Walla Walla Valley Farm to School - a program of
The Sustainable Living Center

Garden Club: A Guide to the Process and Activity Ideas

Table of Contents:

The Garden Club Guide were compiled by Barri Scott, 2018 Whitman student volunteer, and revised and updated by WWVF2S intern Olivia Myers and edited by Program Manager Beth Thiel, Spring 2020. Credit to Life Lab for inspiration.

The mission of the Walla Walla Valley Farm to School program is to inspire healthy communities through food, farm, and garden experience.

1. Garden Club Goals, Philosophy and Values:

Welcome to Garden Club! Thank you so much for your involvement in the Walla Walla Valley Farm to School (WWVF2S) program. It's the garden managers, volunteers, interns, and parents like you that make this program possible. The following booklet is a compilation of past practices and activities that can be used as a guide for planning future Garden Clubs (GC).

Garden Educator Philosophy and Values:

- We let kids do as much of the gardening as possible with clear and demonstrated instructions. We're not afraid to let them use tools, pull hard, push hard, or cut vegetables with knives (while adults provide good instruction and oversight).
- We make students feel like scientists. We tell stories of real scientists and follow their example of curiosity, performing simple investigations. It is important to wonder. It's OK to not know the answer to a question, we will ponder and design a way to find an answer.
- We answer questions with more questions, when possible and appropriate.
- We appreciate and encourage hard work, it feels good.
- In the garden we open all our senses like good observers and scientists. It can help to close our eyes to focus on touch, smell, sound, and taste.
- We use our taste-buds! Even if lessons aren't tasting- or cooking- oriented, we try to find time for tasting something in the garden (borage or mustard flowers, herbs, kale, arugula, nasturtiums, cucumber, etc.). Tasting is an adventure, and we encourage everyone to (politely) try everything edible.
- We don't ever want to waste food. If we don't eat it in time, it can decompose to become nutrients for next year's crop. But we always want to 1) eat it ourselves 2) get it to someone else who wants to eat it or 3) use it for compost. The Garden Club supervisor must coordinate harvesting with the school Garden Education Manager(GEM)
- Nutrition: the more natural, the less processed, the less packaging the better.
- We find sweetness in the fruits and vegetables of the garden, so no candy or artificial sweets.

2. Registration:

For students to attend after school Garden Club, they must have their parents or guardians fill out a registration form (page 18). Registration forms should be provided in English and Spanish. Registration begins the 2nd week of September (Fall GC) or the 2nd week of March (Spring GC). To reduce print cost, a new process will collaborate with the school office to announce registration forms are available for those interested to complete and return over a two week period. A subsequent authorization form (page 19) is sent home with the registered students describing the pick-up time and place, along with a box for parents to check whether their student walks/bikes home or is picked up. A cap of 40 students is recommended. There must be one adult (preferably more) for every 10 students registered to help oversee activity stations.

Summer garden club participants are registered with other programs such as City Parks and Recreation U-Play program or Summer Campfire Program. We won't complete registration for the summer garden clubs. Councilors associated with those programs help to run stations.

Making a Roster: After picking up the completed registration forms, before the first after-school GC, create a roster sheet (see below) that provides the students' grade, parent contact information, and assigned group number. If the GC group is large enough (12+), you will create color-coded name tags to help organize the kids into groups. When assigning students to a group, ensure a variety of ages in each group. Older students are an enormous help in managing the activities. Make name tags for students and volunteers with felt squares, sticker labels and safety pins (supplied by Farm to School, aka F2S). Make a roster for each group. Place name tags and roster for each group into separate zipper bags to give to the adult volunteer group leader. Take roll the first week, and play a fun name-learning activity, before activities begin. In subsequent weeks, group leaders can report who is missing from their group to roll call after initial circle time and activity descriptions.

Student Name	**Grade**	**grp**	**GC 1**	**GC 2**	**GC 3**	**GC 4**	**GC 5**	**Parent**	**Contact**
Parker Smith	1	1						Amy Smith	555-123-1234
Carter Beal	1	2						Jessica Beal	444-222-3344
Evan Fish	1	3						Kristy Fish	567-444-2222
Rylie Dil	1	4						Michelle Dil	509-345-7688

Authorization Forms and Reminder (pg. 19): For after-school Garden Club, parents of participating students must fill out and sign an authorization form to indicate if their child will be picked up, walk home, or needs to go to an after-school program once GC has ended. Deliver the authorization forms to the school front office with each student's name and grade written on the top of each form. Ask the office staff nicely if they will help distribute them to the correct teacher. The form also reminds the student/parents of the GC schedule. When students are authorized to walk home, have them turn in name tags as a self-sign-out. If a student wants or needs to walk home, but there is no signed authorization form, you must contact their parent/guardian before allowing the student to go home by themselves.

