



***Bee A Friend to Pollinators* Library Program Educator's Guide**

Dear Valued Librarian,

The Bee Cause Project and **Bee's Wrap** would like to help you *Bee A Friend to Pollinators* at your library campus this summer! Our top priority is providing quality programming that is comprehensive and easily shared with your community. Read on to learn more about the program details and ways we will help you deliver each component with confidence.

Pollinator Week is just around the corner (June 20-26). Fourteen years ago, the U.S. Senate unanimously approved this week as National Pollinator Week to bring awareness to the decline in pollinator population. Under the management of Pollinator Partnerships, this week has grown into an international celebration of bees, bats, butterflies, beetles, moths, flies, wasps, and birds. We hope this program will bring awareness to your community this coming Pollinator Week and beyond.



Through this program, we will help libraries make small changes to improve pollinator habitats and promote even bigger changes in their communities while supporting pollinator literacy. The program is meant to provide the tools that libraries need to (1) host an in-person educational event with activities for demonstration, (2) install pollinator-friendly habitat spaces on campus, and (3) deliver 25 bee-themed pollinator

activity kits to children and families. Collectively, these steps will increase awareness of the plight of pollinators and inspire students and families to become environmental stewards.

We've created a unique package of books, activities, materials, and suggestions for an event at your library. However, there is flexibility in how you execute the program based on your programming needs. We've provided instructions on how we suggest the 25 kits could be used but, again, we know that you will use your expertise to facilitate the program in a way that works best for your participants. Our intention is to provide support to ensure the greatest impact and value are achieved.

We would like to share some of our favorite video links, including some of our own, to inspire you in this pollinator journey.

- **The Critical Importance of Pollinators**
(<https://www.youtube.com/watch?v=6362aJNNt1s>)
- **The Bee Cause Digital Field Trip - Honey Harvest**
(<https://www.youtube.com/watch?v=OpiF5Jj-DTI&t=20s>)
- **Pollination: Trading Food for Fertilization**
(<https://www.youtube.com/watch?v=LiczM-w3V-U>)
- **What Are Pollinators?** (<https://www.youtube.com/watch?v=fOMbAegJ1wQ>)

Our partners at **Bee's Wrap** are committed to covering the world in pollinators, not plastic. Learn more about their sustainable food storage made in the USA with certified organic cotton, responsibly-sourced beeswax, certified organic plant oil, and tree resin. Check out **beeswrap.com** for more information.

If you would like more information about **The Bee Cause**, please check out our website at **thebeecause.org**.

Thank you for your enthusiasm and commitment to pollinator education. We look forward to you joining our network and hope you will decide to *Bee a Friend to Pollinators*. Please stay in touch with us on Facebook and Instagram at @thebeecause and @Beeswrap. We would love to see how you use this program in your community, tag us when applicable.

Bee Well,
The Bee Cause Team

Please let us know if you do not receive everything on your checklist. Email educator@thebeecause.org with any concerns.

Checklist for your **On-Campus Materials**:

- 1 Sustainable Native Bee House
- 1 *Bee a Friend to Pollinators* Lesson Plan & Campus Assessment
- 1 *My Pollinator Journal*
- 1 *Bee a Friend to Pollinators* Poster
- 1 Seed Ball Kit with seeds included
- ***Beekeeper's Lab: 52 Family-Friendly Activities and Experiments Exploring the Life of the Hive*** by Kim Lehman
- ***Flower Talk: How Plants Use Color to Communicate*** by Sara Levine
- ***Bees: A Honeyed History*** by Piotr Socha
- ***Honeybees and Frenemies*** by Kristi Wientge
- ***The Honey Makers*** by Gail Gibbons

Checklist for your **Bee A Friend to Pollinators Take-Home Kit**:

- 25 *Bee A Friend to Pollinators* Bookmarks with plantable seed paper bee
- 50 Bee's Wrap Samples (2 per kit)
- 25 Honey Straws
- 25 *Bee A Friend to Pollinators* Activity Guides
- 25 Gift Bags

