



Bee the Change Library Program

Dear Valued Librarian & Educator,

The Bee Cause Project and Whole Kids Foundation believe that YOU can #BeeTheChange! Our top priority is providing quality pollinator programming that is comprehensive and easily shared with your community. Read on to learn more about the details and ways we will help you deliver each component of this program with confidence.

Through this program, we hope to help libraries make small changes to improve pollinator habitats and promote even bigger changes in their community while supporting pollinator literacy. The program is meant to provide the tools that libraries need (1) to create an indoor pollinator-focused learning area, (2) to install pollinator-friendly habitat boosters on campus, and (3) to deliver 25 bee-themed pollinator activity kits to children and families. Collectively, these steps will increase awareness for the plight of pollinators and inspire students and families to become environmental stewards.

We've created a unique package full of activities, materials, and suggestions for an event at your library or school. However, there is flexibility in how you execute the program at your campus. We've also provided instructions on how we suggest the 25 Pollinator Kits should be packed, but again we know that you will use your expertise to utilize the materials in a way that works best for your participants. Our intention is to provide support to you 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 about this pollinator journey.

- 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>)

The Bee Cause and Whole Kids Foundation are thrilled to be partnering with you and your community to raise awareness of the plight of pollinators. We look forward to you joining our network and hope you will decide to #beethechange!

If you are looking for 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 working with you in the future.

Bee Well,
The Bee Cause Team

<u>Table Of Contents:</u>	
Program Details.....	Page 3
Installing and Maintaining Your Native Bee House.....	Page 5
Planting Your Pollinator Garden with Monetary Stipend.....	Page 6
<i>Bee A Friend To Pollinators</i> Community Event.....	Page 7
Links to Lesson Plans for Pollinator Literacy.....	Page 7-8
Pollinator Kits Overview.....	Page 9
Assembly Instructions for Pollinator Kits.....	Page 11-20

Program Details

Each library or school library will receive materials to build and distribute 25 Pollinator Kits. This kit will include pollinator-centered activities that are family-friendly and age-appropriate. The kit and the Educational Material document are 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 #BeeTheChange Program:

I. INTRODUCTION

- **Welcome Video** by The Bee Cause Team - (<https://www.youtube.com/watch?v=30B01fF6jNU&t=24s>)
- **The Bee Cause Splash Page** - provides continued support and resources (<https://www.thebeecause.org/bee-the-change/>)
- **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
- **16 Pollinator Focused Books** - hand-selected to address all levels of learning
- **Custom-Created Educator Guides** - for 12 of the books included, perfect for a Book Club or Read Aloud Activity
- Customized Bulletin-Board Poster - to highlight the ***Bee a Friend to Pollinators*** program

III. OUTDOOR COMPONENT

- **Sustainable Native Bee House** - to install onsite
- **Pollinator Garden with Monetary Stipend** - to be used in conjunction with your Grow Bag to plant a pollinator-friendly arrangement to be displayed on the library's campus
- **Custom Signage** - to highlight the Pollinator Friendly Campus program, to be displayed with your Pollinator Garden

IV. COMMUNITY OUTREACH

- ***Bee A Friend to Pollinators Community Event***
- **Pollinator Kits** - for 25 families in your community. Each kit contains pollinator-themed activities that include the following:

- **DIY Sustainable Native Bee House**
- **Planting a Wildflower Garden from Seed**
- **Save the Bees Bracelet**
- **Honey Tasting Experience**
- **Adopt A Bee Certificate**
- **Cotton Drawstring Bag - for packing and giving materials to families**

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 for 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, thus taking just a few hours total each year.

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

- Mason Bee House Maintenance (<https://blog.duncraft.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>)

Planting Your Pollinator Garden with Monetary Stipend

Educating the community about the importance of pollinators begins with small things that we can all do to improve pollinator habitats in our own spaces. First, locate a suitable place on your campus to place your **Pollinator Garden** and accompanying sign. If there is space, the outdoor area near the entrance to the building will catch the eye of your patrons.

Pollinators need year-round food! Plan to have at least one plant blooming during each season. Use the following Ecoregional Guide (<https://www.pollinator.org/guides>) for a list of native, seasonal plants for your area. Local plant nurseries can help you pick out just the right plant no matter what time of year. Consider the optimal growing conditions your plant requires including sun/shade and soil conditions. A mixture of seasonal plants with varying height and flower colors will make an appealing garden for your visiting pollinators.

Your garden soil is as important as your plants. We recommend choosing high-quality garden soil that is labeled for outdoor container gardens. This will provide all of the nutrients your plants will need. Again, your local plant nurseries can assist you in getting the right garden soil.

