



# *Abejas*

**A Youth Garden Education Program  
Huerta del Valle Community Garden**



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**Dear participants and families,**

On behalf of all of us at Huerta del Valle, we would like to welcome you to the Abejas program! We are so excited to spend the next few weeks co-learning and co-creating with you. Together, we will cultivate a safe space to learn more about our identities and connect through gardening, cooking, storytelling, play, and art.

Our story ~ The Abejas program started a few years ago when a couple of college students stepped up to support children at the garden in positive ways. Since 2017, Huerta del Valle has made it a priority to make sure that there is consistent Abejas programming for youth year-round, including during school breaks which are often when there is a bigger need to have engaging activities and experiences for children.

We will honor, respect, and value your knowledge and vow to always encourage the inclusion of your stories, identities, and ideas.

Over the course of Abejas we will progress through the four sacred elements: earth, water, air, and fire—bringing balance and harmony to all life on Earth. Within these activities, we will learn to honor our ancestral roots and the indigenous stewards of the land as well as practice regenerative agriculture to help promote social, environmental, and food justice. Together, we will learn, grow, explore, and most of all, have fun!

We are buzzing with excitement to meet you all and can't wait to share our home with you!

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## **Dear Abejas Co-facilitators & Volunteers,**

First, we thank you for your interest in sharing your time, energy, skills, and care with the children in Abejas.

This letter intends to introduce you to the Abejas program themes, monthly schedule, and proposed structure. In addition to giving you an overview of the program, the handbook provides outlines of element-themed activities and lessons. These are possible programming—no need to complete every single activity. You have the ability to adapt these lessons or create new ones based on themes that you and participants seek to explore in Abejas.

### **Generally, the Abejas program themes include:**

- Social, Environmental, and Food Justice
- Permaculture and Agroecological Gardening
- Social-Emotional Development Skills and Games
- Food Preparation and Healthy Eating
- Sacred Elements: Earth, Water, Air, and Fire

### **Program Schedule**

**1st - EARTH LESSONS**

**2nd - WATER LESSONS**

**3rd - AIR LESSONS**

**4th - FIRE LESSONS**

### **Saturday Schedule**

<b>10:00 - 10:30am</b>	Welcome, Check-in, Grounding
<b>10:30 - 11:00am</b>	Abejas Garden Plot Work
<b>11:00 - 11:15am</b>	Tea + Snack Break
<b>11:15 - 11:45am</b>	Earth/Water/Air/Fire Lesson
<b>11:45am - 12pm</b>	Reflection and Closing

This handbook hopes to share activities, images, and curricula with you that have helped inform our work with Abejas. We hope this information serves as a source of inspiration for Abejas and empowers you to create your own programming.

Onward!





## Icebreakers, Games, and Community-Building Activities

### *Fortunately, Unfortunately*

Build a communal story. The first person begins by saying “fortunately...” then shares as much of a story as they want, before passing it to the next person. Person 2 continues the story, starting with “unfortunately...,” then passes it to person 3 “fortunately...,” continuing until all people have shared.

### *Iceberg Activity*

Explore identities and build a trusting community. With an iceberg, only a small portion is seen above the water, the rest lies below. Similarly, with our identities, we are limited to what we see on the surface. Ask students to draw an iceberg and identify the parts of their identity that are visible above the surface, and the parts of their identity that might be invisible or only present below the surface. This activity allows your community to get to know you better while challenging stereotypes or assumptions. It may be helpful to show an example of your own page.

### *Representing Me*

Give each participant 3 minutes to find a natural object from the garden that represents (e.g. a rock for those feeling hard...). Sit in a circle with the objects and give each person a chance to say their name (and pronouns, if they want) and share their object and how it represents them.

### *Move Your Butt*

This movement exercise explores what we have in common. Participants sit in a tight circle. The facilitator says “Move your butt if...” followed by a statement. If that’s true for a participant, they need to find a new seat. This is non-competitive in that there are enough seats for everyone. The purpose is to notice how many people move. Start with lower stakes prompts then transition, if you feel the group is ready, to higher stakes prompts. Examples below!

- Move your butt if...
  - You like to play soccer
  - Your favorite subject is math
  - You like cats more than dogs
  - You like pineapple on your pizza.
  - You love dancing.
  - You are a vegetarian.
  - You like being inside more than outside.
- Move your butt if...
  - You speak a different language than English



- You have experience gardening
- You sometimes feel nervous being around new people
- You have more than one sibling.
- You want to work in a creative job when you grow up.
- You've stood up for someone who was being picked on.
- You were born outside of the US.
- You walk to school.
- You try not to judge people by how they look.

### *Collective Altar*

Each person brings from home an object that is meaningful to them to place on a collective altar for the duration of the program. In the opening circle, people introduce themselves and say a bit about their object.

### *Hope Tree*

Give each participant a permanent fine point marker and a ribbon. On the ribbon, write hopes, goals, prayers, and intentions. Tie the ribbons loosely to a tree so the wind can take the hopes to support in their manifestation.

### *One Word Gratitude with Echo*

Each person in the circle says one thing they are grateful for and everyone echoes it back in unison. Continue until everyone in the circle has spoken. Good for use as a closer as well as an opener.

### *Mingle Mingle Mingle*

Get the whole group together. The leader running the game calls out a category question (for example—what is your favorite color?). Everyone in the group would then have to start calling out their favorite color to each other and find the others in the group who have the same favorite color as them.

### *Two Truths and a Lie*

To play, everyone sits or stands in a circle. One by one, each person in the circle says three statements about him/herself. Two of these statements must be facts, or "truths," and one must be a lie. The other members then try to guess which statement is the lie.

### *Common Ground*



Get into a circle with chairs or designated spots for each participant, with one fewer spot than participants. One person should be in the middle and say “my name is \_\_\_ and I share common ground with people who...” and then say a true statement about themselves (for example, “my name is Hava and I share common ground with people who are older siblings”). For anyone who shares in that statement (who are also older siblings, for example) run into the middle of the circle and try to find a new place. The last person will not have a spot and will become the new center person, repeating the statement.

### *The Line-Up Game*

Separate everyone into teams of 5 or 6 people. The facilitator calls out “everyone please line up in...” and fills in the blank with a statement such as the suggestions below. All the players race to find the right order and shout when they are finished. For example...

- Everyone please line up in order of age, oldest at the front, youngest at the back
- Everyone please line up in first name alphabet order
- Everyone please line up by height, shortest first
- Everyone please line up according to your birthdays - first in the year goes first
- How many cousins have you got? Line up with the least cousins in front
- What color is your top? Line up in alphabetical order with the earliest letter first
- Most hair at the back, least hair at the front

Make the odd round - or the whole game - a silent one! Players can only communicate with gestures.

### *Name Toss*

This is good for the first or second day, for learning names. Go around the circle and have each person introduce themselves. After everyone has stated their name, call someone’s name and toss the ball to that person. The recipient must then call someone else’s name and toss the ball to that person. Repeat until everyone in the circle has been tossed the ball once. Ask everyone to remember that order, then try to pass the ball in the same order (while saying names) as fast as the group can. Try timing it and seeing if they can beat their time, or doing it in reverse order!

### *Web of Names*

For this game, take a large ball of string or yarn that can easily unravel. The group sits in a circle. To start, one person should hold onto the tip of the string, then say the name of another person and throw the string to them. The second person should then say the name of a different person, then throw the ball of string to the third person. If you want, choose a pretty yarn and have participants wrap the yarn around their wrists loosely before throwing it to the next person and hold the yard there until the end of the game. Then, help participants cut the string and tie it



around their wrists like a bracelet connecting the community. Or, when the last person's name has been said, the group unwinds the web by saying the name of the person who came before them while throwing the ball of string at the person. Make sure that each person rewinds the ball of string before throwing it to the preceding person.

### *Value Spectrums*

Arrange participants in the center of a space, and mark two lines on either side. Ask a question (like do you prefer nighttime or daytime) and designate each side a different answer. The participants move to a location between the two opposites or at either side. Ask some participants to explain their answers if any feel comfortable. Examples of spectrum questions:

- Do you like being with a lot of people or spending time alone?
- Do you like winter or summer?
- Do you resonate more with peanut butter or jelly?

### *Charades Telephone*

The leader lines everyone up and whispers an action or situation into the ear of the first person (for example, brushing your teeth, miming, gardening, jumping for joy, fishing and catching a huge fish...). The first person turns around and taps the next person in line on the shoulder. He or she then acts out the clue using classic charades rules (no talking or noises permitted). The second person then taps the third person and acts out his or her understanding of what was acted out. This process continues until it reaches the last person in line, who must guess what the action is.

### *Animals, Names, Action*

This is a good name game for the first or second week. In a circle, each participant introduces themselves, saying their names, an animal they like that starts with the same letter as their name, and a dance move. The next person has to repeat the first person's name, animal, and action, then say their own. Continue around the circle.

### *Screaming Toes*

Participants gather in a circle. Everyone looks down and picks the shoes of another person in the circle to stare at. While saying, "screaming toes!" everyone simultaneously looks up and if two participants lock eyes (because they were staring at each other's shoes) they have a screaming contest. Whoever runs out of breath the fastest is eliminated. Continue until there is one winner.

### *Magic Wall*



This is a good game to practice names once everyone has had the chance to initially learn each other's names. Divide participants into two groups. Raise a tarp or blanket of some sort between the two groups (the point is that neither team can see each other). Each team sends one of its members up to the edge of the tarp or blanket. The people holding the tarp or blanket count to three and the tarp or blanket is dropped. This leaves two people staring at each other. Whichever can yell out the other's name first 'wins'. The 'loser' then joins the 'winners' team and the game begins again until all the players are on one side.

### *Rock Paper Scissors Tournament*

Everyone finds a partner and plays a rock-paper-scissors game. The loser stands behind the winner's shoulders and follows them around, cheering for them. The winner finds a new person to play with, and they repeat the pattern (so the winner of this second game now has three people cheering for them). Continue until there is only one winner.

## **CHECK-IN QUESTIONS**

Use for openers, closers, transitions, or any other time you feel appropriate! The low-risk category are good for when the group is still getting to know each other, then transition to medium- and high-risk questions when the group feels comfortable and safe with each other.

### *Low Risk*

- What is your favorite book?
- What is your favorite TV show or movie?
- What is your favorite animal?
- What is your dream job?
- If you could learn and master one skill what would it be?
- Share a rose (something positive from the past week), bud (something you are looking forward to), and thorn (something negative from the past week)
- What is your favorite smell?
- What is your favorite sound?
- If you could invent a magical world, what color would the sky be?
- What are you looking forward to learning?
- What is your favorite season?
- If you could be any age, what age would you be?

### *Medium Risk*

- What are you passionate about?
- What are you proud of?
- What is one thing that made you laugh today?



- What is a goal you have?
- What is your favorite memory?
- If you could give advice on anything what would it be?
- What is your favorite spot in nature?
- What makes you special?
- If you could be invisible for a day, what would you do?
- What do you like most and least about school?
- If you could change one rule, what would you change?
- If you could make one rule that everyone in the world had to follow, what rule would you make? Why?
- What are three things you do everyday?
- What is the funniest thing that ever happened to you?

