



Lesson Four

Save the Pollinators!

Lesson Overview

This lesson teaches about the various pollinators found in the garden, how pollination works, why pollinators are so important, and what we can do to protect them. the environment and ecological health.

Lesson Objectives

- Participants will be able to identify at least two common pollinators and two common garden bugs
- Participants will be able to describe why pollinators are important
- Participants will be able to identify at least one plant that pollinators are attracted to in the garden
- Participants will be able to identify that bees make honey
- Participants will be able to describe ways in which we can protect our pollinators

Time Needed

1 hour

Staff Needed

2 Garden Educators

Key Terms

Pollinators/Pollination

Pollination occurs when pollen is moved within flowers or carried from flower to flower by pollinating animals such as birds, bees, bats, butterflies, moths, beetles, or other animals, or by the wind.

Honeybee

A honey-producing bee (genus *Apis* of the family Apidae); *especially* : a European bee (*A. mellifera*) introduced worldwide and kept in hives for the honey it produces

Heirlooms

An heirloom variety is a plant variety that has a history of being passed down within a family or community, similar to the generational sharing of heirloom jewelry or furniture. An heirloom variety must be open-pollinated, but not all open-pollinated plants are heirlooms. While some companies create heirloom labels based on dates (such as a variety that is more than 50 years old), Seed Savers Exchange identifies heirlooms by verifying and documenting the generational history of preserving and passing on the seed. (Definition from Seed Savers Exchange)

Open-pollinated

Open-pollination is when pollination occurs by insect, bird, wind, humans, or other natural mechanisms. Because there are no restrictions on the flow of pollen between individuals, open-pollinated plants are more genetically diverse. This can cause a greater amount of variation within plant populations, which allows plants to slowly adapt to local growing conditions and climate year-to-year. As long as pollen is not shared between different varieties within the same species, then the seed produced will remain true-to-type year after year. (Definition from Seed Savers Exchange)

Hybrids

Hybridization is a controlled method of pollination in which the pollen of two different species or varieties is crossed by human intervention. Hybridization can occur naturally through random crosses, but commercially available hybridized seed, often labeled as F1, is deliberately created to breed a desired trait. The first generation of a hybridized plant cross also tends to grow better and produce higher yields than the parent varieties due to a phenomenon called 'hybrid vigor'. However, any seed produced by F1 plants is genetically unstable and cannot be saved for use in following years. Not only will the plants not be true-to-type, but they will be considerably less vigorous. Gardeners who use hybrid plant varieties must purchase new seed every year. Hybrid seeds can be stabilized, becoming open-pollinated varieties, by growing, selecting, and saving the seed over many years. (Definition from Seed Savers Exchange)

Introduction to Lesson Four

BUGS!

There is a lot to cover in this lesson, and each season this is usually a favorite lesson. One of the main challenges and lessons to impart during this week is that we need to care for our bugs/insects and pollinators rather than harming them. **There are often times stigmas and concerns related to bugs and pollinators. These should be addressed at the beginning of the lesson.**

Explain to participants that bugs have important jobs.

Explain to participants that most insects (including bees and wasps) do not want to sting or harm us. The best thing to do is leave them alone, walk away, and not scream/yell or make a ruckus when we encounter them.

Explain to participants that we should never kill or eliminate a bug without properly identifying it and understanding its function in the garden. Most insects and pollinators are playing an important roll to keep our soils and plants healthy.

What are Pollinators?

Explain that without our pollinators we would not have many of the fruits and vegetables we eat! Pollinators in our garden are most commonly bees, butterflies, and moths. Birds, butterflies, moths, bats, and flies can also pollinate flowers, in addition to bees. Some flowers can also be pollinated by the wind (green flowers are usually wind- pollinated).

Open-Pollinated Seed

Explain that the majority of the seeds we plant in our gardens are “open-pollinated” seed. Ask if anyone knows what that means and why it might be important.

Open-pollinated seeds will go to seed and produce the next generation of the plant. This means we can collect our own seed. Not all heirlooms are open-pollinated. We can look on the seed packages which list whether plants are Heirloom, Open-Pollinated, Hybrid, GMO, etc. At the Big Garden we do not grow any GMO crops.