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 interest in your area. The 25 bee-themed activity 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 the Bee the Change webpage at (<https://www.thebeecause.org/bee-the-change/>). The companion YouTube video is available at (<https://www.youtube.com/watch?v=cxkeo7R74vs>). We also have an interactive digital game that can be played by two competing individuals or teams on Factile at (<https://www.playfactile.com/kffuwvpy1y>).

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 wide 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/>) as well as our OER Commons Group (<https://www.oercommons.org/groups/the-bee-cause-project/5505/>).

- ***Flight of the Honey Bee*** by Raymond Huber
https://www.thebeecause.org/wp-content/uploads/2021/01/bee_cause_book_club_flight_of_the_honey_bee.pdf
- ***The Bee Tree*** by Patricia Polacco
https://www.thebeecause.org/wp-content/uploads/2021/01/bee_cause_book_club_the_bee_tree.pdf
- ***What If There Were No Bees? A Book About the Grassland Ecosystem*** by Suzanne Slade
https://www.thebeecause.org/wp-content/uploads/2021/01/bee_cause_book_club_what_if_there_were_no_bees.pdf
- ***The Thing About Bees: A Love Letter*** by Shabazz Larkin

https://www.thebeecause.org/wp-content/uploads/2021/02/bee_cause_book_club_the_thing_about_bees.pdf

- ***The Honey Makers*** by Gail Gibbons
https://www.thebeecause.org/wp-content/uploads/2021/01/bee_cause_book_club_the_honey_makers.pdf
- ***The Beeman*** by Laurie Krebs and Valeria Cis
https://www.thebeecause.org/wp-content/uploads/2021/01/bee_cause_book_club_the_bee_man.pdf
- ***Honeybees and Frenemies*** by Krisi Wientge
https://www.thebeecause.org/wp-content/uploads/2021/01/bee_cause_book_club_honeybees_and_frenemies.pdf
- ***Farmer Will Allen and The Growing Table*** by Jacqueline Briggs Martin
https://www.thebeecause.org/wp-content/uploads/2021/01/bee_cause_book_club_farmer_allen.pdf
- ***Our School Garden*** by Rick Swann
https://www.thebeecause.org/wp-content/uploads/2021/01/bee_cause_book_club_our_school_garden.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
- ***The Life and Times of the Honey Bee*** by Charles Miucci
https://www.thebeecause.org/wp-content/uploads/2021/07/bee_cause_book_club_the_life_and_times_of_the_honey_bee.pdf
- ***The World of Bees*** by Cristina Banfi and Giulia De Amicis
https://www.thebeecause.org/wp-content/uploads/2021/01/bee_cause_book_club_the_world_of_bees.pdf

There is also a list of books from the Whole Kids Foundation at Pollinator Books for Young Readers. (<https://www.wholekidsfoundation.org/blog/dig-in-books-about-pollinators-and-pollination-for-young-readers>)

We have included books for adults and pollinator-lovers as well. These titles are great for beekeepers and gardeners in your community.

- ***The Backyard Beekeeper*** by Kim Flottum
- ***First Lessons in Beekeeping (2018)*** by Camille Pierre Dadant
- ***Beekeeper's Lab: 52 Family-Friendly Activities and Experiments Exploring the Life of the Hive*** by Kim Lehman
- ***100 Plants to Feed the Bees*** by The Xerces Society

- ***Honey and Venom: Confessions of an Urban Beekeeper*** by Andrew Cote

Pollinator Kit Overview

The kits include 4 activities and instructions for families to complete each activity. Below you will find resources to supplement the uses of these activities and how they help pollinators.

Activity 1. Add a Mason Bee House to your backyard

Mason bees are excellent pollinators and encompass 139 species across North America. They are known for building their nests in unique places. Mason bees are solitary and thus do not swarm. Mason bees like to nest in holes, they find hollow stems or holes in deadwood to build them. Since all they need is a safe place to live, we can build homes for Mason bees and help their population grow.

- There are 139 species of mason bees that are native to North America. Find out more about Mason Bees and how they are a Gardner's Best Friend. (https://www.youtube.com/watch?v=2nDZh-S_2kw)
- Did you know that there are more than 4,000 native bees in North America? Take a peek at some of these vital and unique pollinators - Native Bee Diversity in North America (<https://www.youtube.com/watch?v=cMRxBJ8iGBQ>)

Activity 2. Plant a Wildflower Bee Garden

Bees use nectar and pollen from flowers as a 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. The Garden you plant will become a wonderful place for bees to visit all Spring and Summer.