*High Risk*

- Who do you admire the most and why?
- Where are you from? What is the story of your family?
- What is something that makes your family or community special?
- What makes you happiest?
- When is a time you acted with courage?
- What's the hardest thing about being a kid?
- How do you handle your emotions when you are upset?
- Share something happening in the world that concerns you and something that inspires you.
- How would you change the world if you could?



## **WEEK ONE**

**THEME:** Introductions and Community Agreements

**OBJECTIVES:**

- Students get to know the space and each other
- Students build community and set expectations

**MATERIALS:**

- Markers
- Big post-it paper



**SCHEDULE:**



<i>Time</i>	<i>Activity</i>	<i>Notes</i>
10:00 - 10:15	Welcome and Introduction <ul style="list-style-type: none"><li>- Gather all participants into a circle</li><li>- Instructors introduce themselves and the space</li><li>- Land acknowledgment and grounding activity</li><li>- Welcome and logistics</li></ul>	If you want, invite the parents or guardians of participants to stay for this first day's welcome.
10:15 - 10:30	Name Games	Choose from the list in this guidebook or come up with your own!
10:30 - 11:00	Garden Plot Intro <ul style="list-style-type: none"><li>- Introduce the plot and what the group will be doing throughout the program in the garden. Introduce the plants that are already planted in the Abejas plot, asking if anyone already recognizes the plants.</li><li>- Chat about previous experience (have you ever planted anything in a garden before? what are you looking forward to in growing something together?)</li><li>- Do a garden scavenger hunt for hidden facts and clues about Huerta around the entire garden</li></ul>	
11:00 - 11:15	Tea + Snack Time	See page 13 for notes on facilitating this activity
11:15 - 11:45	Community Agreements	See the next page for instructions on facilitating this activity



11:45 - 12:00	<p>Closing—kids can decide what their closing ritual will be for the program! Here are some ideas:</p> <ul style="list-style-type: none"><li>- Share two gratitudes from the day, one for a person or people and one for the earth</li><li>- Spiral hug</li><li>- Share something you learned</li><li>- Share a quote about the interconnectedness of life with earth, with other humans, with water, or with animals</li></ul>	
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## Community Agreements

Community agreements serve as a living document of how the Abejas community intends to treat each other. This is a collective, interactive process done on the first day (or the first few if it takes longer!) where the Abejas participants and facilitators establish expectations and values to refer back to if conflict emerges.

**MATERIALS:** Poster paper, markers

**OBJECTIVES:** Establish shared community agreements, values, and guidelines for the Abejas program

Abejas participants and facilitators sit in a circle, with the facilitator guiding the discussion. Explain the goal of the conversation, invite everyone to share guidelines and agreements that are important to them, and write down ones that the group agrees on the poster paper. Check for group agreement before writing down agreements and clarify if guidelines are unclear. Facilitators are also co-participants and can pitch ideas!

### Guiding Questions:

- What is the most important value (may need to define the term “value”) to you?
- What would make Huerta del Valle a safe and respectful place for us to learn?
- What do we need from others to feel happy and safe?
- What does respect look, feel, and sound like?
- What do we want to happen if someone hurts our feelings? What about if we hurt someone else’s feelings?

### Example of Possible Agreements



- Be curious, open, and respectful
- Treat others as they want to be treated
- Listen to your body and communicate your needs
- Treat the environment with respect
- Bring a positive attitude
- Have fun!

After writing the list, invite everyone to sign the paper (we can even decorate it!). Post community agreements in a visible place and review them frequently, especially as new participants are integrated into the group. Community agreements can always be changed or added to throughout the program!



## Tea + Snack Time

**MATERIALS:** Hot water kettle and plug, heatproof cups, knives, cutting board

**OBJECTIVES:** Tea + snack time serves as a break each week for refueling, mindfulness, building connection to different plants, and sensory garden experiences.

### TEATIME INSTRUCTIONS:

Each week, pick a different herbal or medicinal plant that grows in Huerta. Check with Andres or other farmers working to make sure the plant is available for harvesting and using.

*Possible teatime plants:* mint, lemongrass, eucalyptus, rosemary, lavender, camomile, lemon balm...

During teatime, heat hot water on the kettle, then introduce the group to the plant of the week, teaching both the English and Spanish names. Teach a bit about the plant and its healing or medicinal properties, then teach the group how to harvest the plant. While harvesting or after, have a discussion about connection to the plant. Ask the students about what connections they have to the plant, what they already know about the plant, and what memories they may have associated with the plant. Pass out hot water in cups and make tea together. The proportions should be 1 teaspoon of herbs per 1 cup of water. While drinking the tea, focus on a mindful sensory experience, prompting the kids on what they smell, taste, see, and feel.

### SNACKTIME INSTRUCTIONS:

Plan snacks a few days in advance based on what's available on the farm. Use fruits like oranges or bananas, or veggies like carrots or tomatoes, and use the budget to supplement with nutritious additions like nuts or dips.

- Wash and cut the produce (could be helpful to cut into bite-size pieces and have toothpicks for more uncommon fruits or veggies!)
- Be creative and ask kids to use their senses when they taste the snack, like smell, sight, taste, and touch!
- If you want, print out a worksheet (like the one on page 10 of [this](#) document)<sup>1</sup> and have kids record the appearance, smell, taste, and growing requirements for each plant.
- Don't forget to wash hands and compost scraps!

Below are fun facts and activities about different fruits and veggies that might be used for snack time.<sup>2</sup>

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<sup>1</sup> <https://www.ecoliteracy.org/sites/default/files/CEL-CA-Thursdays-Tasting-Lesson.pdf>

<sup>2</sup> [https://www.ecoliteracy.org/sites/default/files/media/cel\\_nourishing\\_students\\_enrichment\\_activities.pdf](https://www.ecoliteracy.org/sites/default/files/media/cel_nourishing_students_enrichment_activities.pdf)



### *Oranges:*

Oranges are a good source of vitamin C (which helps the immune system) and beta-carotene (which is important for skin and eye health). California is the largest producer of oranges in the United States.

### Activity:

- Show children an orange and ask: How many segments or sections do you think are inside this orange? What might be a way to tell without peeling it?
- Give each child or small group an orange. Show how they can pull off the button-shaped piece where the orange was attached to the tree, and underneath they'll see a ring of tiny white dots.
- Direct them to mark one dot with their fingernail or a pen and, starting with that one, to count the dots in the ring. Invite them to peel their orange and count the segments. How do the two numbers compare?
- Ask children for their ideas about what the dots are and what they have to do with the segments inside.
- Explain that when the orange is growing, it is attached to the tree at the “button” known as a *pedicel* (PED-ih-sel) and that each orange segment has a tube or duct (the “dot”) that carries water and materials from the tree to the segment.
- See [this](#)<sup>3</sup> link for posters and more guidance on the activity!

### *Cherry Tomatoes:*

Cherry tomatoes are miniature tomatoes. They are high in vitamin C (which helps the immune system) and vitamin A (important for growth and good vision). They grow in loose clusters on a vine, and each plant may produce hundreds of tomatoes, each which may contain up to 90 seeds. Scientifically speaking, tomatoes are fruits, because they start as flowers and contain seeds.

### Books on Cherry Tomatoes:

- *Ashlyn Grows... Cherry Tomatoes*, by Gene Powell. In this delicious story, a young girl grows a cherry tomato plant with the help of her grandfather, learning about the plant's life cycle, as well as about patience and responsibility.
- *I Will Never Not Ever Eat a Tomato*, by Lauren Child. A fussy eater learns to try a variety of strange foods—including tomatoes—through her brother's imaginative names for them.

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<sup>3</sup> [https://www.ecoliteracy.org/sites/default/files/media/cel\\_nourishing\\_students\\_enrichment\\_activities.pdf](https://www.ecoliteracy.org/sites/default/files/media/cel_nourishing_students_enrichment_activities.pdf)



- *Laughing Tomatoes and Other Spring Poems/Jitomates Risuenos y Otros Poemas de Primavera*, by Francisco X. Alarcón. This bilingual book of poetry celebrates the sun, dew, tomatoes, and chili peppers, while honoring life, nature, and culture.

### *Strawberries:*

These heart-shaped fruits have their seeds on the outside. They are good sources of vitamin C (helps the immune system), potassium, folate, and fiber. Strawberries are members of the rose family. Their cousins include apples, cherries, and peaches. They grow best with sunny days and cool nighttime temperatures.

### Activity:

Strawberry Polls / Materials: tokens of some kind (woodchips, straws, or rocks), 4-6 cups or other small containers, dry erase marker, cloth (for erasing pen marks)

- Ask children what the word “poll” means. If they don’t know, explain that it is asking people questions to find out the general opinions of a group. Explain that the children will be creating a poll to find out what the group thinks about strawberries.
- Label two cups as follows with the marker: “Like strawberries” and “Do not like strawberries.” Give each child a token and have them put it in the cup matching their opinion.
- Count the straws in each cup and challenge children to make statements based on their findings, such as, “Two more people in our group like strawberries than don’t.”
- Invite volunteers to suggest more questions—and possible responses—to poll the group about strawberries or fruit. For example, for “Which is your favorite red fruit?” the cups might be labeled with different red fruits. Or, for “How much do you like strawberries?” the labels might read: Love, Like, Just OK, Don’t Like, and Hate.
- For each suggestion, put new labels on the cups and have children do the poll and make statements about the findings.

### *Radishes:*

Radishes are root vegetables whose flavors have a sharp bite. Radishes are high in vitamin C (helpful to the immune system), folic acid, and potassium. They are hundreds of varieties of radishes, which are popular all over the world. The radish leaves are also edible. Their pepper flavor comes from sulfur compounds called *isothiocyanates* (eye-so-thigh-oh-SIGH-uh-nates), which protect the plant from being eaten by animals.

### Activity

Radish song! Materials: whole radish with leaves



- Show children the radish and ask if they can name the different parts of the radish plant (leaf, stem, and root). Point out that the radish bulb we eat is a swollen part of the root.
- Ask what other plant parts they know. Explain that radish plants also have flowers, although they can't see them now.
- Teach children a variation of the song, "Head, Shoulders, Knees, and Toes", with the following words:
  - Leaves, flowers, stem, and roots, stem and roots*
  - Leaves, flowers, stem and roots, stem and roots*
  - Plants like these grow vegetables and fruits*
  - Leaves, flowers, stem and roots, stem and roots*
- As they sing, direct children to tap parts of their body (head, shoulders, knees, and toes) to represent the plant parts.
- Repeat the song and, with each verse, omit one of the plant parts and have children just tap the corresponding body part.



