Wait until temperatures are consistently above 50 for at least a week before removing extra leaves.

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Certification & Recognition



When you're at the stage where your schoolyard pollinator habitat is being used as a teaching tool, the National Wildlife Federation offers the opportunity for recognition as a <u>Certified Wildlife Habitat®</u> through its <u>Schoolyard Habitats®</u> program.

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SCHOOL POLLINATOR

FUND

By certifying your site, you'll get the opportunity for media recognition and can order a Schoolyard Habitats sign for your outdoor classroom. You'll also get access to special resources through the National Wildlife Federation.

Columbia Heights Park Schools' North Park School for Innovation in Fridley and the Howe and Hiawatha campuses of Hiawatha Community School in Minneapolis are certified through the NWF's Schoolyard Habitats program.

The <u>Green Ribbon Schools Award</u> from the U.S. Department of Education recognizes schools that create environmentally friendly learning spaces and incorporate environmental sustainability into the curriculum. The Minnesota Department of Education, in cooperation with the Minnesota Office of Higher Education, nominates candidates based on an application process. We encourage you to learn more about this program and apply as your pollinator garden and learning program progresses.

PROFESSIONAL DEVELOPMENT & TRAINING OPPORTUNITIES

Programs to explore on the national level for resources, peer networking, and training opportunities include the <u>Center for Green Schools</u> at the U.S. Green Building Council and Project Learning Tree's <u>GreenSchools</u> program. The National Wildlife Federation's <u>Schoolyard Habitats®</u> webinar series also provides best practices for outdoor learning.

GETTING ON THE MAP

We encourage you to register your garden as part of the National Pollinator Garden Network's <u>Million</u> <u>Pollinator Garden Challenge</u> and to add it to the <u>Homegrown National Park</u> map of native plant gardens in the United States.

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STARTING YOUR POLLINATOR GARDEN

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Funding

We encourage you to explore Minnesota and national grants to support your pollinator garden project, so that you're able to continue adding plants, signage, and pollinator-related programming.

MINNESOTA GRANTS & RESOURCES

Several watershed districts and watershed management organizations in Minnesota offer stewardship grants or cost sharing funds. The Minnesota Board of Soil and Water Resources maintains a <u>Watershed District Directory</u> and <u>Watershed Management Organizations Directory</u> and associated maps that can help you identify applicable funding opportunities in your area.

Pheasants Forever has <u>Pollinator Habitat Program</u> grants available through its Minnesota chapters. You may be able to partner with a local gardening club to apply for a <u>National Garden Clubs youth</u> <u>pollinator gardens grant</u> or with a Wild Ones chapter to apply for a <u>Lorrie Otto Seeds for Education</u> <u>Program</u> grant. The Minnesota Association for Environmental Education (MAEE) also publishes a List of <u>Environmental Education Grants</u>.

We also encourage you to check with your local Rotary clubs and garden clubs for grant opportunities.



NATIONAL GRANTS

Seed Your Future publishes an extensive list of <u>educator grants</u> to support school garden programs.

The Sand County Foundation awards cash grants and plant materials to high school educators in Minnesota, Wisconsin, Iowa, Illinois, and Michigan through its <u>Pollinator Habitat Grant Program</u>.

KidsGardening offers the <u>Little Seeds Pollinator Pals</u> <u>Grant</u> supporting youth garden programs focused on preserving and creating pollinator habitat.

SCHOOL GARDEN FUNDING TIPS

KidsGardening's <u>"Funding A School Garden Program"</u> resource is packed with ideas on everything from fundraising projects to grant writing. Cornell Garden-Based Learning also offers educator planning tools through its Sowing the Seeds of Success program, including a <u>fundraising plan</u> worksheet and <u>example</u> <u>brochures and letters</u> to help you promote your school pollinator garden.



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Creating Community



We encourage you to spread the word about your pollinator gardening efforts within the school community. Tell your fellow teachers and educators why you are creating a pollinator-friendly landscape at the school and encourage them to participate. Including news about your project in a school newsletter is a great way to build enthusiasm.

Your gardening efforts at the school are also a great way to inspire students and their families to help support pollinators in their own lives – either by starting a backyard garden, container gardening, helping in a community garden, or volunteering with a city pollinator garden installation. Handouts, pollinator-related class projects, and other assignments that students bring home can help get the conversation started with their family members.

We hope you will share your story on social media to generate interest around pollinators with the larger community. This can lead to community members supporting or volunteering with your garden project. Earth Day in April and World Bee Day in May are great times for social posts and could be a good opportunity to host an educational or maintenance event.

COMMUNITY BUILDING

Through KidsGardening's <u>Kids Garden Community</u> you can connect with other teachers and educators to ask questions about pollinator gardening, learn from each other, and find inspiration. The <u>School Garden</u> <u>Support Organization Network</u> also offers face-toface network gatherings, leadership institutes and conferences, webinars, and a wealth of resources. The annual Schoolyard Gardens Conference at the Minnesota Landscape Arboretum offers a great way to connect with teachers and educators from across Minnesota and learn about their programs as well as learning about meeting academic standards, engaging with community partners, and more.

You'll also have great networking opportunities at events hosted by the <u>Minnesota Science Teachers</u> <u>Association</u> or the <u>Minnesota Association for</u> <u>Environmental Education</u>.

As you build your network in Minnesota, you may want to reach out to a school in the <u>Minnesota</u> <u>GreenStep Schools</u> program or reach out to other schools in your area to learn about their pollinator garden project.

TELL OTHERS ABOUT US

Supporting pollinator gardening projects and related learning at Minnesota schools is part of the Melinda Vaughn School Pollinator Fund's mission, and we are also focused on building a community around those efforts. We hope you will spread the word about our school garden grant program in Minnesota and point teachers to the resources on our website. Learn more at <u>schoolpollinators.org</u>.