<u>Table Of Contents:</u>	
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Program Details.....	Page 5
<i>Bee A Friend To Pollinators</i> Community Event.....	Page 7
Seed Balls Activity Kit.....	Page 7
Planting Your Pollinator Garden.....	Page 8
Installing and Maintaining Your Native Bee House.....	Page 10
Links to Lesson Plans for Pollinator Literacy.....	Page 11
Information About the <i>Bee A Friend to Pollinators</i> Take-Home Kits.....	Page 12

Program Details

Your library is receiving materials to host a ***Bee A Friend to Pollinators Event*** and distribute 25 *Bee A Friend to Pollinators* Take-Home Kits. The kits will include information about pollinator-centered activities that are family-friendly and age-appropriate. The kit and the *Bee A Friend to Pollinators* Activity Guide is intended to start a conversation between adults and children on the importance of pollinators and will help your organization highlight the additional pollinator books that are now available for checkout.

Here are the resources included in the ***Bee A Friend To Pollinators Library Program***:

I. INTRODUCTION

- **Welcome Video** by The Bee Cause Team -
(<https://www.youtube.com/watch?v=30B01fF6jNU&t=24s>)
- **The Bee Cause Splash Page** - <https://www.thebeecause.org/bee-a-friend-to-pollinators-library-program/>
- **OER Commons** - encompassing the entire The Bee Cause catalog of curriculum, lesson plans, educator's guides, and more. A login invitation will be emailed directly to you.

II. INDOOR COMPONENT

- ***Bee a Friend to Pollinators*** lesson plan - including a Pre and Post Campus Assessment
- ***Bee a Friend to Pollinators*** companion video - for librarians to share with families during the Event
<https://www.youtube.com/watch?v=cxkeo7R74vs&t=1s>
- ***Bee A Friend To Pollinators*** companion Factile Game - computer-based game as a follow up to the lesson plan
<https://www.playfactile.com/kffuwvpy1y>
- ***Bee a Friend to Pollinators Poster*** - for display within your branch to highlight the new Pollinator Focused Books
- **5 Pollinator Focused Books** - hand-selected to address many levels of learning
- **Custom-Created Educator Guides** - for 3 of the books included, perfect for a Book Club or Read Aloud Activity

III. OUTDOOR COMPONENT

- **Sustainable Native Bee House** - to install on campus

- **Seed Ball Activity Kit** - to help your campus provide pollinator-friendly food resources for your specific region

IV. COMMUNITY OUTREACH

- ***Bee A Friend to Pollinators Community Event***
- ***Bee A Friend to Pollinator Kits*** - containing the following:
 - *Bee A Friend to Pollinators* Bookmark with plantable seed paper bee
 - Honey Straw
 - 2 Bee's Wrap Samples for Pouch Folding Activity
 - *Bee A Friend to Pollinators* Activity Guide

Bee A Friend To Pollinators Community Event

The ***Bee A Friend To Pollinators*** Lesson Plan will help guide you through the steps to access your community space and outline what pollinators need to thrive. Your community event could be with children or families depending on the interest level in your area. The 25 Take-Home kits for families could be used during your event or give-aways after your event. This would also be a great time to highlight the new pollinator book titles that are available for check-out included with this program. Don't forget to take pictures and get quotes from your participants!

The ***Bee A Friend To Pollinators*** Lesson Plan is also available on our webpage at thebeecause.org. The following resources can be accessed and used as part of your event.

- The companion video is available on YouTube.
<https://www.youtube.com/watch?v=cxkeo7R74vs>
- The companion interactive digital Factile Game can be played by two competing individuals or teams.
<https://www.playfactile.com/kffuwvpy1y>

Seed Ball Activity Kit

Just like all living creatures, pollinators need food and flowers to get the job done! Pollinators use nectar and pollen from flowers as their main food and energy source. Depending on your area there may be an abundance of wildflowers, landscape flowers, crops or trees, and shrubs. Bees will fly about 3 miles from their hive to find their nectar and pollen source.