## WEEK TWO

**THEME:** Earth Lesson

**OBJECTIVES:**

- Students strengthen their familiarity with the Huerta garden
- Students expand their knowledge of native plants, weeds, and the natural world around them

**MATERIALS:**

- Popsicle Plant Signs:
  - Popsicle sticks
  - Non-washable paint
  - Paint brushes
  - Rocks
- Identifying the Weeds:
  - Common Urban Foraging Sheets (linked in activity)
- Seed Bombs:
  - 1/2 oz native wildflower seeds (or other types of seeds)
  - 3 1/2 oz dry, organic potting soil
  - 1 1/2 oz dry clay (we suggest powdered red pottery clay)
  - Water
  - A mixing bowl
  - A cookie sheet for drying the seed balls
  - Wax paper
- Phrenology Wheels:
  - Printouts of the Phrenology Wheel blank template
  - Clipboards or something hard for the students to make their wheel on (if they are sitting far away from tables, say)
  - Pencils, erasers, and colored pencils
- Storytime book



**SCHEDULE:**

<i>Time</i>	<i>Activity</i>	<i>Notes</i>
10:00 - 10:30	Welcome <ul style="list-style-type: none"><li>- Check-in</li><li>- Grounding activity</li></ul> Ask everyone to find a spot on the ground, and take a few minutes feeling, smelling, observing the soil textures. Then, talk about what the soil tells you based on how it feels, looks, smells, etc. <ul style="list-style-type: none"><li>- Icebreaker</li><li>- Review community agreements</li></ul>	For icebreakers, choose from the earlier list or make up your own.
10:30 - 11:00	Work on the garden plot as needed. This could look like preparing the soil, watering, poking holes and planting seeds or saplings, or weeding. Decorate the garden! Create bilingual popsicle plant signs for what's already growing or what is going to be planted. Or, paint rocks to decorate the soil. Since it's Earth week, emphasize soil/dirt, and lead a discussion about what makes up soil. <a href="#">Here</a> is a link to refresh your memory about soil education before teaching about it!	If you don't have time to do all these activities, choose one or a few. You can come back to ones that sound exciting in future weeks!
11:00 - 11:15	Tea + Snack Break	
11:15 - 11:45	Possible Activities: <ul style="list-style-type: none"><li>- Identifying Weeds Activity</li><li>- Seed bombs</li><li>- Phrenology wheels</li><li>- Storytime in the garden</li></ul>	
11:45 - 12:00	Closing	

**Identifying Weeds Activity:**

Introduce the group to “weeds” found in the Huerta garden which are also common to Southern California.



*Instructions:*

- Before class, print out Tracey's Common Urban Foraging sheets, in both [English](#)<sup>4</sup> and [Spanish](#)<sup>5</sup>.
- These are primarily for the instructor, so one or two copies is fine. Quickly familiarize yourself with the sheets.
- Introduce the activity by asking the group what they know about weeds and if they know the name of any weeds (dandelion, wild onion and garlic). Come up with a definition of weeds together (a plant in the wrong place).
- Before identifying any weeds, make it clear to the group that although some of the weeds they will find are edible, some are also toxic, so no one should eat any weeds during the class. Remind them it is easy to misidentify plants, so always check with an experienced forager before you eat anything you find whether inside or outside Huerta.
- Have students split into smaller groups (size of the groups can be left to the instructor's discretion) and have them locate a plant they think is a weed.
- In a group, have them talk amongst each other about what is noticeable about the plant. Does it have flowers? Does it smell? Does it have pointed or rounded leaves? etc.
- Once they have settled on a description, the group will return to the instructor and describe the plant. The instructor will then use Tracey's *Common Urban Foraging Fieldguide* to guess which plant they found. The instructor and the group can work together to determine if they identified the plant correctly.
- Repeat!
- In the last 5 minutes of the activity regroup and ask the group about any interesting findings. Discuss how weeds can be used for food and medicine, and ask the group whether they think weeds are always bad?

**Seed Bombs:**<sup>6</sup>

Seed bombs are exploding balls of seeds that are both fun to throw and an easy way to grow native flowers. They are fun AND make the world a greener, more environmentally-friendly place. They even make great gifts!

*Instructions:*

1. Line cookie sheet with wax paper.
2. Mix seeds and potting soil together.
3. Add dry clay and mix again.

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<sup>4</sup> [https://docs.google.com/document/d/15s3dZhTwQdqnljjMv9JEydQNZ8gAv\\_YWagbZ\\_h8DOxg/edit](https://docs.google.com/document/d/15s3dZhTwQdqnljjMv9JEydQNZ8gAv_YWagbZ_h8DOxg/edit)

<sup>5</sup> <https://docs.google.com/document/d/1rIHJ92ZXoWujiMY8OnhCAN0Q7hWqbGCP-rK9lgiUH0HI/edit>

<sup>6</sup> <https://climatekids.nasa.gov/seed-ball/>



4. Slowly add water while still mixing the seeds, potting soil, and water into a well-blended paste.
5. When you are able to form a ball of the blended material without it falling apart, you are ready to stop mixing.
6. Mold the mixture into small (~1 inch diameter) balls and place cookie sheet or tray with wax paper.
7. Allow balls to dry in the sun for at least one day. Kids can take home and dry or pick up next week.
8. Now, all you have to do is throw them at a patch of dirt and watch it explode! Once it rains (or you water them), they have everything they need to grow.

### **Phrenology Wheels:**

A phrenology wheel is a circular journal or calendar that provides a structure for recording observations about the natural world where we live. The wheel is made to record your observations over the course of a month (31 vertical sections for 31 days in our longer months), but the can be changed to accommodate different timelines (ten sections to accommodate the ten weeks of Abejas, for example).

#### *Instructions:*

- Before the class, print out blank phrenology wheels (changing if you want to accommodate a different timeline) for each kid. Make an example or print out the one from [this link](#).<sup>7</sup>
- Find a place that you can return to each week.
- Draw that place and/or label it with words in the inner circle of the diagram below.
- Return to that place each week (incorporate this into weekly Abejas programming!) and record the following as often as you can:
  - In the outer circle write the date.
  - In the next circle record any observations you make in your place. Record the same kind of information over time so you can compare it day today. Some things to record include: the weather, time of day, temperature, moon phase, time of sunrise and set, etc. Write or draw!

### **Storytime in the Garden:**

Read a food, environmental, or social justice in the garden book! Here are some ideas for books:

- Green Green: A Community Gardening Story
- Right This Very Minute: A Table-to-Farm book About Food and Farming
- Before we Eat: From Farm to Table

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<sup>7</sup> <https://commonthreadsfarm.org/wordpress/wp-content/uploads/2021/01/PhenologyWheels.pdf>



- The Farm that Feeds Us: A Year in the Life on an Organic Farm
- Icing on the Cake: Food Idioms
- Every Night is Pizza Night
- Fry Bread: A Native American Family Story
- Let's Eat: Mealtime Around the World
- Bruno the Beekeeper
- The Ugly Vegetables
- Gathering the Sun: An Alphabet in Spanish and English
- City Green
- What's in the Garden? Learn Where Food Comes From
- Farmer Will Allen and the Growing Table
- The Barefoot Book of Earth Tales
- Diary of a Worm



## WEEK THREE

**THEME:** Earth Lesson

**OBJECTIVES:**

- Students know what composting is, what foods we can and cannot compost, and why it is important to Huerta and in general
- Students learn about the importance (and coolness) of worms and other critters for the ecosystem

**MATERIALS:**

- Worm Count
  - Water spray bottle
  - Shovel to dig soil
  - Ruler or measuring tape
  - Tarp and plastic container to hold soil
- Environmental Lunch
  - [Environmental Lunch Log Sheets](#)<sup>8</sup> (included in activity below)
  - Writing utensils
- Decomposition Tag
  - 2–5 light colored armbands
  - 1–2 dark colored armbands
- Photosynthesis
  - Photosynthesis worksheets (included in activity below)
  - Craft scissors
  - Tape
  - Pencils/crayons

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<sup>8</sup> [https://www.cvswwmd.org/uploads/6/1/2/6/6126179/do\\_the\\_rot\\_thing\\_cvswwmd1.pdf](https://www.cvswwmd.org/uploads/6/1/2/6/6126179/do_the_rot_thing_cvswwmd1.pdf)



## SCHEDULE:

<i>Time</i>	<i>Activity</i>	<i>Notes</i>
10:00 - 10:30	Welcome <ul style="list-style-type: none"><li>- Check-in</li><li>- Grounding activity</li><li>- Icebreaker</li><li>- Review community agreements</li></ul>	This is the last week that “review community agreements” is listed in the schedule, but feel free continue to build this review into future weeks if you find it will be supportive!
10:30 - 11:00	Work on the garden plot as needed. This could look like preparing the soil, watering, poking holes and planting seeds or saplings, or weeding. Learn about bugs and critters in the garden. Ask kids to find and name any bugs they see, and talk about what use these critters might play in the ecosystem. Play a critter bingo together!	Bug Bingo: <a href="#">Bug Bingo 1.pdf</a>
11:00 - 11:15	Tea + Snack Break	
11:15 - 11:45	Possible Activities: <ul style="list-style-type: none"><li>- Compost Activity</li><li>- Worm Count</li><li>- Photosynthesis</li><li>- Environmental Lunch</li></ul>	<a href="#">DO THE ROT THING</a> has even more fun compost activities to check out!
11:45 - 12:00	Closing	

### Compost Activity:

This activity will introduce Abejas participants to compost, why it is important, and how it works at Huerta.

- Ask students what they already know about composting. Why is it good for the earth? How does it help us make less waste? What do we compost? Where are kids already composting?



- Teach Compost Basics (use [this](#) infographic to support your teaching!)<sup>9</sup>
  - Composting is a way to recycle and transform organic material into natural fertilizer. This process is called decomposition.
  - There are 4 ingredients to a healthy compost pile:
    1. Air: the bacteria in compost needs oxygen to properly break down the material
    2. Water: keeping the compost moist helps the material break down quicker
    3. Browns: things that are rich in carbon, like cardboard or wood chips
    4. Greens: things that are rich in nitrogen, like fruits and vegetables
  - When browns and greens are mixed together and watered, the natural decay process is sped up. The compost breaks down completely into soil within several weeks up to six month.
  - Vermicompost is the process that is used at Huerta. Vermicomposting is composting using worms to speed up the process, creating a better fertilizer. How does it work, though? The worms eat the organic material in the compost and then create worm manure—WORM POOP! This is used for excellent fertilizer.
  - Composting is a way to recycle organic matter that saves food waste from the land fill. Some studies have shown that up to 20% of waste in our landfills could have been composted. At the end of the process, composting creates a nutrient-rich topsoil that is great for planting!
- Walk with the group to the compost at Huerta. Talk about what we observe—can we see the four ingredients to a healthy compost pile? Discuss why composting is important to Huerta, and where else in our lives could we start composting (home, school, work, church...). If time and interest, design and create a flyer or note to give to school or church leaders to encourage them to start composting!

### Worm Count<sup>10</sup>:

1. *Introduction*: Earthworms are an indicator of biological life in the soil, large and small. Easily visible and easy to count, higher numbers can be an indicator of improved soil health. In this activity, one cubic foot of soil is removed from a garden area and the earthworms are counted. Different areas can be sampled to compare soil health.
2. *Cultural Connection*: Cleopatra (69-30 B.C.) recognized the earthworm's contributions to Egyptian agriculture by declaring this animal sacred. Egyptians were not allowed to remove so much as a single worm from the land of Egypt, and even farmers were not

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<sup>9</sup> [https://www.canva.com/design/DAE9gZOHNAw/4NmOqfttyubzWxbP5F5F-A/edit?utm\\_content=DAE9gZOHNAw&utm\\_campaign=designshare&utm\\_medium=link2&utm\\_source=sharebutton](https://www.canva.com/design/DAE9gZOHNAw/4NmOqfttyubzWxbP5F5F-A/edit?utm_content=DAE9gZOHNAw&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton)

<sup>10</sup> <https://docs.google.com/document/d/1XbGrTfXe5Vh8TY43y2rRT2tRIt3jb4Vv1VAQoxvuD2U/edit>



allowed to touch an earthworm for fear of offending the god of fertility. It is also believed that certain Egyptian priests devoted their full time to the study of the earthworm and its work. (Minnich 1977)

3. *Ecological Fact:* Did you know that there are three basic types of earthworms? As you do your count, see if you can tell the difference.