3. Volunteers:

The primary method of finding parent volunteers for GC is through the student registration process (see registration form page 18). For additional volunteers, advertise the opportunity long in advance of the start date! Maintain a list of volunteers. Methods to recruit volunteers:

- Post a volunteer sign-up sheet on school bulletin boards where parents will see it. Ask the front desk for suggestions on effective communications (information sharing app, etc.)
- Colorfully email college students on the F2S email list, other related list-serves, and interested friends.

One week before the first GC, connect with each volunteer by email or phone to confirm their involvement including:

- Background check form must be completed by all volunteers.
    - For parents, they can fill this out and turn it into the school's front desk directly.
    - For other community members, the F2S Program Manager must sign the form first.
- Date and Location of Volunteer Orientation

Pre-GC Prep: Two to three days prior to each GC, email volunteers an outline of the week's activities. It is nice to have notecards present on-site with a description of each activity and key objectives for the volunteers to reference. At the first GC, introduce the volunteers and have students give them a cheer and thank you. After the very last GC, you will want to write and deliver thank you letters to your volunteers.

4. Typical Garden Club Routine:

The GC schedule might vary between seasons and leadership preference, however a consistent routine throughout a GC session allows the kids and volunteers to be familiar and comfortable with a daily pattern. The pattern set the first day, will be difficult to change for the remainder of the club, so be well prepared. Prepare four activities (for example: a garden maintenance, cooking, craft, and science activity). Below is an example of an approximately 90 minute-long GC:

- Initial circle gathering and welcome – same place each time
- Mindfulness activity to shake off the day and prepare for garden club fun – 3-5 min.
- Description of group activities and rotation style (Ex: 10min/station, listen for the howl to switch stations, seed collection station will always go to the seed dissection station etc.)
- Reminder of the garden rules – especially as they pertain to the day's activities
- Remind students about process at finishing time – (find your group leader volunteer with clipboard, hand in your name tag only when your parent is present to pick up and sign out)
- Roll Call – as a whole group or group leaders do independent roll call and report back
- Rotate through 4 activities of about 12 minutes each
- When time allows, add in full group team building activity before or after station rotation
- Wrap-up activity with the whole group
- Return nametag, sign-out, and parent pick-up

Example - GC Activities and Time Breakdown		
Activity	**Summary**	**Time**
Circle Gathering - Welcome, Mindfulness Activity	Have students sit in a circle and close their eyes. Tell students to be very quiet and to listen to the sounds around them. After 30 - 60 seconds, or 8 deep breaths, have students open their eyes and take turns sharing what they heard with the group.	5 minutes
Introductions, Club time description, Activities introduction, Garden Rules reminder, Roll call	**Introductions**: don't forget to thank volunteers -Remind students about **routines for checking out**. It is vital to establish the habit of parent signature sign-out on the first day. Students don't hand in the name tag until the parent is there to pick them up and sign them out -Introduce **activities stations** -Review **garden rules**. -Take **attendance** and break students into their groups.	10 minutes
Four Activity Rotations	1) Picking/Sorting Tomatoes/identifying plant parts 2) Chopping/Prepping Ingredients for Salsa 3) Chalk drawing any plant with labeled 6 parts of a plant. 4) Weeding a designated bed - sorting weeds by root type	48-50 minutes (about 12 minutes / station)
Whole Group	The students will come together as a larger group. On a whiteboard, write down the recipe for salsa. Have the students tell you how much of each ingredient you will need. Place all ingredients (with good listener help) in a bowl and mix. Have students wash their hands and then form a single file line. Distribute one chip and a scoop of salsa to each student (Only students having salsa get a chip). Students that want seconds simply go to the back of the line until all the salsa is gone.	10 minutes
Closing	Clean up and review garden lessons (did we have all plant parts in our salsa?). Have students hold onto their name tags until their parents arrive to sign-out. Turn in the name tag only once parents/guardians arrive.	

5. Creating a Garden Club Classroom Culture:

Essential to any learning atmosphere is a culture of respect, cooperation, organization, fun, and engagement. Education Outside provides these best practices for establishing an effective classroom culture. https://drive.google.com/file/d/13BC4nKPRyF-qaCh72lOIPgcKfIkpD4hZ/view

One key to a successful Garden Club is preparation before each session. Life Lab's Outdoor Classroom Management document is a good additional resource: https://www.lifelab.org/wp-content/uploads/2003/04/OutdoorClassroomManagement.pdf

1. Pre-lesson organization:

- Have all materials ready and accessible for station leaders to distribute for student use.
- Have the agenda for the day displayed visually and clearly outlined verbally during the initial welcome.
- Designate where activities will be held, and which station leader oversees each activity.