- Use the following Ecoregional Guide (<https://www.pollinator.org/guides>) for a list of native, seasonal plants for your area. Local plant nurseries can help you pick out just the right plant no matter what time of year.
- Learn more about turning your yard into a wildflower garden for pollinators! Planting Wildflower Seeds (<https://www.youtube.com/watch?v=UUzZumrLlvA>)

Activity 3. Save the Bees Bracelet

The Save the Bees bracelet raises awareness of one busy pollinator. Bee a voice for taking action. You can wear it proudly, but be ready as you may have to answer questions about the meaning of your bracelet. Luckily, after completing this project you will have all the tools you need to be a Bee a Friend to a Pollinator. They make great gifts too.

- Learn more about the Critical Importance of Pollinators from the experts as well as what you can do to help. (<https://www.youtube.com/watch?v=6362aJNNt1s>)

Activity 4. Honey Tasting Experience

Did you know that the flavor of honey changes based on the season and the region in which it is produced? The honey's flavor is based on the floral variety near the hive. You can support bee populations by buying local honey. It is more vital than ever to support local beekeepers who are helping raise and maintain healthy bees. The percentage of fructose, glucose, amount and type of amino acids, and organic acids can also affect the flavor of honey.

- Honey Wheel - Honey I Hardly Know You!
(<https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=14865>)
- Learn how to appreciate the different flavors, colors, and textures of honey with Taste This: The Connoisseurs Guide to Tasting Honey with Amina Harris @ UC Davis (<https://www.youtube.com/watch?v=HeeCm0kZo8>)
- UC Davis Honey Wheel
(<https://ucdavisstores.com/MerchDetail?MerchID=1333237>)

Assembly Instructions for Pollinator Kits

Please take a moment to read through all of the following information before starting your project.

This is an easy-to-assemble project and should only require a surface the size of the average kitchen table. You will want to work on a clear, clean surface, free of liquids and any other obstacles. We have organized the materials in the boxes you have received to guarantee your success.

Let's start with what you have in the boxes!

Box #1 Nature Watch Mason Bee House - 25 kits

- 25 Clear Plastic Tubes (made from recycled water bottles!)
- 230 Paper Straws
- Bag of Rubber Bands
- Bag of Twine
- Pad of Mason Bee House Small Instruction Sheets
- *1 Teacher's Guide

Box #2 Nature Watch Bee Garden Starter - 25 kits

- 25 Clear Plastic Bases and Lids (made from recycled water bottles!)
- 100 Soil Pellets
- 25 Spoon Straws
- *1 Packet of Seeds
- Pad of _____'s Bee Garden Instruction Sheets
- *1 Teacher's Guide

Box #3 Nature Watch Save The Bees! Kit - 25 kits

- Letter Beads (SAVE THE BEES)
- 250 Yellow Beads
- 25 Bracelet Wires
- 25 Bracelet Clasps
- *1 Teacher's Guide

Box #4 Food Doesn't Grow in Supermarkets - 25 kits

- 25 *Food Doesn't Grow In Supermarkets Worksheet*
- 25 *My Honey Placemat Worksheet*
- 4 packs of honey sticks (do not mix the sticks together)

- *1 Teacher's Guide

Box #5 The Bee Cause Packing Materials Box

- 25 9 x 12 Kraft Recycled Envelopes
- 25 Adopt a Bee Certificate
- 25 Bee The Change Library Programs: Instructional and Educational Materials for the Bee The Change Kits packets
- 25 Packets of Botanical Interests Seeds
- 25 Small Sheer Organza Bags
- 5 Sheets of Red, Yellow, Blue, and Green Circular Stickers
- 2 Rolls of Clear Scotch Tape
- 25 Cotton Drawstring Bags
- 25 Gift Tags with Jute Twine

*The Nature Watch Kits come with a Teacher's Guide. Feel free to use this information as you would like.

* The Nature Watch Bee Garden Starter Kit also comes with a bag of wildflower seeds. This is in addition to the seeds The Bee Cause has included in your kits.

Assembling the Educational Materials

The following items should be put into the **9 X 12 Kraft Recycled Pre-Stamped Envelopes** to create 25 fully packed individual envelopes. Once all of the paperwork is in the envelope, use the attached metal brad to secure the envelope closed.

- 1 Adopt a Bee Certificate from **The Bee Cause Packing Materials Box**
- 1 Bee The Change Library Programs: Instructional and Educational Materials for the Bee The Change Kits packets from **The Bee Cause Packing Materials Box**
- 1 *Food Doesn't Grow in Supermarkets Worksheet* from the **Nature Watch Kit #4**
- 1 *My Honey Placemat Worksheet* from the **Nature Watch Kit #4**



Assembling The Kits

Box #1 Nature Watch Mason Bee House 170s (25 participants)

Each kit gets the following items:

- 1 Clear Plastic Tube
- 9 Paper Straws
- 2 Rubber Bands
- 1 Piece of Twine
- 1 Mason Bee House Small Instruction Sheets

1. Place the twine in the bottom of the clear plastic tube.
2. Put the two rubber bands around the 9 straws at the top and bottom.
3. Tuck the Mason Bee House Small Instruction Sheet into the side of the tube.
4. Place the straws into the tube.
5. Set this kit aside, you will place items from the other kits into the clear plastic tube when you unpack the other kits.



