WISCONSIN SCHOOL GARDEN INTIATIVE BRIEF:

BEEKEEPING WITH YOUTH

The first time a student stands next to a beehive, their emotions are likely to be a mixture of fear and fascination. Having a beehive as part of a garden education program allows fear to turn to pride, and fascination to knowledge. Students easily develop a relationship with their bees, turning insect observation into a profoundly personal experience. Read on to learn about the benefits of keeping bees, considerations before starting, and ways to involve students.

Why Keep Bees?

Unique Learning Opportunity – Students closely observe and form a relationship with the bees. This provides a direct, personal connection to many science and social studies topics, from insect behavior to ecosystem interactions.

Overcoming Fears – In a world that so often introduces bees as "dangerous," allowing kids to discover – and appreciate – bees up close can help many students overcome long-held fears. Students may discover that they quickly become teachers to those around them.

Involving the Community – A beehive near your garden is sure to pique the curiosity of many visitors, and offer opportunities to involve new people in your learning community, from experienced beekeepers to enthusiastic novices.

Garden Health – If your garden is in an area without a large number of natural pollinators, keeping bees can boost your pollination rates and benefit a large number of fruiting crops.

Honey – Students are fascinated to see and taste honey right from the hive!

Before You Begin with Bees

Before setting up your hive, ask yourself a few critical questions to make sure that bees are a good fit for your site. Consider:

- Do I need to gain permission to maintain a beehive in this location? Who should I ask, and in what order? Consider: school boards and administrators, facilities staff, other educators, parents, etc.
- Does my city or township allow beehives? Do I need a permit?
- Where would the beehive be located? Will vandalism be an issue? Could the beehive be secured in a closed-off area if it is?
- What plants or flowering trees are within half a mile of the hive to provide food for the bees?
- Who will be responsible for maintenance of the hive?
- How will safety concerns be addressed?

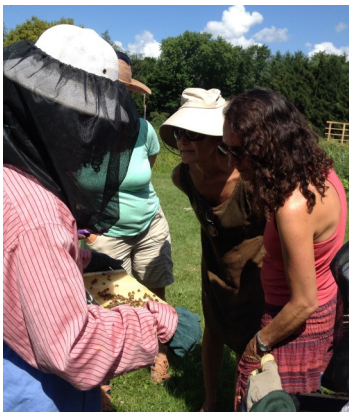
If bees are a good fit for your site, take some time to put together a "Bee Team" within your organization. This team will be responsible for deciding who will care for the hive, when to purchase equipment, and what to do should problems arise. Consider including facilities staff, parents, administrators, teachers, and students on your team. If bees are not a good fit for your site at this time, consider taking a field trip to a local apiary or farm that hosts bee hives, or work with your students to create habitats in the garden that will attract natural pollinators.

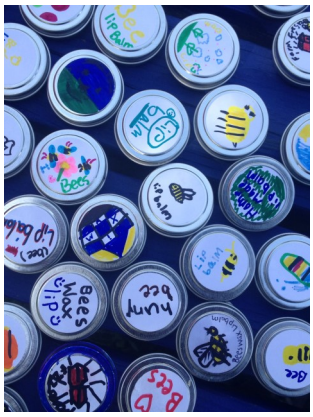
Addressing Safety Concerns

No matter how much support you have for beekeeping at your school, you will still have a number of safety concerns to address before you begin taking students over to the hive. Consider having a meeting where you can answer questions and address concerns. Here are some common concerns:

Stings –Stings are a reality of working with bees. You will greatly reduce the chance of stings by using proper protective equipment, and facilitating a quiet, calm environment around the hive. Many students enjoy seeing how the bees seem to "reflect" their positive behavior.

Allergies –Students with severe bee allergies should not be allowed to work at or near the hive. Make sure you have access to all student allergy information. Also address allergy concerns with the location of your hive – choose an area that is far from common use spaces such as sidewalks or playgrounds. Honey bees are not aggressive like some wasps or ground-nesting bees, tend to be concentrated around the hive, and normally only sting if provoked.





Hive Management

Bees are certainly not a set-it-and-forget-it affair. To effectively manage a hive, you will need a lead beekeeper to conduct weekly hive inspections, test for mites and other pests, maintain equipment, collect honey, and winterize your hive. No beekeeper knows it all, and it is totally acceptable to have a novice at the helm. However, make sure you always have a place to turn to when you need advice. Many beekeepers associations have active online forums, and many beekeepers are open to helping newcomers get started. If your site is suited to bees, but you do not have a future beekeeper on your staff, try creating a partnership with a local beekeeper who is interested in additional space to put hives. If they are willing to open the hive up for student learning opportunities in exchange for a home for their bees, you may have a win-win relationship!

Involving Students

Students can be involved in an on-site beehive on multiple levels. Even observing the beehive from a distance can open up conversations about pollination and bee behavior. Whole classes can watch demonstrations, or talk with the lead beekeeper about their job. In smaller numbers, students can become involved in hands-on hive activities. This type of involvement is best suited for middle and high school students who have a keen interest in learning more about bees. Students wear protective equipment and learn to handle frames and boxes, or sometimes just gain confidence standing next to the hive. This type of learning is full to bursting with teachable moments, and is an unforgettable experience. Finally, students can create value-added products: honey can be bottled and sold as a fundraiser, and wax from your hive can become lip balm or candles.

Resources

Building Background Knowledge:

There is so much to read about bees. We suggest choosing at least one book about the logistics of a hive, and one about honey bee biology before beginning your project. Hands-on beekeeping classes are also a plus!

- WSGI's "Pollinators in the School Garden": www.communitygroundworks.org/content/pollinators-school-garden
- *Natural Beekeeping: Organic Approaches to Modern Apiculture* by Ross Conrad
- *Honeybee* Democracy by Thomas D. Seeley
- University of Minnesota Bee Lab: www.beelab.umn.edu
- List of honey bee forage plants throughout the US: honeybeenet.gsfc.nasa.gov/Honeybees/Forage.htm

Gaining Experience and Making Connections:

Find a local beekeeper that will allow you to watch or assist with weekly hive inspections. Connect with local beekeepers through local bee clubs.

- List of Wisconsin Bee Clubs: http://www.bees-on-the-net.com/wisconsin-bee-clubs/

For more information about the Wisconsin School Garden Initiative, visit us at WISchoolGardens.org

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