2. Welcome:

- Greet all with a friendly smile and interaction such as a high-five, fist bump, etc.
- Begin GC with a consistent routine, such as a circle of inclusion and mindfulness activity.
- Introduce the main objective in an engaging, exciting way such as a story, mystery, or challenge, etc.

3. Managing Engagement and Discipline:

- The first after-school GC welcome circle should include a quick **name-learning** activity. Summer GC will see different students each week, so quick introductions each week instead is a good practice.
- Speak with a **calm tone** with variation and emphasis when appropriate to keep students engaged. Use a clear voice and appropriate language easily understood by the kids.
- Give concise, understandable **instructions**. Remind kids of relevant garden rules. Anticipate student questions and ask for verbal understanding from the students (check-in) to make sure instructions are understood.
- Use **thoughtful transitions** to move students smoothly and quickly into new activities and refocus after the transition is complete.
- **Positively narrate student behavior**, i.e. name, and acknowledge the kids following the instructions as an example to others not yet following. Involve the students in discussion and decision-making.
- Explain **appropriate consequences** of students not following directions, i.e.. "If students are talking while I am giving instructions and I need to repeat myself, we will not have enough time to play our final game."
- Manage **student conflict** calmly, patiently and with a listening heart. Believe in students' ability to solve problems. Sometimes a simple game of rock, paper, scissors can provide the solution. Providing equal time with limited tools can be important to avoid conflict.

- Use reliable, situation-appropriate **attention-getters** such as:

“If you can hear me. . . Put your hands on your head! . . . Clap once! . . . Show me your chipmunk cheeks!”	Think up actions until all students are paying attention.
“Waterfall in 3, 2, 1!”	After 1, students say whooshhh and make rainfall with their hands.
“Ba ba da ba da. . .”	Students respond “Ba ba!” Can be adapted to other songs/words/syllables.
Quiet Coyote	The educator makes a coyote with their hand and may or may not say “Quiet Coyote,” and waits until all students are silently showing the symbol.
Flute/Harmonica	Students freeze and turn towards the educator when they hear the sound.
“Hands on top!”	Students respond, “Now we stop!” and put their hands on their head. Helpful during a hands-on activity.

6. Preparation and Garden Materials:

Planning for Rotations: As mentioned previously, after-school Garden Club is organized around activity stations. Roughly every 12 minutes, the students will rotate around these stations with their assigned group. The focus of each station is up to the Garden Club Coordinator and is dependent on what is available or what is needed in the garden. Organizing the stations around a theme can be helpful (insects, seeds, soil/compost). Stations that are consistent each week, but change depending on garden status could include: maintenance, art/poetry, science, and cooking.

Print out and use this GC weekly report to keep track of important points/notes.

Answer these questions before and after each Garden Club to prepare for and evaluate after-school and summer GC each week. Include any other helpful observations, reminders, etc.

Garden Educator:_____ School:_____ Date:_____

Before GC:

What are special considerations in the garden at the moment? (Garden weeds, maintenance needs, ripe fruits or vegetables, weather, number of students, student requests, etc.)	
What will kids remember from their time during GC this week? Is there a theme we will return to throughout the club?	
Where are the optimal locations for each station activity? (generally, not more than two groups at a time in the garden space)	
Which volunteer adult will oversee each station, considering their skills, time available, preferences, etc.?	
What materials are needed for each of the activities?	
Notes:	

After GC:

How many students attended today?	
Were the learning objectives met for the day? How or how not? Were there any special quotes from the day that demonstrate student engagement? What was tasted in the garden? What maintenance was accomplished?	
What were the students excited about? What can the next GC follow up on or explore more of?	
Does a project need completion (a planting cared for, etc.?)	
Are there recommended modifications to the activities either for the rest of the season or to consider for future GCs?	
Did transitions and attention-getting work well? Are there any logistical fixes/new strategies that could make the GC run smoother?	
How much time was spent 1) preparing for lessons 2) setting and cleaning up 3) doing maintenance prior to or after GC 4) reporting/summarizing GC	
Notes:	

Managing Materials and Garden Tools: Because you and the students will be working with many tools and materials in the garden, it is important that you manage them properly. Here are a few logistical tips for managing tools and materials:

1. Count equipment before and after each lesson to ensure none are left in the garden space.
2. When station activities use tools, ensure the station leader first demonstrates proper use and how to return the tool once finished.
3. Clean all the equipment after each club. Brush the soil off shovels and trowels. Sometimes you will need to wash equipment (e.g. cooking bowls, measuring cups) at home and bring it back the following week.
4. Make sure all equipment is properly stored after each Garden Club.