*Materials:* spade or shovel, tape measure, container for worms, tarp, notebook and pen, spray bottle with water (optional)

*Procedure:*

1. This test is best done in late spring, early fall, or a couple of days after a rainstorm when the soil is moist.
2. Observe the conditions of the garden area where you plan to dig. Notice any mulch, compost, cover crops, or healthy practices like no-till or polyculture (define these for the kids if they don't know what these are).
3. Dig a hole in the garden that is 1 ft x 1 ft x 1 ft and put all of the soil onto a tarp.
4. Put some soggy soil into a container. This will hold the worms.
5. Sift carefully through the soil, placing all of the worms in the container.
6. Count the number of worms you find.
7. Take a look at the walls of the hole you dug. Do you see evidence of worm tunnels? If you can't see any, spray the walls with water. These holes are called "biopores" and indicate worm activity. This is why "no till" is sometimes called "biological tillage" - the worms do the work!
8. Replace the soil in the hole.
9. Repeat in a location where the management is different. Do you notice any differences in the number of worms? Why might this be?

*Critical Thinking Questions*

1. Why is it important to measure the size of the hole? Why can't you just dig a hole of any size and count the worms?
2. What might account for differences in the number of worms between the sites you observed?



3. Earthworms are not native to the Americas but they have adapted to live here. Are nonnative species generally “bad?”
4. How can we encourage worms to thrive, aerate the soil, and add fertility to the land?

### **Photosynthesis:**

- Photosynthesis lesson could be incorporated by talking about why/how the vegetables are different colors and how this serves a role in photosynthesis (i.e. chlorophyll)
- Hand out the worksheets below, as well as craft scissors, tape, and pencils/crayons (avoid markers if possible to keep hands cleaner for eating).
- This big word might be confusing for young students at first. Try introducing it by asking the group what animals need to stay alive - air, water, food. Connect to the quesadillas (or other meal of choice) and how we eat them to get the energy to power our bodies! And how most of the ingredients in the quesadillas (or other meal of choice) came from plants. Then ask what *plants* need to stay alive. Air, water, just like us. But what do plants eat?
- Plants are special because they get their energy from the sun! The green color of their leaves comes from a special chemical called chlorophyll that helps them turn the sun’s rays into energy. This process is called photosynthesis.

### **Photosynthesis Pictorial**

Using construction paper and crayons or markers, have the group design a pictorial representation of photosynthesis.

1. Instruct the group(s) to draw a plant or flower on a piece of paper.
2. Have the group draw a sun above the plant to symbolize the sun's energy.
3. Ask the group to add a source of water for the plant. This can be in the form of raindrops or groundwater.
4. On the left side of the paper, have the group write the words "Carbon Dioxide." Draw an arrow leading from the term to the plant to show that the plant is taking in the carbon dioxide from the environment.
5. On the right side of the paper, have the group write the word "Oxygen." Draw an arrow pointing away from the plant to symbolize the release of oxygen into the surrounding air.
6. Have the group draw a sugar cube near the base of the plant to symbolize the glucose produced by photosynthesis.

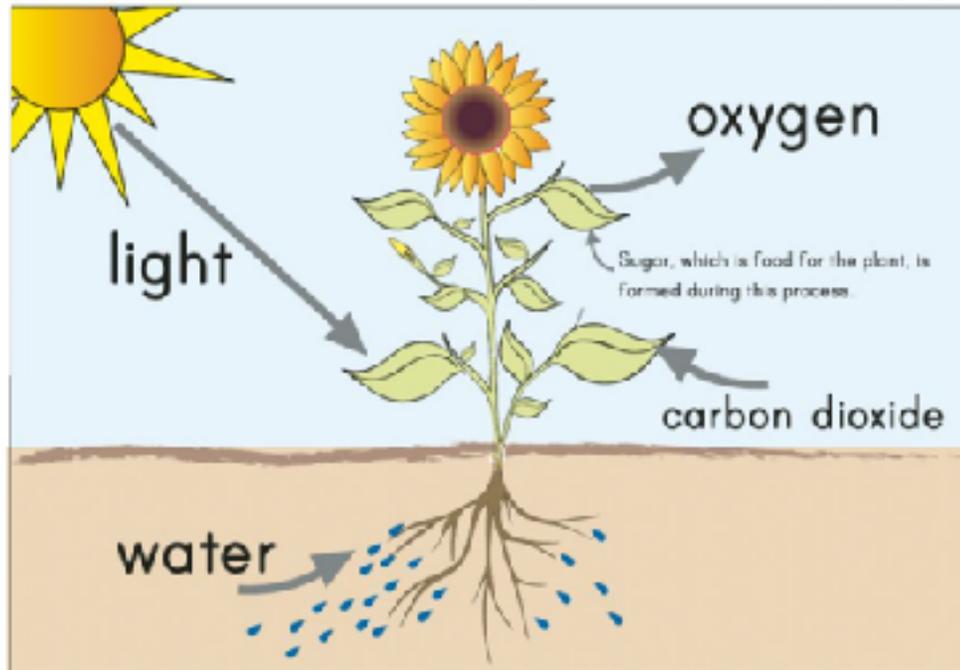


7. Explain to the group how each step of the process works while he is working on the drawing.
8. Provide the sheet on the next page as a take-home/individual exercise



## what is Photosynthesis

Look at the picture and fill in the blanks using the words at the bottom of the page.



**Photosynthesis** is a **process** where **plants** **use**

from the **sun** to **transform**

from the **air** and  from the

**soil**  into  to **feed** the plant

and  is **release** into the air.

water, sugar, carbon dioxide, light, oxygen



## **Environmental Lunch:**

*Introduction:* Much of the material we throw away can be reused, composted, or recycled. What people buy and how it is packaged can have a big impact on the garbage problem, as well as other environmental problems. Looking through their lunches and finding ways to reduce the amount of garbage empowers students to find their own ways of helping the earth. Students will also have the opportunity to learn what natural resources were consumed to make this waste

### *Procedure*

1. Provide each student with a copy of the log sheet
2. Have students think about everything that they ate the previous day for lunch, another meal, or each meal that they had that day. Ask students to write down any waste, cutlery, and utensils that they can remember from the meal(s). Alternatively, if students cannot recall what they ate or what leftovers they had, ask students to think about their dream meal and fill out the list accordingly.
3. Once students have finished filling out the worksheets, have each student find the total for each of their categories. These totals represent the materials generated from one meal/day by the student. Help students tally the total amounts for the entire group to see the total number of materials generated in one day. These results can also be multiplied to represent the amount of materials generated in one week, one year.
4. After completing the activity, ask students to brainstorm ideas for reducing the amount of lunch/meal trash created.



## Environmental Lunch Log Worksheet

Describe Item	Reuse	Recycle	Compost	Landfill	Could Replace with
Banana Peel			X		
Whole Orange	X				
Juice Box				X	Reusable thermos or reusable plastic bottle of juice

Name: \_\_\_\_\_ Date: \_\_\_\_\_



**Decomposition Tag:**<sup>11</sup> (pages 13-14 of the linked document)

*Important note:* Death can be a heavy topic to engage with for young students. Consider contextualizing the topic within the natural world: Death is a natural process in the cycle of life and is essential to provide nutrients in soil for plants to absorb and create new life! If death is a sensitive topic, also consider changing “death” to “weed” and have students freeze when tagged by a weed, showing how a weed can hinder the absorption of nutrients by plants.

*Introduction:* Without decomposers such as bacteria, fungi, worms, ants, beetles, and mites, decomposition would stop and resources which sustain life would be depleted. A seemingly endless variety of decomposers all serve different functions in the decomposition process. Every compost pile has its own food web. In this activity, we will look at the role decomposers play in the cycle of life: life, death, decay, and re-birth.

#### *Procedure*

1. Introduce the life cycle and the role of decomposers in nature and in composting.
2. One participant will play the character “death” and wears a dark colored armband. If the group is large, you can have two.
3. Two to five participants are decomposer characters and wear light colored armbands. As a general rule, 1/5 of the class should be decomposers. All other participants are plants or animals.
4. Plant and animal characters “die” when they are tagged by the death character. When tagged, they freeze in place until one of the decomposers unfreezes them by walking around them three times. The decomposers unfreeze the plants and animals as fast or faster than death freezes them.
5. The game has no natural end. You should let participants play long enough to experience the concept, and stop the game well before participants get exhausted or lose interest.
6. To summarize, form a circle and review the life cycle and the role of decomposers. Encourage students to talk about how they felt during the game, and what they learned.

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<sup>11</sup> [https://www.cvsd.org/uploads/6/1/2/6/6126179/do\\_the\\_rot\\_thing\\_cvsd1.pdf](https://www.cvsd.org/uploads/6/1/2/6/6126179/do_the_rot_thing_cvsd1.pdf)



## WEEK FOUR

**THEME:** Water Lesson

**OBJECTIVES:**

- Students understand the importance of water in an ecosystem and specifically at Huerta
- Students strengthen their relationship with water and understand how they can protect it
- Students understand where their water comes from and California waterways

**MATERIALS:**

- Water Cycle Song:
  - Poster paper
  - Markers
- We are Water Protectors:
  - Book,
  - Printed copies of the activity guide ([here](#))<sup>12</sup>
  - Pencils and drawing supplies
- California Water Map:
  - Printed map worksheets
  - Art supplies and paper

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<sup>12</sup> <https://images.macmillan.com/folio-assets/activity-guides/9781250203557AG.pdf>



**SCHEDULE:**

<i>Time</i>	<i>Activity</i>	<i>Notes</i>
10:00 - 10:30	Welcome <ul style="list-style-type: none"><li>- Check-in</li><li>- Grounding activity</li><li>- Icebreaker</li></ul>	
10:30 - 11:00	Work on the garden plot as needed. This could look like preparing the soil, watering, poking holes and planting seeds or saplings, or weeding. Since it is water week, walk around the garden and point out irrigation systems and how water is used on the farm. Split into groups and ask/informally interview community members or farmers working on the farm about their use of water in their gardens, and then report back to the larger groups!	
11:00 - 11:15	Tea + Snack Break	
11:15 - 11:45	Possible Activities: <ul style="list-style-type: none"><li>- Water Cycle Song</li><li>- Water Protectors</li><li>- California Water Map</li></ul>	
11:45 - 12:00	Closing	

**Water Cycle Song:**

*Explain the Water Cycle:*

- Use the water cycle to discuss the centrality of water within all of life in the universe. Unlike with food, people can not go days and days without water. Drinking water is the single most important thing that we do everyday. Every single living thing on Earth requires water in order to survive. Nothing could grow from the ground without water. But where does the water that we use to drink and water our plants come from? There are many misconceptions about water and where our water really comes from. In fact, fresh water will soon be the most valuable resource on the entire planet.