Introduction to Lesson Four (Continued)

Why is using open-pollinated seed so important – From Seed Savers Exchange

“While hybrids have their benefits, choosing open-pollinated varieties conserves the genetic diversity of garden vegetables and prevents the loss of unique varieties in the face of dwindling agricultural biodiversity. Furthermore, focusing on heirloom varieties creates a historical connection to gardening and food production, building a more sustainable future by carrying on our garden heritage. By choosing open-pollinated and heirloom varieties, you have the ability to help conserve biodiversity and to contribute to the stories behind our seeds.”

In a nutshell — when we use open-pollinated seed we help create food sources for our pollinators, we also are growing plants that are able to produce their own seed that we can harvest. When it comes to food security (and good growing practices) growing plants that produce seeds (for free!) that we can grow again makes perfect sense. This is called a **closed-loop system**. We plant the seeds, harvest the fruits, harvest and process the seeds, and plant again.

Pollinators are Disappearing!

In 2017, a native bee to North America was put on the Endangered Species List. This is terrible news for our food system and overall food security. Without bees (one of the many pollinators) we would not have the following edible foods —

Apples, Mangos, Rambutan, Kiwi Fruit, Plums, Peaches, Nectarines, Guava, Rose Hips, Pomegranites, Pears, Black and Red Currants, Alfalfa, Okra, Strawberries, Onions, Cashews, Cactus, Prickly Pear, Apricots, Allspice, Avocados, Passion Fruit, Lima Beans, Kidney Beans, Adzuki Beans, Custard Apples, Cherries, Celery, Coffee, Walnut, Cotton, Lychee, Flax, Macadamia Nuts, Sunflower Oil, Goa beans, Lemons, Buckwheat, Figs, Fennel, Limes, Quince, Carrots, Persimmons, Palm Oil, Loquat, Durian, Cucumber, Hazelnut, Cantaloupe, Tangelos, Coriander, Caraway, Chestnut, Watermelon, Star Apples, Coconut, Tangerines, Boysenberries, Starfruit, Brazil Nuts, Beets, Mustard Seed, Rapeseed, Broccoli, Cauliflower, Cabbage, Brussels Sprouts

Introduction to Lesson Four (Continued)

Foods that need bee pollination (continued)

Bok Choy (Chinese Cabbage), Turnips, Congo Beans, Sword beans, Chili peppers, red peppers, bell peppers, green peppers, Papaya, Safflower, Sesame, Eggplant, Raspberries, Elderberries, Blackberries, Clover, Tamarind, Cocoa, Black Eyed Peas, Vanilla, Cranberries, Tomatoes, Grapes AND MORE!

Common Veggies that do not need pollinators —

All leafy greens

Some brassicas: broccoli, cauliflower, cabbage and kohlrabi

Below ground root veggies and tubers such as carrots, parsnips, salsify, potatoes, sweet potatoes, horseradish

Ground level root veggies such as beets, turnips, rutabagas

Most legumes including peas and beans

Corn—like other wind pollinated veggies, giving them a little shake helps distribute the pollen.

Most herbs, like the lemon balm pictured

Celery

Onions and leeks

Why Are Our Pollinators in Danger?

Pollinator populations have declined steadily since at least the 1950s. Disease, parasites, and competition from non-native bees have contributed to declines in managed and wild bee colonies. Some butterflies, bats, and hummingbirds also have declined. These losses are associated with **diseases, parasites, habitat loss, habitat fragmentation, landscape deterioration, and climate change.**

- Department of Natural Resources

At The Big Garden we are working to implement solutions that address all these concerns. We are building habitats, mitigating climate change and through carbon sequestration (which happens with good soil practices and organic farming), educating all ages on why pollinators and wildlife are important, advocating for a complete **ELIMINATION** of synthetic chemical use, creating biodiverse gardens where pests and diseased cannot thrive, and re-wilding our cityscapes!

Activity One - Who Are Our Pollinators? (All Ages)

Materials // Laminated vegetable, fruit, nut, herbs, oilseed cards, 5 Things Kids Can Do to Help, Pollinators Handout, Pollinator Buzzy Activity Book

Ages // All Ages

Time // 15 - 30 minutes depending on the area and whether there are good plants for identifying/foraging

Activity Description //

Invite all participant to find a flying insect in the garden and follow it, see where it lands, where it is going. Give them five or so minutes to do this, then invite them to re-group in a central location in the garden. Where did it land – a flower, a piece of grass?