7. Welcome Circle and Mindfulness Activity:

Begin GC by circling up with the students in a routine spot to welcome everyone, introduce the theme and activities for the day and practice a mindfulness activity together. Mindfulness is the ability to be fully present and aware of ourselves and what is happening around us. In GC, mindfulness activities emphasize an awareness of the senses. This activity should not take more than five minutes, and helps the students settle down and grow calm and focused before the start of GC. Some examples include:

- Breathing exercises in which the students focus on the pace and rhythm of their breath.
- Have students lay on their backs, look at the sky for 4 breaths then share what they see.
- Have students close their eyes and turn, then open their eyes in the new direction. Then tell students to focus on one object and think of one word to describe what they see.
- Go around the circle to allow each person to describe how they are feeling in a form of weather.

8. Garden Rules:

The four rules should be reviewed at each welcome circle and appropriate ones reiterated before certain activities (such as when handing out tools to use.)

1. Keep feet on the paths and out of the beds (because the plant roots like the soil to be light, not compacted).
2. Everyone is encouraged to feel, smell, and listen to everything in the garden, but please ask before you pick anything. Some items aren't edible and may be toxic and some items may not be ripe yet.
3. Be respectful to creatures, equipment, fences, fellow gardeners, and yourself. This includes watching creatures with scientist eyes to create questions in your mind rather than picking up or touching creatures.
4. When using tools, keep them below the waist so no one gets hurt. Put tools away in the designated area.

Tasting Manners: In addition to the rules above, an important etiquette reminder in the garden is what we fondly call "don't yuck my yum." Whenever students will be tasting something in the garden together, encourage them to be bold and try the new food, but not to express their dislike in a way that could be hurtful to others. Ask the students to quietly put the food in a scrap bowl without a fuss, because not liking something is perfectly ok, but degrading the food and others' tasting experience is not. "Don't yuck my yum!"

9. Activity Rotation:

GC is organized around three to five activity stations that students rotate through in their assigned groups. The garden club coordinator develops and prepares the activities at each station, which reflects the needs and products of the garden. The activities section of this guide provides example activity ideas, but there are multiple online resources that are also great places to find ideas (SLC garden lessons, Lifelab.org and edibleschoolyard.org/curriculum). Feel free to use these resources as inspiration in creating your own activities for GC. Common themes (i.e. compost, insects, water cycle, etc.) or a big project (i.e. salsa making) throughout the club helps focus your activity ideas on a central learning objective.

Station Activities ideas:

1. Science: See Garden Club Themes section 11
2. Garden maintenance: see page 12
3. Cooking: see pages 13-15
4. Arts/Crafts: see pages 15
5. Games and Scavenger Hunts: see page 16

10. Wrap-up Activity:

It is important at the end of each GC to regroup the students to review and reflect upon the activities of the day together. In a toe-to-toe circle, ask each student to share something they observed/learned/enjoyed/tried for the first time that day. This is also an opportunity to distribute harvest treats (utilize the produce in the garden!) as students answers questions (or comes up with questions), share some harvest treat. Along with reviewing main concepts pertaining to the theme of the day, some guiding questions include:

- What is one thing you noticed in the garden today?
- Can you tell me about a special shape, color, texture, or pattern that you observed in the garden today?
- Did anyone hear or smell something interesting in the garden? What did it remind you of?
- Was there anything in the garden that surprised you or made you curious?

Finally, students will wait to turn in their name tags until their parents sign them out.

11. Garden Club Themes:

The Garden Educator may center the day's activities around a central theme. Along with this list of GC themes and related activities, the Education Outside document is an excellent source of activity ideas. Themes for Summer, Fall, and Spring GC can include:

- 6 Plant Parts
- Compost
- Nutrient Cycle (Producers, Decomposers, Consumers)
- Flower Anatomy
- Insects: beneficial vs. pest
- Flower–Insect interactions

- 3 Types of Soil (clay, silt, sand) and Hummus investigation
- Symbiosis: Nitrogen-fixing Legumes; Lichen; 3 Sisters Garden; Companion Planting
- Cycles: water cycle; plant life-cycles; insect life-cycles, nutrient cycle etc.
- Habitat Identification and Comparisons
- Adaptations
- Bees: social vs solitary (bee boxes)
- Nutrition
- Seeds: Anatomy and Collecting for planting next year

12. Maintenance Tasks per Season:

The garden maintenance tasks that students will work on will vary depending on the season and the needs of the garden. Any maintenance tasks should be coordinated with the school Garden Education Manager who will also be engaging classrooms in maintenance and planting activities.