- Discuss: Where do students think the fresh water that we drink in California comes from (answer: the Colorado mountains). What do they already know about fresh water, the water we use to drink? What questions do they have?
- Using a large piece of poster paper, go through the four elements of the water cycle by creating a diagram. Use [this](#) website to better understand each element and how to explain it to kids!<sup>13</sup>
- If accessible, watch or listen to a song about the water cycle. Here are two options: the [GoNoodle version](#)<sup>14</sup>, which is fun to dance to, and [another one](#)<sup>15</sup>, which is a bit more clear.
- After watching the video, break the students into groups and ask them to make their own song and dance for the water cycle!

### **Water Protectors:**

1. Introduce and read the book [We Are Water Protectors](#)<sup>16</sup> together. This book tells the story of a young Ojibwe girl and her people as they take on the "black snake" of an oil pipeline threatening their way of life. Inspired by the many Indigenous-led movements across North America, We Are Water Protectors teaches about the importance of safeguarding the Earth's water from harm and corruption.
2. Hand each student a printout of [this](#)<sup>17</sup> packet, the We Are Water Protectors activity guide. Together, fill out the packet and discuss using the questions on the second page. Then, talk about specific ways each student can protect water.

### **California Water Map:**

- Ask students: where does our water come from? Do some group brainstorming, before handing out worksheets of [this map](#).<sup>18</sup>
- Hand out coloring supplies and ask kids to start decorating places that are important to them on the map (their home, special places they have been to, maybe even mountains or natural areas they know about)

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<sup>13</sup>[https://www.usgs.gov/special-topic/water-science-school/science/water-cycle-schools?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/special-topic/water-science-school/science/water-cycle-schools?qt-science_center_objects=0#qt-science_center_objects)

<sup>14</sup> <https://www.youtube.com/watch?v=KM-59ljA4Bs>

<sup>15</sup> <https://www.youtube.com/watch?v=TWb4KIM2vts>

<sup>16</sup> <https://bookshop.org/books/we-are-water-protectors/9781250203557>

<sup>17</sup> <https://images.macmillan.com/folio-assets/activity-guides/9781250203557AG.pdf>

<sup>18</sup><https://water.ca.gov/-/media/DWR-Website/Web-Pages/What-We-Do/Education/K-12-Education-Materials/Worksheets/CA-Waterways-Student-Worksheet.pdf>



- Teach the information from [this sheet](#)<sup>19</sup> (could help to have a few printouts to pass around)
  - Water isn't always where we need it. In California, most of the rain and snowfall is in the north, but we live in the south! In order to deliver the water to the south, California has delivery systems like the State Water Project (SWP).
  - (Have kids track where the water starts and goes along their own maps as you explain.) The SWP delivers water from Lake Oroville in the north to the San Francisco Bay area, the San Joaquin Valley, and Southern California. Water from Oroville through rivers and other natural channels, then travels through a system of reservoirs, pumping and hydroelectric power plants, pipelines and canals. (Take some time here to define these terms and talk about what each of these look like, maybe even acting out the systems or attaching an action to each vocab word.)
- Ask children what they think most of the water in California is used for—homes? Showers? Cleaning? Farming? Waterparks? Break it down—in California, water is used for homes, farmlands, industries, recreation, and the environment. Explain that corporations and industries use the most water. Together, brainstorm or do art about how they can save water in their own homes and communities, then talk about how to pressure politicians to make laws that ask companies/corporations to save water.

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<sup>19</sup><https://water.ca.gov/-/media/DWR-Website/Web-Pages/What-We-Do/Education/K-12-Education-Materials/Posters/CA-Waterways-Map.pdf>



## WEEK FIVE

**THEME:** Water Lesson

**OBJECTIVES:**

- Students strengthen their understanding of water use when tending to a garden
- Students expand their knowledge of how to conserve water in their daily lives
- Students advocate for conserving water in their broader communities
- Students understand the impact of compost use on water absorption in soil

**MATERIALS:**

- Water-wise Soil Activity (*These materials are for one experiment only. Consider creating groups of students and having each group have this set of materials.*)
  - Three identical glasses/cups, preferably with a narrow opening
  - Two clean cone-shaped paper coffee filters
  - 2 portions of 2/3 cup dry dirt (must be dry enough to crumble)
  - 1/3 cup measuring cup
  - Compost
  - Water!
  - Writing utensil and paper for note-taking
  - Optional: a scale
- Water Footprint Worksheet
  - Printed worksheet for each student
  - Coloring/writing utensils
  - Envelopes
  - If letters are being sent through the mail: Stamps
- Storytime: Books of choice



**SCHEDULE:**

<i>Time</i>	<i>Activity</i>	<i>Notes</i>
10:00 - 10:30	Welcome <ul style="list-style-type: none"><li>- Check-in</li><li>- Grounding activity</li><li>- Icebreaker</li></ul>	
10:30 - 11:00	Work on the garden plot as needed. This could look like preparing the soil, watering, poking holes and planting seeds or saplings, or weeding.  Discuss water conservation tips with the students. Use <a href="#">this document</a> for a list of tips and ways to be a “Water Hero.” Ask students if they know of/ practice ways to conserve water and see what practices the group can come up with together!	
11:00 - 11:15	Tea + Snack Break	
11:15 - 11:45	Activity Ideas: <ul style="list-style-type: none"><li>- Water-wise Soil Activity</li><li>- Water Footprint Worksheet</li><li>- Letter for Change: Writing Activity</li><li>- Storytime</li></ul>	
11:45 - 12:00	Closing	

**[Water-wise: Keep Soil Wet Without Waste](#)**<sup>20</sup> (Although the link uses rice/rice meal, we will be using dirt from the garden!)

Time in the garden may lead students to wonder how much they should water their plot, especially in being mindful of striving to conserve water. Are the plants getting enough water, or even too much or too little? How often should the plot be watered? How much water does the plot need? Soil types have a huge impact on these questions about water schedules! Ideal watering schedules (how much and how frequently one should water) depend largely on how much water the soil can hold. Two factors play a major role in determining the water-holding

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<sup>20</sup> <https://www.sciencebuddies.org/stem-activities/waterwise-keep-soil-wet-without-waste>



capacity of soil: the structure of the soil—how big or small the particles in the soil are—and the amount of organic material present in the soil—such as compost! Water loves to cling onto organic material, so the more that is present in the soil, the more water the soil can hold! This activity introduces students to wise water skills when tending to the garden and shows how beneficial compost can be to the seeds and the soil.

#### INSTRUCTIONS:

1. Place glasses on a table/flat surface that withstand getting wet.
2. Open a coffee filter and let it rest in the opening of a glass. Repeat with one other filter and glass. You will have only one glass left.
3. Create a 2/3 cup of a 1:2 compost-dirt mixture (approximately 1 tablespoon of compost for every two tablespoons of dirt). Place this mixture in the first filter.
4. Place 2/3 cup of remaining dirt in another filter.
5. If a scale is available, weigh the filters with the dry substances, one at a time. Write down your measurements.
6. Are there any noticeable differences between the two mixtures? If so, what are they? The next step will be pouring water over the dirt mixtures: Which one do they think will hold more water? Have students write down any observations that they make.
7. Pour 1/3 cup water over the dirt-only mixture.
8. Pour 1/3 cup water over the compost-dirt mixture.
9. Observe what happens to both set-ups: Does water seep through the substances? Does it seep through at the same rate? Why or why not?
10. Ask students to share what they think may happen if they add more water to each mixture: Will more or less water seep through?
11. Pour another 1/3 cup of water over each substance. Ask students to observe any changes.
12. Fill the remaining glass with 2/3 cup of water and place it next to the other glasses.
13. After approximately 5 minutes, compare how much water ran through the substances in each of the glasses. The third glass shows how much water was poured over the substances. Which glass has the most water? If there is less water in some glasses, where has the water gone?
14. If a scale is available, weigh each filter with its wet substances. Are the measurements different from the mass of the dry materials measured in the first step? Which samples gained the most mass? Where is the extra mass coming from?

[Water Footprint Student Worksheet](#)<sup>21</sup> (Print worksheet beforehand to have students fill in during the activity)

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<sup>21</sup> <https://www.ctwater.com/media/1834/student-worksheet.pdf>



Introduce students to wise water habits by helping them to calculate their water footprint! This activity is not to negatively point out how much water students use; rather, it is a time for students to reflect on their water usage and see if there are ways in their daily lives that they can conserve water. Have students fill in and color the sheet, and encourage them to discuss the second page with their families to bring back to Huerta to discuss.

### **Letter for Change: Writing Activity**

1. Ask students about ways that they think water could be better conserved in their community. Do sprinklers run during the day at school? Do they notice a leaky sink? Is water wise spread around their city.
2. Have students choose someone they would like to write to about water usage in their lives. This could be a local politician, their city council, their school principal/leadership, or even a family member!
3. Provide students with paper, writing utensils, and suggestions for how to structure a letter. [Note the template included in this lesson plan for ideas.](#)<sup>22</sup>
4. Once students are finished with their letters, have them seal the letters in envelopes and address them to the person that they intend on giving it to. If the person the students wrote to is a family member, school principal, or someone that they can easily access, they do not need to formally address and stamp their envelope and can give the letter in-person. If the student wrote to a local politician, their city council, or someone that they cannot easily reach, have the student formally address the letter and send it through the mail.

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<sup>22</sup> <https://www.innovativeteachingideas.com/products/letter-writing-templates-free-informal-and-formal>



## Writing Organizer - Formal Letter Plan

**Recipients Address**

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_  
Postcode \_\_\_\_\_

**Writers Address**

Address \_\_\_\_\_  
City \_\_\_\_\_  
Postcode \_\_\_\_\_

**Name or Title**

Dear \_\_\_\_\_

**Introduction**

\_\_\_\_\_

**Three Main Points of the Letter**

1. \_\_\_\_\_  
\_\_\_\_\_

2. \_\_\_\_\_  
\_\_\_\_\_

3. \_\_\_\_\_  
\_\_\_\_\_

**Conclusion**

\_\_\_\_\_

**Salutation**

\_\_\_\_\_

**Your Name**

\_\_\_\_\_





### **Storytime in the Garden:**

Read a water justice in the garden book! Here are some ideas for books:

- Bear Loves Water by Ellen Weiss
- Water (The Four Elements) by Carme Solé Vendrell and J.M. Parramó
- Water (My First Nature Books) by Adrienne Soutter-Perrot and Etienne Delessert
- I am Water by Jean Marzollo
- Follow the Water from Brook to Ocean by Arthur Dorros
- Brother Eagle, Sister Sky by Susan Jeffers and Chief Seattle
- The Drop in My Drink: The Story of Water on our Planet by Meredith Hooper and Chris Coady
- Snail Girl Brings Water: A Navajo Story by Geri Keams and Richard Ziehler-Martin
- Water, the Source of Life (Voyages of Discovery) by Scholastic Books
- The Magic School Bus at the Waterworks by Joanna Cole and Bruce Degen (Spanish: El Autobús Mágico: Viaja por el Agua)
- The Magic School Bus: Wet All Over by Joanna Cole and Bruce Degen (Spanish: El Autobús Mágico - Se Salpica Todo)
- A River Ran Wild: An Environmental History by Lynne Cherry
- Raven Returns the Water by Anne Cameron and Nelle Olsen
- Signs Along the River: Learning to Read the Natural Landscape by Kayo Robertson
- A Drop Around the World by Barbara Shaw McKinney and Michael Maydak
- Water Dance by Thomas Locker
- All the Water in the World by George Ella Lyon
- Water Is Water: A Book About the Water Cycle by Miranda Paul and Jason Chin
- Hey, Water! by Antoinette Portis
- Did a Dinosaur Drink This Water? by Robert E. Wells
- The Water Princess by Susan Verde
- One Well: The Story of Water on Earth by Rochelle Strauss and Rosemary Woods
- “Water Can Be...” by Laura Purdie Salas and Violeta Dabija
- Why Should I Save Water? by Jen Green and Mike Gordon
- Water: Up, Down, and All Around by Natalie Myra Rosinsky and Matthew John
- You Wouldn’t Want to Live Without Clean Water! by Roger Canavan and David Antram
- Water! Water! Water! by Nancy Elizabeth Wallace