Seed balls are an easy and fun way to create more wildflower spaces for pollinators on your campus. Even if your campus does not have a designated pollinator garden, this activity will allow you to utilize any area to create a bee meadow.

Tips for Getting Started:

- The kit provided will create between 100 and 120 seed balls.
- This is a great outdoor activity.
- Participants may be tempted to deviate from instructions and add lots more seeds, but seeds need a certain amount of space to germinate properly.
- Small seed balls grow best, less than ½ " in diameter is the recommendation.
- Your Seed Ball kit is specific to the region your state is located within.

- If you would like to create more seed ball activities, visit our website at [thebeecause.org](https://www.thebeecause.org). **My Pollinator Journal** will provide our homemade seed ball recipe and many other suggestions for continued pollinator education. <https://www.thebeecause.org/2-support-materials/my-pollinator-journal/>
- **Full instructions and seed identification are located inside the Seed Ball Kit.**

Planting Your Pollinator Garden

Seed Balls is one way that you can support the pollinators in your community. You can also use packets of wildflower seeds just as easily to create a pollinator habitat. Pollinator Gardens work in containers or raised beds as easily as in a pre-existing flower bed. Here are some suggestions for creating a Pollinator Garden on your campus that will work for sowing seeds and Seed Balls.

1. **When to Sow Seeds** - Your seed packet will provide information about when to plant based on the last frost of the season. Be sure to follow the instructions for the best results.
2. **Preparing the Soil** - Choose an area that allows for at least 6 hours of sunlight. Remove any weeds or debris from the area. Seeds need exposed dirt to begin the germination process. Seed Balls do well in areas of exposed dirt too. Better preparation of the soil = more flowers!
3. **Sowing the Seeds** - The seed packet will provide information about spacing for the seeds. Many species of wildflowers do not like to be crowded so follow the coverage rate per square foot. You can also mix your seeds with sand to make spreading easier. For Seed Balls, toss them so they land about a foot apart. One Seed Ball will potentially grow a one-foot by one-foot area of wildflowers.
4. **Pressing the Seeds** - Seeds need sunlight to germinate! Burying them too deep will result in no growth. Press the seeds into the topsoil by stepping on them or pressing them with your hand. Seed Balls do not need to be pressed into the ground.
5. **Watering the Seeds** - Water the seeds well and continue to water every few days. Depending on the time of year you are planting, you may not need to continue to water. For example, if you plant the seeds during a rainy season, that will be sufficient to aid in germination and growth.

- 6. Alerting your Community** - It is important that your Pollinator Garden have the opportunity to flourish year after year. Consider creating or purchasing signs to keep foot traffic out of the garden.

Learn more about Pollinator Gardens by visiting these websites!

- **Fall Is For Planting Wildflower Seeds** <https://www.americanmeadows.com/fall-planting-wildflower-seeds>
- **How to Plant and Maintain a Wildflower Meadow**
https://www.gardeners.com/how-to/growing-wildflowers/5023.html?gclid=CjwKCAiAl-6PBhBCEiwAc2GOVKrFiLHROm_Ng2zp4bnOQQP56KLSPzgbQinmsD7ApgCrgJethivdexoCo_8QAvD_BwE
- **Easy Steps to Plant a Pollinator Garden from Seeds for Bees, Butterflies, and Hummingbirds**
<https://www.youtube.com/watch?v=mIJ4feqW9R4>

Installing and Maintaining Your Native Bee House

Native Bees are incredible pollinators. There are many native and solitary bees in North America that have evolved alongside the native plants in your area. They will happily visit thousands of blooms in your garden and increase flower productivity in any community. They are a welcome addition to any garden!