Explain: If you look closely enough you can watch pollination occur! Ask if participants know all the different living things can pollinate the foods we eat --

Ants

Bats

Beetles

Bumblebees

Butterflies

Flies

Honeybees

Hummingbirds

Moths

Thrips

Wasps

Then ask if participants know which food crops need to be pollinated. Hold up laminated examples of fruits, vegetables, herbs, nuts, and oilseed crops. Hold them up one by one and ask “Does this need to be pollinated in order to produce the part we eat, yes or no?” Explain that without pollinators, we wouldn’t have food to eat! This means – we must protect these.

Talk about ways we can protect our pollinators by using the handout “5 Things Kids Can Do to Help Pollinators”

Activity Two - Bug & Pollinator Hunt

Materials // Chalk, Clipboards & Bug List, Markers, Trowels, Garden Gloves, Nets (for play)
Wooden Bug Boxes, Common Garden Bug cards

Ages // 3-10

Time // 15 - 30 minutes depending

Activity Description //

Use the clipboards with insect and pollinator lists attached, or find a place on cement and write out the different bugs with chalk. Split the participants into groups and for 10 minutes have them search the garden location (invite them to dig, look under rocks, etc) but remind them not to harm the garden or any living things. Have them put tally marks to indicate the number of bugs they found! You can also include birds, bunnies, squirrels, and other creatures in the garden.

After the hunting show pictures of common garden insects and how they contribute to the garden. Show images of what we consider “garden pests.” Go through the cards twice so that participants can become familiar with these, and the second time around ask “Does this insect help us or harm the garden?”

Next — Do you see any pollinators? What are they doing? Take note!

Color Hunt — Draw different color chalk squares on the cement. Have the participants go around and find things that match that color and then place them on the chalk square. Note all the beautiful items we can find in the garden. Can you identify all of the plants?

Activity Three - Bee Keeper Talk & Bee Products

Materials // Products that Bees Make — Honey and Raw Beeswax, Beeswax candles, Soaps, Salves, etc to show what these can be used for.

Ages // All Ages

Time // 15 - 30 minutes

Activity Description //

Invite a local bee-keeper to come and talk about what they do. Ask them if they can bring example hives (without the bees) and bee-keeping equipment to show the tools that are used. Ask them to describe and show how they harvest the honey.

Show examples of bee products:

Honey, raw beeswax, beeswax candles, etc.

Activity Four - What Colors Do Bees Like?

Materials // Folding Table, glass jars, sugar & water, essential oils of vanilla, orange, peppermint, flower blossoms

Ages // 10 - 18

Time // 15 - 30 minutes

Activity Description //

This is an outdoor activity and needs to be in an area where there are active honey bees gathering food or water. Set up a table outside (it needs to be durable since this experiment will go on for several days). Have the students prepare at least three different concentrations of sugar water (such as 50%, 25%, and 10% or 0%). Also gather some fake flowers of different colors, or make them from construction paper or colored plastic. Make sure the flowers are large enough so that whatever is used to hold the sugar water (the lid to a large mayonnaise jar or a petri dish, for example) will fit on top of the flower but still allow the petals to show at least an inch around the edge.

Set three dishes with different concentrations of sugar water on three different colored flowers as far apart as possible on the table. Wait for bees to find the sugar water. As the bees begin to find the dishes, have the students observe which sugar concentrations they prefer. Make sure that the dishes stay filled with the solution. The students may need to refill the lid a few times during the day. After a day or so, switch the favored solution to another colored flower on the table. What do the bees do? Can they find the solution that they liked best?

Next time have the students try keeping the dishes in the same place, but switching the flower colors underneath them. Discuss how the bees are finding their nectar. Another variation on this is to remove the colored flowers and instead place a small vial with a screen top and fill it with a scent. Ask the students to place a different scent next to each sugar solution. If they have all the solutions the same concentration, they can test which scents the bees like most. Use natural scents from flowers (such as orange blossoms) or use extracts like those that you can buy at the grocery store (orange, vanilla, peppermint, but don't use banana, lemon or citronella).