## WEEK SIX

**THEME:** Air Lesson

**OBJECTIVES:**

- Students can describe importance of Monarch butterflies, both for the ecosystem and as a symbol, and how we can help protect them
- Students feel empowered to make a difference in their community regarding protecting the environment
- Students understand difference between local and native plants and animals vs nonnative species, weeds, invasive species, and are able to name a few examples of each

**MATERIALS:**

- Native milkweed transplants
- Top-mulch
- Paper, paint, paintbrushes, collaging materials, and other art supplies
- *Optional:* print-outs of other monarch butterfly art
- Postcards, stamps, and writing supplies



## SCHEDULE:

<i>Time</i>	<i>Activity</i>	<i>Notes</i>
10:00 - 10:30	Welcome <ul style="list-style-type: none"><li>- Check-in</li><li>- Grounding activity</li><li>- Icebreaker</li></ul>	
10:30 - 11:00	Work on the garden plot as needed. This could look like preparing the soil, watering, poking holes and planting seeds or saplings, or weeding. Plant milkweed together and talk about the importance of native species, differentiating native/invasive species. See instructions below!	
11:00 - 11:15	Tea + Snack Break	
11:15 - 11:45	Activity Ideas: <ul style="list-style-type: none"><li>- Postcards to politicians</li><li>- Monarch migration learning and art</li><li>- Pollinator detectives</li></ul>	
11:45 - 12:00	Closing	

### **Planting Milkweed:**

This garden plot activity will likely take longer than the 30 minutes allotted on the schedule, so feel free to incorporate this activity into the activity block post-snack break.

[Introduce the plant to the students.](#) If milkweed is currently planted anywhere in the garden, bring the students to look at it and make observations, then discuss.

Milkweed is a plant that attracts monarch butterflies. There are two types: tropical milkweed and native milkweed. Native milkweed has narrow leaves. Can they guess which milkweed is better to plant?

Tropical milkweed disrupts monarch butterfly migration (you may need to pause here, back up, and explain what migration is) because of the timing that it flowers. It throws off the monarch's migration and has them travel to a different location. Native milkweed is very helpful for monarch butterflies! They bloom at the right time each year, and if you plant milkweed once, it will be there forever. When it grows dormant, it then grows from the root the next year. Another



fun fact—similar to the dandelion, the seeds of the narrowleaf milkweed fluff out and the wind carries them, helping more milkweed plants spread around the area.<sup>23</sup>

*Prep the site for the planting.* Using what the students have learned from past weeks working on the garden, prepare the bed for planting the milkweed. Remove weeds and competing plants, spread the seeds, incorporate them into the soil using a rake or other tool. If using milkweed transplants, dig a small hole and plant the milkweed. If accessible, spread a top-mulch around the transplants to conserve moisture and reduce weed competition. Be sure to water thoroughly and immediately after planting!<sup>24</sup>

### **Monarch Migration Art:**

In this activity, kids will learn all about monarch butterflies and why they are important—both to the ecosystem and as a symbol of freedom across borders. Make the connection between monarchs and the milkweed you planted together earlier! This activity also connects with the Postcards to Politicians activity below.

#### 1. [Introducing Monarch Butterflies](#)<sup>25</sup>

Before teaching, ask students to share what they already know about monarch butterflies—do they know the color? If the butterflies are endangered? (What the word “endangered” means?) What migration is? Do they have any stories about monarch butterflies to share? If you want, come up with a “Know Want Learn” list on a sheet of poster paper—writing down under each category what the students already know, what they want to know, and then at the end of the day, come back and write what they have learned.

[Here are some important facts to teach about monarch butterflies](#)<sup>26</sup>:

- Monarchs are large butterflies that live across North America during the spring and summer, relying on milkweed for fuel. Each fall, as cold weather approaches, millions of monarch butterflies migrate from Canada and the United States and fly south until they reach central Mexico. They travel more than 2,000 miles!

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<sup>23</sup> [https://www.nwf.org/~media/PDFs/Garden-for-Wildlife/Xerces-NWF/04-CA\\_Inland\\_Monarch\\_Plant\\_List\\_spread.ashx](https://www.nwf.org/~media/PDFs/Garden-for-Wildlife/Xerces-NWF/04-CA_Inland_Monarch_Plant_List_spread.ashx)

<sup>24</sup> [https://xerces.org/sites/default/files/publications/19-004\\_002\\_Native%20Milkweed%20in%20California\\_Planting%20and%20Establishment.pdf](https://xerces.org/sites/default/files/publications/19-004_002_Native%20Milkweed%20in%20California_Planting%20and%20Establishment.pdf)

<sup>25</sup> [https://xerces.org/sites/default/files/2018-05/16-015\\_01\\_XercesSoc\\_State-of-Monarch-Overwintering-Sites-in-California\\_web.pdf](https://xerces.org/sites/default/files/2018-05/16-015_01_XercesSoc_State-of-Monarch-Overwintering-Sites-in-California_web.pdf)

<sup>26</sup> <https://kids.nationalgeographic.com/animals/invertebrates/facts/monarch-butterfly>



- Monarchs often return to the same forests each year, and some even find the same tree their ancestors landed on. Some estimates say up to a billion butterflies arrive in the mountains of Mexico each year. (Pause and ask—how much is a billion?)
- Scientists aren't sure how migrating monarchs know which way to go, since they only live a few months and none makes the journey more than once. At the end of winter, monarchs in Mexico mate and travel north again, depositing eggs on milkweed plants along the way. The eggs go through the metamorphosis process (pause—anyone know what this process is? The eggs become caterpillars first before they turn into butterflies!) and become adult monarchs again, repeating the cycle.

Ask the kids what they think of monarchs so far—is there anything in their life that the monarch butterfly life cycle reminds them of? If you want, you can even ask the kids to briefly act out a monarch butterfly's journey.

## 2. Monarch Butterfly Threats and Decline

*Discuss:* What is an endangered species? Why might monarch butterflies be endangered?

- There are a few sad reasons that monarch butterflies are being threatened. Monarchs only lay eggs and feed on the nectar of milkweeds, and milkweeds have experienced significant plant loss, especially because of the loss of winter habitats that they spend a lot of time with. Global warming and climate change is at the core of this—because of deforestation, harsh weather, and other habit disruptions, the locations that monarchs gather at is at risk. *Discuss:* what parts of climate change have we seen in our life that might affect monarch butterflies?<sup>27</sup>
- While people love to catch and look at all types of bugs, it could be very harmful to butterflies if we catch them because they have a very delicate powder on their wings that are vulnerable to human touch. Other bugs can be caught though—rolly pollies, ladybugs, etc! Just stay clear of butterflies and moths.
- Recap together: what are the biggest threats to monarch butterflies and what are some ideas, big and small, that we have to protect monarch butterflies?

## 3. Monarch Butterflies as Symbols of Freedom in Art

Art is fun to make and also can have lots of meaning (possible ask: what is art that has meaning for you?). Some art uses symbols, such as special colors, plants, or animals, to display a meaning or message. In art that is about immigration (might need to define immigration or clarify what this word means), monarch butterflies are symbols of freedom. The butterfly symbol represents

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<sup>27</sup> <https://www.sacnaturecenter.net/visit-us/nature-blog/ask-a-naturalist-why-are-monarch-butterflies-endangered/>



resilience and hope in the immigrant community and the right that all living beings have to move freely.<sup>28</sup>

- If you want, print out and show some pictures of art about immigration that use monarch butterflies (see [here](#) for ideas).<sup>29</sup> As a group, discuss why monarchs might represent freedom to move across borders and why they might be a symbol used in art about immigration and in immigrant communities, especially for undocumented immigrants. Now that you know about the journey and challenges that monarchs face, what connections can you make to your life and the life of immigrant communities?
- *Explain:* Before there were borders, a lot of tribes traveled across Turtle Island (the Indigenous name for the continent of North America before it was colonized) from Alaska down to Central and South America, similar to the monarch butterfly. The monarch butterfly has a long journey to reach its destination, and can symbolize the long journey that many immigrants take when going to a new country.
- *Discuss:* What could monarch butterflies symbolize in *your* life? This could be freedom to live across borders, freedom for everyone to be able to travel and live wherever they want, hope, dreaming, or anything else! Go around the group and everyone can share if they want—anything from one word to a few sentences—of the answer to this prompt.

#### 4. Art Activity!

Using the responses and ideas generated in the discussion above, create art together or individually portraying what monarch butterflies symbolize to each participant or to a shared vision of monarchs in the Abejas community. Give out paper and paints, and encourage participants to be creative by including imagery, words, poetry, collaging, or just painting. Encourage participants to walk around the garden and spot butterflies or other nature for inspiration! At the end, debrief as a group. What does your painting mean to you? What inspired you? What do you hope others will see in your painting?

#### **Postcards to Politicians:**

Using what the Abejas participants have learned about native species and monarchs, students will write a postcard to a local politician advocating for the protection of monarch butterflies.

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<sup>28</sup> <https://shortyawards.com/10th/butterflies-for-dreamers#:~:text=The%20butterfly%20symbol%2C%20which%20is,beings%20have%20to%20move%20freely.>

<sup>29</sup> [https://www.google.com/search?q=monarch+butterfly+dreamers&tbm=isch&ved=2ahUKEwjp7cHtqZL3AhUbHjQIHWGqDc4Q2-cCegQIABAA&oq=monarch+butterfly+dreamers&gs\\_lcp=CgNpbWcQAzoICAAQgAAQsQM6BQgAEIAEOgYIABAfEB46BAgAEBhQAFj5BmDzB2gAcAB4AIABUIgB2gSSAQE4mAEAoAEBqgELZ3dzLXdpei1pbWfAAQE&scIent=img&ei=wG5XYumNHZu80PEP4dS28Aw&bih=789&biw=678#imgrc=LjFfRm2M6LH1SM](https://www.google.com/search?q=monarch+butterfly+dreamers&tbm=isch&ved=2ahUKEwjp7cHtqZL3AhUbHjQIHWGqDc4Q2-cCegQIABAA&oq=monarch+butterfly+dreamers&gs_lcp=CgNpbWcQAzoICAAQgAAQsQM6BQgAEIAEOgYIABAfEB46BAgAEBhQAFj5BmDzB2gAcAB4AIABUIgB2gSSAQE4mAEAoAEBqgELZ3dzLXdpei1pbWfAAQE&scIent=img&ei=wG5XYumNHZu80PEP4dS28Aw&bih=789&biw=678#imgrc=LjFfRm2M6LH1SM)



- Introduce the activity. What do we know about who makes the laws and important decisions where we live? Talk about the role of the mayor, city council, and other politicians—what their jobs are, how they represent us, what kind of power we as citizens have to make a change. One way that citizens help make big political changes is by asking our political representatives to pass laws! We can call, email, or write letters to elected officials. We have been talking about how monarch butterflies and milkweed
- Discuss: what do you want them to know? What do you want to see change in the IE? Brainstorm positive solutions (plant more native milkweed in public parks, for example)
- Make postcards: on one side, the kids can draw a picture and write a personal message about why this is important to them. On the other side, teachers write a blurb written by the class about what Huerta and the Abejas program is. Send in a packet all together to the mayor (or another local politician of choice)

### **Pollinator Detectives:**

This is a quick activity learning about common pollinators to plants around Huerta's garden, specifically drawing on the information earlier about monarchs.