Tasks include:

- Weeding: Year-round. Students will weed a specified area in the garden, in beds or the pathways. Emphasis will be placed on removing the roots, the safe handling of equipment and investigating plant root structure (activity outline on page 26).
- Seed Harvesting: Summer/Fall. Students will collect seeds which can be taken home in paper envelopes students create or can be saved for fundraisers (pg. 23).
- Composting: Year-round. Students will learn the process of composting and why we compost. They will review the different layers of a compost pile and will then build their own compost pile (pg. 24). If a compost pile already exists, turning the compost is an important project as well as investigating the creatures that break organic matter down.
- Harvesting Fruits or Vegetables (pg. 25): Spring/Summer/Fall. Students will collect fruits or vegetables from the garden. Students will sort the harvest based on ripeness. Ripe produce is used in a recipe. Unripe produce will stay on the vine. Over-ripe/rotten produce will be used for composting.
- Spreading Mulch: Fall. During the last days of Garden Club, students will prepare the garden for the winter by spreading mulch (dried leaves, straw) on garden beds.
- Watering: Spring/Year-round. Students will water a specified area of the garden. Instead of a hose, have students use buckets, rainmakers, or watering cans. Describe to students that in dry conditions, soil needs more water than they think. Water beyond just wet.
- Turning Cover Crop: spring, summer: Students will prepare the bed for planting.
- Feeding Soil: spring, summer, fall: Students add organic fertilizers/compost to the beds.
- Pathway Maintenance: Year-round: Students can pull weeds and spread fresh wood chips.
- Plant Cover Crops: Summer, fall, after a crop has been harvested, spread cover crop seeds
- Planting: spring, summer, fall: Students will plant seeds or seedlings based on our local crop planting guide - coordinate any planting with the school Garden Education Manager.
- Irrigation: year-round: Students will help install, fix, and finally take out irrigation lines in the fall where they are removable.
- Trellising: spring, summer: Students will create trellises for climbing vines (peas, cucumber, squash, melon) and set tomato cages.
- Thin Seeded Crops: spring, summer: Radish, beets, carrots, lettuce, kale
- Pest Control (squash/stink bugs): summer, fall: Refer to the summer maintenance guide.

13. Cooking:

Cooking is a fun and important aspect to GC that engages students with the food in the garden. Students should be involved in all stages of the cooking process, so try to incorporate produce students can harvest directly from the garden, and other raw ingredients not yet prepared. Cooking is a great time to remind students about the seasonality of food, the nutrients found in different foods, and the importance of eating a diversity of colors and plant parts in your diet.

Materials:

1. A bin of cooking equipment is in many of the garden sheds and includes silverware and plates, colander, bowls, cutting boards and hand washing soap and towels.
2. Some items may be brought from home for the day's cooking such as a sharp knife, extra bowls, recipe ingredients, etc.

Preparation and Safety:

1. Ask the school secretary (and the students) if any students have any allergies to certain foods. Avoid cooking with any of those ingredients.
2. Avoid using foods that can easily spoil when cooking with students. Use fresh, unprepared ingredients to cut up and cook with. Cooking ingredients that are good to bring include: canola, sesame or olive oil, vinegar, citrus, plain yogurt (new), cream cheese (new), honey, mustard, soy sauce, ginger, garlic, salt and pepper, herbs or spices, peanut butter (check for allergies), fruit preserve, sugar.
3. Limit disposable materials by using reusable silverware and plates. Sometimes for tasting, it is easiest to hand each student a piece with a fork. Students can use toothpicks for things like melon, summer squash or cucumbers, tomatoes.
4. If anyone cuts themselves, treat the wound by rinsing, sanitizing with an alcohol swab and a Band-aid (know where the first aid kit is located). The student should sit out the remainder of the preparation but can take part in tasting.

Handwashing:

1. The gardens are pesticide and herbicide free. When students are picking and tasting something for themselves, they don't have to wash the product or their hands first.
2. When students are picking something to create a dish for sharing, they must first wash their hands before picking or preparing any ingredients.
3. Wash any items picked or purchased before preparing for a shared dish.
4. The cooking station begins with handwashing. Have students dip their hands in a bowl of water to get them wet, then receive one drop/squirt of biodegradable soap (Dr. Bronner's Soap), then wash hands by rubbing together before rinsing with water from a watering can. Lastly, always dry thoroughly with a clean towel!

Cutting Safely: Giving students knives may seem like the last thing you want to do; however, with clear instructions beforehand, and keen oversight, most students will take the responsibility seriously and enjoy participating in the entire cooking process. In GC we use the "Claws in" cutting technique, shown in the picture to the right. Before students have knives in front of them, clearly explain the importance of cutting properly. Role play an improper way of cutting, such as with fingers splayed out, and ask students why that is dangerous. Then, with your fingers gripping the object in the "Claws in" method, demonstrate slow, safe cutting. Oversee one student at a time with a sharp kitchen knife. Allow students to cut on their own with safe dinner table knives.