This type of experiment may be used to examine how honey bees perceive colors and shapes. For example, train the bees so that two yellow flowers have 0% sugar baits and one red flower has 25% sugar water bait. Then switch the yellow flowers with black flowers of the same shape. Can the bees still find the red flower?

*Adapted from Africanized Honey Bees on the Move Lesson Plan 4.5 – Learning From Bees)

Activity Five - Pollinator Relay Race

Materials // Two baskets, cotton pompoms of all colors, bee wings (for younger kids)

Ages // Ages 2-12

Time // 20 minutes

Activity Description //

Split the participants into 2 teams. Have each team sit in a circle. Select two individuals to be the flowers. They will hold the pots full of pompoms. Explain that the pompoms are pollen which the bees must collect. Only one child in each team can leave the circle at one time and they can only collect one pollen and bring it back to the mat. Then the next child can go and collect one. As each of the flowers runs out of pompoms, they curl up and turn into a seed as they have been pollinated. The team with the most pompoms when they have all run out wins – their bees will have the most food through the winter.

Activity Six - Pollinator Tag

Materials // Paper, double-stick tape, cotton balls of different sizes

Ages // Ages 5-12

Time // 20 minutes

Activity Description //

Start by asking participants to draw their favorite fruit or vegetable on a piece of paper. On the other side of the paper, tell students to draw a large flower. If the participants are younger you may want to have these pre-made. In the center of their flower, place a piece of double-sided tape, and attach a cotton ball to the flower. This is the pollen!

Participants may choose to color the cotton ball with marker to distinguish their pollen from the other flowers in the class.

Next, choose three students to be pollinators. If they are younger participants they can put on the bug wings. The pollinators will now chase the flowers in a game of tag. When a flower is tagged, it must give its pollen to the pollinator. If the pollinator is already carrying a cotton ball, they hand the pollen to the flower to pollinate it. When this happens, the flower turns over their piece of paper to show that they turned into a fruit. This player then comes out of the game to sit down.

The game ends when most of the flowers have been pollinated and turned into fruits!

Activity Seven - Plant A Pollinator Strip or Pollinator Container Garden

Materials // Perennial Plant starts (Bee balm, Butterfly Weed, Milkweed, Hairy Mountain Mint, Echinacea, Sunflowers and Hyssop, etc.), trowels, gloves, organic potting mix, outdoor garden space or containers (1-gallon plastic or terra cotta is recommended as these plants require a decent amount of space), watering cans or spray bottles for younger participants

Ages // All Ages

Time // 20 minutes

Activity Description //

Our pollinators are in crisis and it our responsibility to assist them. In 2017 the honeybee is now listed as an endangered species. One of the reasons pollinators, especially the honeybee are at risk is because their habitat is being destroyed. In the Midwest farms are growing and cities are developing which eliminates many of the native (or prairie) plants that pollinators rely on. Pollinators need blooming plants that grow all season long in order to survive.

Now is the time to help our pollinators by planting blooming plants, especially those common to this bio-region known as the Prairie or Great Plains.

Here are some great plants for our bees! Many of these plants can be found at local nurseries in the area as well as The Big Garden Campus!

- Black-eyed Susan
- Currant
- Elder
- Goldenrod
- Huckleberry
- Joe-pye weed
- Lupine
- Penstemon
- Purple coneflower
- Sage
- Sunflower

Transplants or seeds can be planted out in the garden or in pots. Refer to seed packets or tags on the plants for planting instructions. Remind participants that the plants need to be watered regularly!

Activity Eight - Insect Hotels!

Materials // A wooden box or open bird house that has an overhanging to keep rain & snow out, assorted twigs, wood chips, rolled up paper, toilet paper rolls, leaves, hollow reeds (like bamboo), thin cardboard, blocks of wood with holes drilled in them, hot glue gun and glue sticks, swing or wire to hang

Ages // All Ages

Time // 30 minutes

Activity Description //

**Adapted from inhabitat.com “DIY: How to Build an Insect Hotel from Found Materials”

If you're using rolled up leaves or bits of paper, it's best to pre-roll them tightly and then set them aside for when you need them. The same goes for hollow reeds or bamboo: cut all the sections before you begin so you don't have to stop and start up again a dozen times.

Choose a tube and glue it into place in the bottom left- or right-hand corner of your open box/bird house. This is basically the cornerstone for the rest of the tubes.