- Discuss what pollinators are. Define together what pollinators are and what purpose they serve in the garden. How do pollinators know where their food sources are? (Here's a good analogy—you know how at a birthday party, parents put balloons on the fence so people know where the party is? The butterflies or other pollinators use their senses to tell that pollinators are where the party is! That's why the issue with tropical milkweed is that it distracts the monarchs from the party they need to be at in central Mexico). Discuss why we need to plant native plants—so the cycle and jobs of pollinators aren't messed up.
- [Discuss native plants](#) in the garden that attract monarchs and other butterflies, walking around the garden and pointing them out as a group: coastal sagebrush (planted at the front left of the garden), wormwood (fun fact! Wormwood is a very powerful herb that is antiparasitic), mugwort, saltbush, geranium, other sages, sunflowers...<sup>30</sup>
- Brainstorm pollinators that help Huerta's garden grow. Some ones the kids may already know about are bees, butterflies, and maybe birds. Let them know that beetles, bugs, ants, flies, and even bats are also pollinators! In groups, walk around the garden very carefully and spot bees, bugs, beetles, ants, and butterflies pollinating the garden. The group that spots the most wins! Afterwards, rejoin as a group and share interesting things the pollinator detectives found :)

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<sup>30</sup> <https://www.nwf.org/NativePlantFinder/Plants/Flowers-and-Grasses/1>



## WEEK SEVEN

**THEME:** Air Lesson

**OBJECTIVES:**

- Students will gain awareness and appreciation for wind
- Students will establish or broaden their understanding of how wind impacts the environment and the garden

**MATERIALS:**

- Rainbow Twig Wind Chimes:
  - Sticks/twigs gathered beforehand from around the garden
  - [Sanding block](#) or a piece of sandpaper
  - Acrylic craft paint
  - [Craft varnish](#)
  - [Small screw eyes](#)
  - Yarn, twine, or fishing line
- Seed balls (makes 8-10 balls, adjust as necessary):
  - 0.5 oz native wildflower seeds (or other types of seeds)
  - 3.5 oz dry potting soil
  - 1.5 oz powdered red pottery clay
  - Water
  - A mixing bowl
  - A cookie sheet
  - Wax paper



## SCHEDULE:

<i>Time</i>	<i>Activity</i>	<i>Notes</i>
10:00 - 10:30	Welcome <ul style="list-style-type: none"><li>- Check-in</li><li>- Grounding activity</li><li>- Icebreaker</li></ul>	
10:30 - 11:00	Work on the garden plot as needed. This could look like preparing the soil, watering, poking holes and planting seeds or saplings, or weeding. Complete a bingo challenge for birds, bees, and other flying insects around the farm, then discuss as a group why birds, bees, and flying insects are important for the ecosystem.	Bird Bingo: <a href="#">Bird Bingo 1.pdf</a>
11:00 - 11:15	Tea + Snack Break	
11:15 - 11:45	Possible Activities: <ul style="list-style-type: none"><li>- DIY Wind Chimes</li><li>- Seed Bombs</li><li>- Interview an Elder</li></ul>	<i>Note:</i> the Seed Bombs activity is a repeated activity from week 2. If you've already done it and want to repeat it (using different seeds or making gifts for family, for example), go ahead! If you feel like the kids would rather skip it, do so.
11:45 - 12:00	Closing	

### Wind Chimes:

1. Background on Wind: teach a brief lesson on wind, using the main points below to guide you.
  - a. [Wind is essential to natural processes](#).<sup>31</sup> Seeds are one of the most common things moved by the wind, including milkweed! Milkweed uses a parachute mechanism to disperse the parent plant using the wind.
  - b. Other plants can use the wind to create seeds, such as pine and oak trees.

<sup>31</sup> [https://www.canr.msu.edu/news/wind\\_is\\_essential\\_to\\_natural\\_processes](https://www.canr.msu.edu/news/wind_is_essential_to_natural_processes)



- c. Wind blowing on a small seedling or newly emerged spring plant can help the plant create a stronger stem.
2. Ask: why are we building wind chimes? What do kids already know about wind chimes and wind?
  - a. Emphasize that wind chimes are a fun and useful way to interact with wind
  - b. Wind chimes help keep us aware of the effects of wind
3. DIY Wind Chimes: [Rainbow Twig Wind Chimes](#)<sup>32</sup>
  - a. Snap sticks into lengths of approximately 8-10 inches
  - b. Peel the bark off the sticks
  - c. Take a sand block or sandpaper and go over the stick to smooth it out (kids may enjoy how velvety smooth the stick ends up feeling!)
  - d. Paint each stick with two coats of acrylic paint
  - e. Allow sticks to dry in the sun before brushing on a coat of craft varnish
  - f. Screw in small screw eyes into one end of each stick (Facilitators should start each screw and then have students finish twisting them in)
  - g. Tie a long length of yarn, twine, or fishing line to each hook, then tie around around another stick (stick may be straight or can be bent into a circle)
  - h. The wind chimes are complete!

### **Seed Bombs**:<sup>33</sup>

Seed bombs are exploding balls of seeds that are both fun to throw and an easy way to grow native flowers. They are fun AND make the world a greener, more environmentally-friendly place. They even make great gifts!

#### *Instructions:*

1. Line cookie sheet with wax paper.
2. Mix seeds and potting soil together.
3. Add dry clay and mix again.
4. Slowly add water while still mixing the seeds, potting soil, and water into a well-blended paste.
5. When you are able to form a ball of the blended material without it falling apart, you are ready to stop mixing.
6. Mold the mixture into small (~1 inch diameter) balls and place cookie sheet or tray with wax paper.

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<sup>32</sup> <https://happyhooligans.ca/homemade-wind-chimes/>

<sup>33</sup> <https://climatekids.nasa.gov/seed-ball/>



7. Allow balls to dry in the sun for at least one day. Kids can take home and dry or pick up next week.
8. Now, all you have to do is throw them at a patch of dirt and watch it explode! Once it rains (or you water them), they have everything they need to grow.



## WEEK EIGHT

**THEME:** Fire Lesson

**OBJECTIVES:**

- Cook nutritious food from garden ingredients
- Encourage students to think about important aspects of food in their communities: family recipes, cooking and eating with others, access to food in their communities

**MATERIALS**

- Cooking materials for Veggie quesadillas:
  - *Vegetables/ fillings of choice* (from the garden or brought in): Tomatoes, spinach, squash, sweet potatoes, mushrooms, bell peppers, are all starting ideas for veggies. You can also include beans, cheese, and salsa. Prepare the veggies beforehand (i.e. chopping) if needed.
  - *Ingredients/materials for tortillas:* Tortilla press, stovetop, harina, flowers for pressing in (optional). Tortillas can also be store-bought and brought in if this is easier.
  - Potato masher or large spoon
  - Cutting boards
  - Napkins
- Food in the Community (either interviewing a family member or person of choice or completing the food resource map)
  - Coloring and writing materials
  - Paper
  - Scissors
  - Tape



**SCHEDULE:**

<i>Time</i>	<i>Activity</i>	<i>Notes</i>
10:00 - 10:30	Welcome <ul style="list-style-type: none"><li>- Check-in</li><li>- Grounding activity</li><li>- Icebreaker</li></ul>	
10:30 - 11:00	Work on the garden plot as needed. This could look like preparing the soil, watering, poking holes and planting seeds or saplings, or weeding. Pick produce for the meal depending on what is available from Huerta and what you've grown throughout the past few weeks. Talk about seasonality, how to see if plants are ripe, best harvesting techniques for different plants, etc.	If a cooking activity is chosen, garden plot activities may need to be condensed to offer enough time to assemble and cook meals.
11:00 - 11:15	Tea + Snack Break	Incorporate into cooking time to allow more time to prepare/eat meal
11:15 - 11:45	Possible Activities: <ul style="list-style-type: none"><li>- Veggie quesadillas</li><li>- Farming and Family</li><li>- Cooking and Family</li><li>- Food Resource Map</li></ul>	If making veggie quesadillas: Note that a stove must be brought in prior to this week's activity; if a stove is not available, consider baking them in the pizza oven
11:45 - 12:00	Closing	

**Garden Chefs: [Veggie Quesadillas](#)<sup>34</sup>**

1. If making tortillas at the garden, students can help to press the tortillas and add edible flours. Facilitators should help to cook the tortilla.
2. Add pre-cut vegetables to a mixing bowl and mix in any other fillings (i.e. beans, salsa), using a potato masher or the back of a large spoon.

<sup>34</sup> <https://happykidskitchen.com/easy-veggie-and-bean-quesadillas/>



3. Add shredded cheese to one half of a tortilla, spread on a few spoonfuls of the veggie mixture, then top with more cheese. Fold down the opposite side of the tortilla over the filling and press gently to seal.
4. Facilitators should help students assemble the quesadillas if assembly/cooking is occurring on the stove.
5. Let quesadillas cool before enjoying them!

### **Farming and Family:**<sup>35</sup>

- In this lesson, students reflect on their personal relationship and their family's relationships with farming. Students will interview a family member and conduct research into their family's history with growing food. Finally, they will use their answers to develop a creative project.

### **Cooking and Family:**

- Ask students to interview a family member about a family recipe or a favorite meal to cook together. Students can also share their favorite recipes and meals that they enjoy preparing with others.
  - Do they have any unique food traditions?
  - Are these recipes written down? Passed down verbally?
- Consider incorporating a creative element in this activity:
  - Have students write about this recipe or meal (i.e. a poem, a fictional tale, a retelling of their favorite memory of eating this meal)
    - What are the tastes and smells that the student remembers when thinking about this recipe/meal?
    - Who did they last share this meal/experience with?
    - Do they have this meal often, or is it saved for special occasions?
  - Students can draw a picture that reminds them of this meal/recipe (i.e. a drawing of the meal, a drawing of gathering in the kitchen to cook/eat the meal, etc.)

### **Food Resource Map:**

Where is the good food in my neighborhood? Get some clipboards and paper and take to the streets as a group (or in 2 groups, but make sure each group has an adult!).

Check out the food stores - any store with at least 7 different kinds of fresh fruits and vegetables counts as a "good food resource." Community gardens, food pantries that offer fresh fruits and vegetables, and farmers' markets also count.