When choosing a place to hang your Native Bee House, consider a few details. The bees prefer the house to be securely affixed rather than swinging. Attaching it to a fence, side of the building, or tree will keep the house from rocking in the wind. The native bees also like to be out of the rain so think about placing it under the edge of an existing roof or under the canopy of a tree. These solitary bees also prefer to face cooler morning sun rather than hotter afternoon sun.

Your Native Bee House is designed to be the perfect nesting spot for mason bees and leafcutter bees. Mason bees prefer to use moist, clayey mud for their nests. If none is available you can create a small muddy patch on the ground near the Native Bee House to assist in their work. Leafcutter bees live up to their name and need to have access to a diverse area of different types of plant materials. They cut circles in thin leaves, roll the leaves like cigars, and tuck the rolls into their nests.

Learn more about Mason Bees vs. Honey Bees -- both are great pollinators but have different methods! <https://www.youtube.com/watch?v=d9jWyGt2VHE&t=340s>

Enjoy the ABCs of raising solitary, hole-nesting mason and leafcutter bees as well!
(<https://www.youtube.com/watch?v=YrJVeD0kctE>)

Your Native Bee House is designed to sustain up to two years of healthy life cycles. At the end of that time, you should consider a maintenance plan to ensure that you are hosting healthy, happy bees. This process can take as little as 30 minutes each time, totaling just a few hours of effort each year. See the links below for more information.

If you are looking for further activities for your new Native Bee House and/or Pollinator Garden Space, we recommend that you explore the **My Pollinator Journal** included in this kit.

Check out the following sites to learn more about Native Bee House Maintenance.

- **Mason Bee House Maintenance** <https://blog.dunecraft.com/2018/09/07/mason-bee-maintenance/>

- **How To Clean A Mason Bee House** <https://beekeepclub.com/how-to-clean-a-mason-bee-house/>
- **Gardener's Supply Company** <https://www.gardeners.com/buy/mason-bee-house/37-481.html>

Links to Lesson Plans for Pollinator Literacy

The book titles we've included in this program are some of our favorites. We've covered a variety of ages of interest, reading abilities, and genres with our Book Club Challenge Lessons.

Please use the lessons as a resource for hosting a kid's book club, a summer reading program, or for read-aloud experiences in your branch or school.

All of our educational resources are free, downloadable, printable, and shareable at The Bee Cause (<https://www.thebeecause.org/resources>) as well as our OER Commons Group (<https://www.oercommons.org/groups/the-bee-cause-project/5505/>).

- ***The Honey Makers*** by Gail Gibbons
https://www.thebeecause.org/wp-content/uploads/2021/01/bee_cause_book_club_the_honey_makers.pdf
- ***Honeybees and Frenemies*** by Krisi Wientge
https://www.thebeecause.org/wp-content/uploads/2021/01/bee_cause_book_club_honeybees_and_frenemies.pdf
- ***Flower Talk: How Plants Use Color to Communicate*** by Sara Levine
https://www.thebeecause.org/wp-content/uploads/2021/07/bee_cause_book_club_flower_talk-1-1.pdf

Information About the *Bee A Friend to Pollinators Kits*

The purpose of the ***Bee A Friend to Pollinators Kit*** is to (1) continue the conversation beyond the event about the importance of pollinators and how families can help in their own space, and (2) to learn more about Bee's Wrap Sustainable Food Storage with a hands-on activity. The *How to Fold a Bee's Wrap Pouch Activity* is found on their website at <https://www.beeswrap.com/blogs/news/how-to-fold-a-bees-wrap-pouch>. This information will be included in the *Bee A Friend to Pollinators Activity Guide* to ensure success at home.

Suggestions for the *Bee A Friend to Pollinators Take-Home Kit*:

- As a give-away after you have hosted a ***Bee A Friend To Pollinators*** Event
- As a give-away to anyone who checks out one of the new pollinator-friendly books while supplies last
- As prizes for families who compete in ***Bee A Friend to Pollinators*** Factile Game