Other knife safety tips include:

1. With round objects like onions, cucumbers, etc., adults should first slice them so that there is a flat, stable side of the object that can rest on the table while the kids cut.
2. Have students place knives to the side of the cutting board whenever they are not cutting.
3. With objects difficult to cut, or if there are small amounts of food to cut, a one-by-one cutting station can be set up. Have an adult monitor one child at a time who makes a few slices, then rests the knife down for the next student in line to take a turn. This is a good activity for students to practice "Claws in" as an adult watches each student closely and can correct them.

Tasting Manners: When tasting with students **tasting manners** are very important. Remind students about manners right before tasting. In GC we use the saying: "Don't yuck my yum!" The philosophy behind this is being brave to try new things as well as respecting what others like that we may not prefer ourselves. Students should practice evaluating not only taste, but smell, feel and sound. Here are some tasting guidelines:

1. No one must taste something they do not want to taste. But everyone is encouraged to go on a multi-sensory adventure! Encourage students to be curious and use all their senses to explore something new. "Those who aren't afraid to try new things are more likely to travel around the world someday."
2. "Many people love these items that all come fresh from the garden. Please don't yuck my yum." Remind students that if they don't like something, they may dispose of it politely in the scrap bowl or in the compost. Ask students to not make noises or faces about the food they taste. We show good manners at GC.
3. Ask students to wait until everyone has a sample. Once everyone has their piece remind them to use all their senses to observe how it sounds, smells, and feels as they taste. You can have the students close their eyes to make other senses more aware. Say "bon appétit, time to eat" or another phrase to indicate that everyone can taste at the same time.
4. As students open their eyes, ask them to list a descriptive word about how the food tasted, sounded, smelled, felt, or looked. If there is plenty to go around and students want more, let them eat as much as they like.

Cooking/Snack Ideas per season:

Find some garden program recipes on the SLC Website at https://www.slcww.org/f2s

- Salsa: Summer, Fall, 1st grade fall lesson
- Cucumber Sesame Slaw: summer, fall
- Carrot Cucumber Salad: summer, fall
- Green Salads: spring, early summer
- Kale Salad: year-round
- 6 Plant Part Burrito with dressing: year-round
- Pesto with basil or oregano: summer, fall
- Oregano and basil in Tomato Sauce w/ bread: summer, fall
- 6 Seed Trail Mix: Year-round
- Herb tea: Summer, fall; take-home jars or bags
- Herb lemonade: year-round; lavender, lemon balm, mint etc.
- Stir Fry: year-round; any garden veggies with onion, soy sauce and ginger
- Winter Squash Seeds: fall; roast or pan sauté seeds with oil, spices, soy sauce, vinegar
- Sunflower seeds: summer, fall; see above
- Herb Yogurt Dip: year-round; use herbs to flavor, veggies to dip
- Cream Cheese and Herbs/Pesto Spread: year-round
- Salad Rolls with Sauces (peanut/soy sauce/ginger; lime/sugar/fish sauce)
- Make Your Own Insect (3 body parts, six legs, 2 antenna w/ fruit/veg pieces + toothpicks)
- Solar Kale Chips: summer
- Stone Soup: fall
- Seed Packages: summer, fall; for the kids to take home to plant
- Boiled Potato: summer, fall
- Popcorn with Herbs: fall, year-round
- Corn Grinding: Fall; grind flour and make corn tortillas for quesadillas

14. Art Projects:

Inspire creativity in the garden! Students love creating to decorate the garden or to take home to show the family. Arts & crafts materials provided by F2S with sufficient notice. Ideas include:

- Signs to label plants or beds (salsa bed, greens, 3 sisters, pizza bed) with paint on wood in English and Spanish
- Potato print cards: cut stamps from potatoes, dip in paint, stamp on paper
- Leafy gift wrap: paint things from nature and stamp/print onto large paper
- Decoupage vase: tissue, wrapping, or napkin paper in watered glue on glass jars
- Newspaper pots: LifeLab tutorial, take a plant home or plant a seed
- illustrate plants or animals with color pencils
- Nature Journaling includes illustrations with additional observations
- Measure plants with rulers and draw them to scale on graph paper
- Press flowers then create bookmarks or notecards two weeks later
- Sticky tape nature bracelet
- Flower necklace with fishing line
- Fairy houses built with items found in nature
- Haikus or other poems written during quiet contemplation in the garden
- Painted rocks to decorate the garden