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<sup>35</sup> <https://edibleschoolyard.org/resource/farming-and-family>



Take your data and turn it into a map that you can share with your neighbors so they know where to get healthy food.



## WEEK NINE

**THEME:** Fire Lesson

**OBJECTIVES:**

- Cook nutritious food from garden ingredients
- Encourage students to think about their relationship with food/promoting healthy relationships with food

**MATERIALS:**

- Sun drying fruits
  - Fruits of choice from the garden (i.e., peaches, plums, strawberries, even tomatoes; could potentially bring other fruits in)
    - Wash and cut fruit beforehand: slice/chop into desired shapes for students to help assemble on drying racks
    - If using peaches or other stone fruit, peel beforehand
  - Drying racks (i.e., cooling racks)
  - Cookie sheets
  - Cheese cloth
  - Lemon juice water mix (1 cup of lemon juice:4 cups of water)
- Food memories/relationships with food
  - Coloring/writing utensils
  - Paper
- Storytime: books of choice



**SCHEDULE:**

<i>Time</i>	<i>Activity</i>	<i>Notes</i>
10:00 - 10:30	Welcome <ul style="list-style-type: none"><li>- Check-in</li><li>- Grounding activity</li><li>- Icebreaker</li></ul>	
10:30 - 11:00	Work on the garden plot as needed. This could look like preparing the soil, watering, poking holes and planting seeds or saplings, or weeding. Pick produce for the meal depending on what is available from Huerta and what you've grown throughout the past few weeks.	If a cooking activity is chosen, garden plot activities may need to be condensed to offer enough time to assemble and cook meals.
11:00 - 11:15	Tea + Snack Break	Incorporate into cooking time to allow more time to prepare/eat meal
11:15 - 11:45	Activity Ideas: <ul style="list-style-type: none"><li>- Sun drying fruits</li><li>- Food memories/relationship with food</li><li>- Storytime</li></ul>	
11:45 - 12:00	Closing	

**Garden Chefs: [Sun-Dryin<sup>36g</sup> Fruit](#)**

1. Set up ingredients at the picnic tables. Have students all wash their hands.
2. Put fruits in the lemon/water mixture and allow them to soak for a few minutes (this will help them from browning)
3. Place drying racks on a cookie sheet so that any dripping water is caught. Lay the fruit out on the drying racks with enough space for air to flow between/around the fruit.
  - a. Different fruits require different lengths of drying time; depending on the type of fruit used, organize the fruit on the drying racks to be brought in depending on required drying time
4. Cover the racks with cheesecloth to protect the fruit from bugs.

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<sup>36</sup> <https://www.instructables.com/How-to-Sun-Dry-Fruit/>



5. Set racks of fruit in a warm, dry place in the sun. Ideally, a location with warm temperature and low humidity. *Make sure to bring the fruit inside overnight/after garden closes*
6. Fruit is done drying when it appears wrinkled, is leathery but not stiff, and if, when ripped in half, there are no moisture beads; similar to raisins
  - a. Approximate drying times:
    - i. Apples: 2 days
    - ii. Cherries, blueberries, and apricots: 3 days
    - iii. Peaches and plums: 4 days
7. Store dried fruit in an airtight container and enjoy!

*Special notes on chatting with students about food:*

- The language used for foods can often be positively or negatively charged, and it is important to shift focus away from “good” or “bad” foods to discussions on how food makes one feel in their body, what foods bring them joy, the importance of both nutrient-dense and “fun and social” foods.
  - What are foods that they think should always be on their plate?
  - What foods make their bodies feel good? In what ways?
  - What are foods that are “fun and social” in their lives?
- If they tend to focus on less nutrient-dense foods, such as foods high in sugar, encourage them to also comment on other categories of food (without vilifying any foods!). Ask what fruits or vegetables are the same color as that food that they also like.
- Focus on ideas surrounding what foods cultivate joy, eating in community, intuitive eating, how the garden can teach about a "colorful plate," and highlighting social/cultural aspects of eating and cooking.

**Food Memories:** Encourage students to share their most integral food memories; can be done in tandem with sun drying fruits if there is enough time. If you'd like, incorporate art and drawing into this conversation. Here are discussion or art prompts:

- What is their favorite food? Why? What is its smell, taste, texture, color?
- What is a memorable meal that they have had? Where was it? Who was it with?
- Do they like to cook for themselves? If so, what do they like to make? Why do they enjoy making it?
- What food, seasoning, or sauce do they think is a great addition to any meal? Why?
- Do they have any funny stories connected to food? What are they?
- What is a food or a meal that always cheers them up?
- Do they have a favorite cook in their family? Who, and why?
- What foods make them feel energized?



- Can they think of a food that matches their favorite color? Do they enjoy that food?

### **Storytime in the Garden:**

Read a food, environmental, or social justice in the garden book! Here are some ideas for books:

- Green Green: A Community Gardening Story
- Right This Very Minute: A Table-to-Farm book About Food and Farming
- Before we Eat: From Farm to Table
- The Farm that Feeds Us: A Year in the Life on an Organic Farm
- Icing on the Cake: Food Idioms
- Every Night is Pizza Night
- Fry Bread: A Native American Family Story
- Let's Eat: Mealtime Around the World
- Bruno the Beekeeper
- The Ugly Vegetables
- Gathering the Sun: An Alphabet in Spanish and English
- City Green
- What's in the Garden? Learn Where Food Comes From
- Farmer Will Allen and the Growing Table
- The Barefoot Book of Earth Tales
- Diary of a Worm



## WEEK TEN

**THEME:** Closing Reflections

**OBJECTIVES:**

- Students reflect on what they have learned over the program and celebrate what they've shared together

**MATERIALS:**

- Letter to Future Selves:
  - Blank papers to write on or premade letter templates
  - Envelopes
  - Writing supplies
  - Clipboards (optional to write on)
- Food Story Placemats:
  - Coloring supplies
  - Horizontal large papers
  - Plastic sleeves
- Materials for choice closing activity



**SCHEDULE:**

<i>Time</i>	<i>Activity</i>	<i>Notes</i>
10:00 - 10:30	Welcome <ul style="list-style-type: none"><li>- Check-in</li><li>- Grounding activity</li><li>- Icebreaker</li></ul>	
10:30 - 11:00	Final harvesting from the garden plot and discuss what students have learned from working in the plot. Talk about what care will need to happen in the garden over the months that the Abejas program isn't happening to maintain the garden.	
11:00 - 11:15	Tea + Snack Break	
11:15 - 11:45	Possible Activities: <ul style="list-style-type: none"><li>- Food Story Placemats</li><li>- Letter to Future Selves</li></ul>	
11:45 - 12:00	Closing Celebration <ul style="list-style-type: none"><li>- Complement circle</li><li>- Family potluck (if accessible)</li><li>- Certificates and mini-graduation</li></ul>	Invite parents in!

**Letter to Future Selves**<sup>37</sup>:

- Invite participants and facilitators to write a letter to yourself that will be mailed to them in about 6 months. Explain that the letter is an opportunity to capture how you're feeling right now in your life and consider any advice or thoughts to share with yourself. This letter will be kept in a sealed envelope and will only be read by the author so go for it!
- Distribute pieces of paper or make your own template with this prompt: *Write a letter to yourself. What's going on for you right now in your life? Hopes? Dreams? Include a couple of things you would like to tell yourself and anything you learned from the past 10 weeks at Abejas. Be sure to put your letter in the envelope, we'll store all the sealed envelopes in a top secret place and you will receive this letter from yourself in about 6 months. Write on the back if you've got more to say!*
- Make sure to collect addresses from kids so you can properly distribute the letters.

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<sup>37</sup> <https://seedsofsolidarity.files.wordpress.com/2012/05/food-for-the-solfinal-sm.pdf>



**Food Story Placemats**<sup>38</sup>:

- Using paper and colored pencils or markers, ask participants to design a placemat that tells a cultural or personal food story. For example, a food story may illustrate a special dish that is served at a holiday meal, a traditional food from their country of origin, their personal choice to become vegetarian, or the story of their time in the Abejas program. The placemat can describe any significant food story the kids want to share. This activity is about understanding that food connects and nurtures us with more than just its ingredients.
- Collect the placemats, place them in a plastic sleeve or laminate them, and share the stories. You can use them for the community meal!

Leave this week open-ended. You could fill the rest of the time with games, plan for students to guide their loved ones on a tour of Huerta together, have the students cook a meal for their loved ones, or ask families to bring in a dish for a potluck (but make sure to communicate this with parents before and make sure that this is accessible for families who may be working or busy). Another fun idea is making personalized certificates for each student and hold a mini-graduation.

Close with a community circle where each participant shares something they took away from Abejas, a special memory from the garden, and a compliment for another person.

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<sup>38</sup> <https://seedsofsolidarity.files.wordpress.com/2012/05/food-for-the-solfinal-sm.pdf>



## REFERENCES & RESOURCES

Along with the resources linked in footnotes on this document, here is a list of resources we used to help guide this curriculum.

[Next Generation Science Standards](#)

[California Farm to Fork](#)

[Vermont Feed](#)

[Soul Fire Farm's Food Sovereignty Education Youth Program](#)

[Seeds of Solidarity's Food for the Sol Program](#)

[Planting Justice's Food Justice Education](#)

[Photosynthesis Worksheet](#)

[Center for Ecoliteracy Ecological Education](#)



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In community,  
Hava Sprung, Sable Fest, & Maddie Ward



## CONSIDERATIONS FOR FUTURE PROGRAMMING

The Abejas program is targeted toward young people ages 5 - 12. However, the garden has the potential to be a site of education about social, food, and environmental justice for all ages! If anyone (future CASA Pitzer Interns, future volunteers, future Huerta leaders) is interested in developing the Abejas program or a new program for a middle-school audience, I have compiled resources below for lesson ideas from various online sources. The middle school lesson ideas have more components centering on critical engagement with food sources, medicinal plant knowledge, and the indigenous histories of the land. Good luck, and please don't hesitate to reach out to Hava Sprung ([hsprung@students.pitzer.edu](mailto:hsprung@students.pitzer.edu) or [havasprung@gmail.com](mailto:havasprung@gmail.com)) for any questions or just to talk about developing a middle-school program!

[The Media Does Not Have My Mind](#) - about critical media consumption and advertisement literacy regarding food justice, specifically fast food

[Food Justice Charades](#) - learning food justice vocabulary

[Perspectives Walk - A Food Justice Activity](#) - an identity walk about food scarcity, need to build trust and community safety before this activity to make sure it is safe

[Land Loss and Resistance Timeline](#) - a theater of the oppressed-type activity

[Food is a Human Right](#) - curriculum about the Black Panther Party and food justice

[Planting Justice](#) - a good curriculum about seeds and planting justice

[Plant Medicine](#) - plant medicine curriculum about healing plants

[What is the Food System](#) - all about the food system, for middle schoolers or older. If using it for middle schoolers, you will need to edit and make it more clear and age-appropriate.

[School Lunch Survey](#) - school lunch survey—way to get folks politically engaged

[Take it Home](#) - tons of take-home activities!

[Nature is My Teacher](#) - great SEL/connection to the land activity

[Indigenous Origins Regenerative Agriculture](#) - learning about regenerative agriculture indigenous practices