Holding the box at an angle, arrange the other tubes around the first one you glued in there, holding them in place as you work. If and when you feel it's necessary, add a drop or two of hot glue to the bottom of a tube to secure it before settling it in, or between the tubes if you find that they're not locking together tightly. The tubes should hold one another in place firmly, but shouldn't be packed in so tightly that they crush one another or impede air circulation.

It's good to have a variety of tube sizes available so you can use different thicknesses to fill large or small gaps as they're created. Varying the sizes also helps different insect species find homes in among the niches.

You can create a sort of condo hotel by using a large wooden box and alternating the types of filler you have inside of it. If you create sections within the box that have wood bark, wood chips, rolled tubes/hollow reeds, drilled wooden blocks, bundles of sticks, and bunches of straw, you may find that a dozen different species find shelter in there.

When it comes to drilling “bee holes” in wood, take into consideration the fact that different bee species are drawn to different sizes of holes for shelter and egg-laying:

- For leafcutter bees, the drilled holes should be 1/4" wide and 2 1/2 -4" deep.
- For mason bees, drill holes that are 6" deep, 5/16" wide.

Try to space holes at least 3/4" apart, and never drill entirely through the wooden blocks.



Activity Nine - Gourd & Pine Cone Bird Houses

Materials // Bird seed, pine cones, peanut butter

Ages // Ages 5-12

Time // 20 minutes

Activity Description //

Another great way to attract pollinators, especially birds to the garden is to make bird feeders. One of the easiest ways is hunt for pinecones near the garden, in your neighborhood park or woods. Take spreadable peanut butter and cover the cones. Place birdseed on newspaper or cardboard and let the participants roll their pinecones in it. Then use twine to wrap around the pinecone or create a loop at the top for hanging in the tree. These bird feeders look beautiful and they will attract birds (especially in spring) to your garden.

Activity Ten - How Pollination Works

Materials // Vegetable plant poster with flower and all part labelled, laminated pollinator pictures with velcro that can be put on the poster.