- Tile mosaic grouted onto garden pathway steppingstones
- Thank you cards with garden drawings
- Flower arrangements for the school staff room
- Seed bombs: clay, soil, and seeds

15. Games and Scavenger Hunts:

Games:

- Human Camera: Students will take turns leading a partner with eyes closed to something they find beautiful in the garden to "take a picture" (pg. 30)
- Flower and pollinator matching game.
- Worm game https://docs.google.com/document/d/17AEL-aDgWrxZ8SDpChDhBac40AAqAaF6/edit?dls=true
- Plant Parts/Plant Needs relay: https://mail.google.com/mail/u/1/#label/Farm+to+School/FMfcgxwGDDtDhdlcDpwCLFBbmSNrLRxL
- Bees vs. Butterflies pollinator relay
- Plant Parts Factory https://docs.google.com/document/d/1w_k8pSK4qSQiAQtwCuu6qgFiYOvsYMXv/edit?dls=true
- Lighthouse: communication team building game with the whole group,
- Producer, Consumer, Decomposer tag: https://www.scienceworld.ca/resource/food-web-tag/

Scavenger Hunts are an excellent exploration or introduction to the garden:

- Scavenger hunt template for a white board: Create 4-6 commands using several *actions* in the description (draw, find, feel, smell, measure, use two descriptive words, write a question, listen, taste) Number the commands and provide a map to mark the number where it was found or students can just check them off the list or make a mental note as they are found.
- Trail of Cards: Students will walk around the garden and will use their 5 senses to answer specific questions (pg. 28).
- Hunting for Leaves: Provide students with a handout of different leaf shapes. They will then search the garden for leaves that resemble specific leaf shapes.
- 6 of 1: Students will use their senses (e.g. sight, smell, touch) to identify objects in the garden that are opposites of each other (pg. 27).
- Picture page: find different garden objects, critters, and plants. (pg. 29).
- Weed ID and scavenger hunt: Groups of 2-3 students hunt with descriptions/pictures of a specific weed (leaf shape, texture, plant height, flower color). Students match numbered stakes with the weed description. Remove the weed!
- Creature Identification: Students will find, identify, and write a description or sketch a garden creature.

- Human Camera – From Life Lab “Garden of Wonders” Students work in pairs to figuratively “snap a photo” of something that captures their attention and then use descriptive words to describe to each other what they saw. Partners take turns. Pg. 30
- Bingo Cards – Students hunt for pictures within a defined area, individually or in a group. The cards will represent a specific topic – compost creatures or insect related items or plant life cycle etc. Trowels and magnifiers may be helpful for this activity.
- Match colors – From Life Lab “Garden of Wonders” Provide paint chips and have students see if they can find the closest color match to the chip.
- Hunting smells – Find 5 leaves that are scented and choose your favorite leaf.

16. Back-up Activities:

It is inevitable that the students will not respond to some of the planned activities as you would have hoped. In other cases, you may find you have 15 minutes of unplanned time to fill. Therefore, you will want to have a set of back-up activities in mind. These can be any activities described in this manual or as simple as playing I Spy, Name that Plant Part, or a garden-related tag game. It is best to have all the students engaged in a structured activity.

17. Garden Sign-up and Walking Authorization Forms:

See the Garden Club Registration Form is on page 18 below, and the Parent Authorization form is on page 19. Remember to change the dates and location to your specific Garden Club.

***School Name* After School Garden Club**
Fall 2020
5 Tuesdays 3:00 – 4:30pm
October 3 – October 31
Students 1st – 5th grade are welcome

The Parent/Volunteer Orientation will be held
Tuesday, September 26, 3:00 – 3:45pm

Garden Club Sign Up Form
Please return to the office ***by September 20th***

Student Name:_____Grade:_____

Parent Name:_____Contact #:_____

Parent Volunteers are needed to help oversee Garden Club! Parents *interested in assisting* with Garden Club, please provide your Email: _____

_____Yes, I plan on attending the Garden Club *volunteer orientation* on September 26, 3pm

_____ No, I am unable to attend the garden club volunteer orientation but do plan to volunteer.

_____ I am unable to volunteer to help during garden club (☺ *That's OK)*

Completion of registration provides permission for garden club photos of your child to be shared on Farm to School Social media. If this is an issue, indicate by signing here checking this box ☐

To secure a spot please be sure to turn your form in on time!

***School Name* Garden Club Parent Authorization and Reminder**

Garden Club begins Tuesday, Sept 30, 3:00pm and will meet once/week for 5 weeks

Students:

- Be ready to learn and have fun. Wear gardening appropriate clothes on club day.
- Please bring this completed form to the first day of Garden Club.