Box #2 Nature Watch Bee Garden Starter 168s (25 participants)

Each individual kit gets the following items:

- 1 Clear Plastic Base and Lid
- 4 Soil Pellets
- 1 Spoon Straw
- 1 Packet of Seeds -- from **The Bee Cause Packing Material Box**
- 1 _____'s Bee Garden Instruction Sheet

1. Place the 4 Soil Pellets side-by-side in the bottom of the Clear Plastic Base to form one layer.
2. Place the Seed Packet and the _____'s Bee Garden Instruction Sheet inside of the Clear Plastic Base.
3. Put the Spoon Straw in the Clear Plastic Tube from the **Nature Watch Bee Garden Starter Kit** inside of the rubber bands with the 9 Paper Straws.
4. Set this kit aside, you will place items from the other kits into the Clear Plastic Base when you get to unpacking that kit.



Box #3 Nature Watch Save The Bees! Kit 167s (25 participants)

Each individual kit gets the following items:

- Letter Beads (SAVE THE BEES)
 - 2 - S beads
 - 1 - A bead
 - 1 - V bead
 - 4 - E beads
 - 1 - T bead
 - 1 - H bead
 - 1 - B bead
 - 10 Yellow Beads
 - 1 Bracelet Wire
 - 1 Bracelet Clasp -- this item should have two sides that screw together in the middle, some do come apart in shipping, check each one
 - 1 Small Sheer Organza Bag -- from **The Bee Cause Packing Material Box**
1. Count out the correct amount of letter beads that is needed to spell SAVE THE BEES.
 2. Count out 10 yellow beads.

3. Put all of the beads into the Small Sheer Organza Bag.
4. Put the Bracelet Wire and Bracelet Clasp into the Small Sheer Organza Bag. The Bracelet Clasps may have separated in shipping, please check that each one has two sides that screw together in the middle.
5. Pull the strings on the Small Sheer Organza Bag and tie in a bow.
6. Place the Small Sheer Organza Bag into the Clear Plastic Base from the **Nature Watch Bee Garden Starter Kit** and put the lid on the base.





Box #4 Food Doesn't Grow in Supermarkets 163s (25 participants)

Each kit gets the following items:

- 1 *Food Doesn't Grow In Supermarkets Worksheet*
- 1 *My Honey Placemat Worksheet*
- 4 packs of honey sticks (do not mix the sticks together)
- 6 Sheets of Red, Yellow, Blue, and Green Circular Stickers -- from **The Bee Cause Packing Material Box**

1. The two worksheets should have been placed into the **9 X 12 Kraft Recycled Pre-Stamped Envelopes**.
2. Use a pen to continue to create A, B, C, D stickers on all of the 6 Sheets of Red, Yellow, Blue, and Green Circular Stickers.
3. Open the bag of honey straws that is labeled Honey A. Place a Red A label on each honey straw. Use a piece of tape to secure the label.
4. Continue this process until all of the honey straws are labeled correctly.
Red = A, Green = B, Yellow = C, Blue = D
***This step is extremely important, the participants do not know which honey is which until they taste test them all. The Educational Materials that go with their kit let them know at the end!

- Each kit gets 1 A, 1 B, 1 C, and 1 D straw. Put the straws into the Clear Plastic Tube from the **Nature Watch Bee Garden Starter Kit** inside of the rubber bands with the 9 Paper Straws and the Straw Spoon.



Assembling the Final Product in Bags

You will need the following materials:

- 25 Cotton Drawstring Bags -- from **The Bee Cause Packing Material Box**
- 25 Gift Tags with Jute Twine -- from **The Bee Cause Packing Material Box**
- 25 Fully Packed Kits -- See the last image on page 12
- 25 Fully Packed 9 X 12 Kraft Recycled Pre-Stamped Envelopes -- see image on page 7

1. Place 1 Fully Packed 9 X 12 Kraft Recycled Pre-Stamped Envelope into the bag. Be sure to pack the bags so that The Bee Cause Project Logo is on the front of the bag.
2. While holding the bag upright, place the Fully Packed Clear Plastic Base into the bottom of the bag.
3. While holding the bag upright, place the Fully Packed Clear Plastic Tube into the bottom of the bag.
4. Gently pull the drawstrings of the bag slightly to create a cinch at the top of the bag. Be careful not to crush the envelope inside.
5. Add a tag to the bag with a message. Include a short message or your library/school name.
6. When packed in this manner, the bags will stand up nicely with the materials inside.