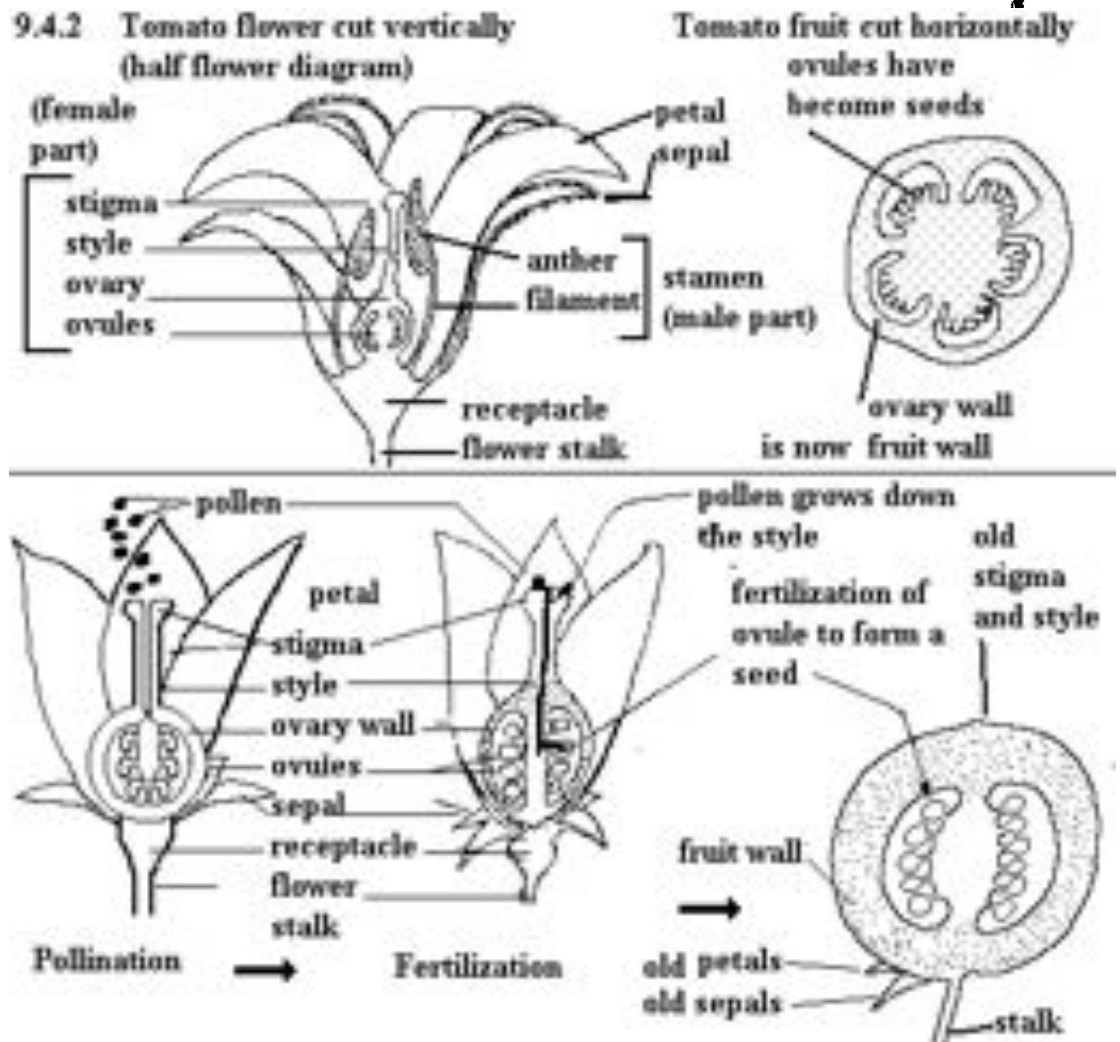
Ages // All Ages

Time // 10 minutes

Activity

Description //

Show participants how pollination actually works. Make sure you label all the parts of the plant and go through them a few times until participants can see each part of the flower. Remind them that these flowers turn into our fruits. Cucumbers and eggplants are a very easy examples to show participants how the flower and the fruit are both present. For little ones they can practice the process of pollination on the poster with the different pollinators.



Activity Eleven - Flower Part Identification

Materials // Small scissors, white paper, string, tape

Ages // Ages 5+

Time // 10 minutes

Activity Description //

Walk around the garden area looking for flowers on the vegetable plants and otherwise. Have every participant gently pick a flower (for example, one tomato flower). Take these flowers back and tape them down onto heavy paper like white cardstock. Then cut pieces of string (or use markers or colored pencils) to draw lines or arrows to each part of the flower. While making this project discuss what each part of the flower does to make pollination happen and then eventually produce fruit!



Activity Twelve - The Power Of Pollinators

Adapted from Project Wild Nebraska

Materials // Laminated pollinator trivia questions from Project Wild's "The Power of Pollinators"

Ages // Ages 4-18

Time // 10 minutes

Activity Description //

Sit in a circle and go through the pollinator trivia questions, or break into two small groups if the class size is large and have them work together to answer the questions. These questions are really amazing and even cover facts specific to Nebraska!

Activity Thirteen - Local Honey Taste Test

Materials // Spoons, three jars of raw local honey, crackers, goat cheese (an option!)

Ages // 3+

Time // 10 minutes

Activity Description //

After bees take their nectar from the flowers they visit they head back to the beehive and turn the nectar into what? HONEY! We like to call this Nature's (or God's) sweet treat. Let participants know that there are so many benefits to our body when we eat honey. Local honey is great for anyone who has seasonal allergies. Ask participants if they or anyone they know has itchy, watery eyes, puffy or red eyes or congestion in the Spring or Fall when pollen counts are high? Eating a spoonful of honey produced by bees in your area can help with this.

Bring out various jars of honey from local farms/bee-keepers. Tell participants where each one came from and any other information you might know about the honey. Honey can be spread on crackers (make sure to bring a gluten-free option) or a small amount put on spoons. Ask participants to describe the flavor or taste, do they notice anything different? Explain that the flavor of the honey depends on the types of blooms/flowers a bee visited. Most often bee-keepers have their bees near clover because it gives the honey a specific taste that a lot of people like.

Also mention that honey is a great replacement for white sugar which is refined and not the best for us.

Ways to use honey -

On toast or pancakes

In tea

In fresh squeezed lemonade in the summertime

In homemade cookies replacing the white sugar

As a glaze on baked chicken

Activity Fourteen - A Picnic Without Pollinators

Materials // Picnic blanket, various foods that would be at a picnic, plates, cups, silverware, etc. Set it up just like it would be at a real picnic.

Ages // All Ages

Time // 10 minutes

Activity Description

// Show participants what it would be like at a picnic if we did not have our pollinators. Set out all the items and then make it look really nice. Then one by one remove all the different items, showing that without our pollinators we wouldn't get to enjoy any of these foods. At the end, actually enjoy the picnic foods!! But before you eat say **THANK YOU POLLINATORS!!**

Here are some ideas —
Adapt as you are able!



Activity Fifteen - Save the Pollinators

Materials // Markers, Paper, Any other art supplies to make, contact paper, lamination sheets and the laminator, long wooden stakes (if you want to attach your signs to stakes).

Ages // Ages 5+

Time // 30 minutes (depending on how creative you get!)

Activity Description //

It is time to get the message out about our pollinators! Pass out cardstock paper, cardboard, poster board, or anything else you can think of to create signs/posters/fliers about pollinators. Work with participants to brainstorm where these could get put up — at local stores, inside their school, outside in the garden, passed out at home, faith communities, clubs, etc. Let participants know that spreading information and education is one of the best ways to inspire change.

Here are some great ideas for the posters —

Save the pollinators!

Our pollinators (birds, bats, beetles, flies, ants, bees, wasps) are responsible for 1 in 3 bites of food

Native bees are on the endangered species list!

No more chemicals, it is harming our pollinators.

Organic garden, do not spray!

Bees say “Keep your chemicals off me, I make your food!”

Stop using pesticides and herbicides please, save the pollinators!

Bees revolt.

You could even have a parade with your signs. Get creative. :)

Pardon the

WEEDS



I'm Feeding the

BEEES



Important:

**SAVE
THE
BEEES!**

APES CURAMUS ET NOS CURANT
Anthony Burrill for Green & White

Recipes

Honey Lemonade

There are some easy and refreshing drinks that incorporate honey – Honey Lemonade (use fresh squeezed lemons, water, and honey for the sweetener) add ice cubes to make it cool. This is perfect to drink while gardening.

Herb Iced Tea with Honey

Try to make an herbal tea from herbs in the garden – lavender, chamomile, or mint. Pour hot water over herbs in a pot or using cheesecloth, or better yet, let it steep in the sun in the garden for an entire day. Squeeze the water from your cheesecloth bag and/or strain the water from your teapot through a mesh sieve. Put your tea on ice to cool it down. Yum!

Ants on a Log

This popular recipe will live forever in snack history. Cut celery into small pieces, spread peanut or almond butter, add raisins or other dried fruit on top.

Celery

Peanut or other nut butter (sunflower butter if there are allergies)

Dried fruit of your choice (raisins or cranberries work great!)

Garden Care

Thinning Your Seedlings

Explain to your garden class participants that certain seedlings need to be thinned, which means they need extra space in the soil to grow. Some examples are onions, beets, and carrots. The best way to thin your garden accordingly is to check the seed packets and follow the thinning instructions. Seed packets will give the precise information when it comes to spacing between rows and plants. The best time to thin is when the plants are quite small, but not too small that you would destroy all of them by poking a few out.

METHOD Use your fingers to pinch the plant at the stem (below the leaves) and pull it straight out with the roots. These can go in a small bucket or basket, and then be dumped into your compost pile. Be careful so that you do not disturb the plants you wish to keep. Also, never stand directly on your garden bed, which will encourage soil compaction.

Mulching the Garden

Mulching the garden is a great way to keep the weeds down, retain soil moisture, and protect your plants all season long. For a gardener that doesn't want to spend a lot of time in the hot sun weeding the garden, mulching is the best remedy.

METHOD Mulching doesn't necessarily require wood chip mulch – you could use cardboard boxes, shredded newspaper, straw or hay, or leaves. Mulch around the base of all plants and/or between rows of seeds that you planted, leaving a small ring area where you can water. Explain to your garden class participants that the soil likes to be covered up, just like we like to sleep in blankets at night or wear clothing during the day. Cardboard and straw also make great walkways in the garden.