Parents:

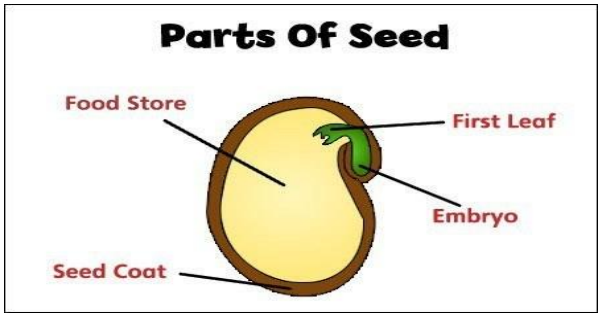
- If you are picking your student up, please plan to go to the garden to sign them out. (You can drive to the garden through the WaHi auditorium parking lot or walk across the Elementary school field)
- Please tell us which situation is correct for your child:
  - ☐ I plan to pick my child up after Garden Club at 4:30pm
  - ☐ My child is authorized to walk home after Garden Club
  - ☐ My child needs to be delivered to the Campfire program after Garden Club

Parent Signature Required _____

18. Activity Outlines

Inspiration for all activities are from: Life Lab, Eat Think Grow, Berkeley Unified School District.

Dissecting Seeds
Time: 15 minutes **Description/Objective**: Students will learn the different parts of seed and their significance in germination. They will then dissect a bean to identify these different parts. **Materials:** Presoaked beans (lima beans are the biggest) , magnifying glasses, cutting boards, seed diagram, scrap container, paper, pencils. **Procedure:** ➢ Ask students what a seed is. What is the purpose of a seed? Where do seeds come from? ➢ Using the diagram, review the different parts of a seed. The embryo (the small leaf, root, and shoot systems) is the baby plant. The endosperm almost takes up the entire inside of a seed and provides the plant embryo with food. The seed coat surrounds the seed and protects the seed from the environment. ➢ Demonstrate how to remove the seed coat, which should slip right off. ➢ Demonstrate how to open lengthwise along the seam of the seed. The split should reveal the endosperm and small embryo. ➢ Once students know how to open seeds correctly, ask them to identify each part of the seed. Students can use magnifying glasses to get a better look at the root and leaves of the embryo. ➢ Students can also draw a diagram of their seeds if time permits. ➢ Ask students questions like: are seeds are alive? What do seeds need to germinate? (*Water and the right temperature)* Will bean seeds grow a corn plant? Why not? Do we eat seeds? What types?



Plant Parts

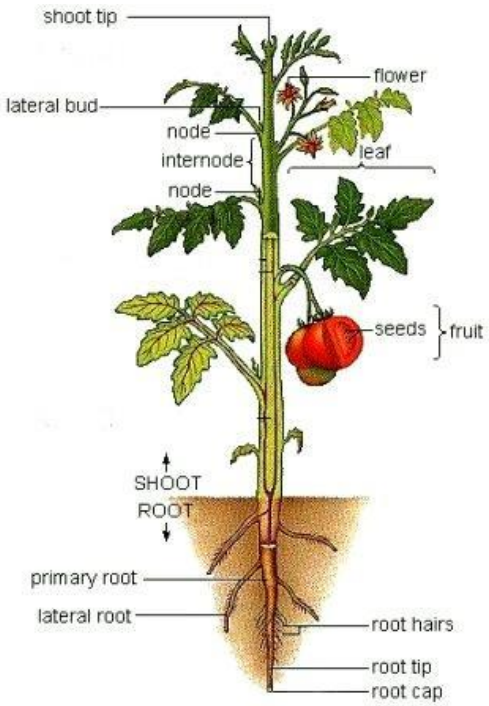
Time: 15 minutes

Description/Objective: Students will review the different parts of a plant. **Roots** anchor the plant to the ground and take in water and nutrients that are necessary for the plant to grow. The **stem** allows for water and nutrients to travel through the parts of the plant and acts as a structural support for the entire plant. **Leaves** absorb sunlight through chlorophyll, which is used for photosynthesis. **Flowers** attract pollinators which are necessary for plant reproduction. **Fruit** develops when a flower is pollinated to protect the developing seeds. **Seeds** are baby plants covered in a hard coat.

Materials: Clip boards, whiteboard, pencils, diagram of plant, cut outs with different plant parts

Procedure:

- Divide the group into pairs.
- On a white board, draw a picture of a plant and label the different parts (root, leaf, stem, flower, fruit, seed).
- Then, distribute cut outs with images of plant parts (no descriptors). Have students identify what each part is.
- Review the function of each part.
- In their pairs, have students explore the garden and choose a plant that exhibits all six parts.
- Have students draw their chosen plant and identify its parts.
- Come together and have the students share with the group.



Flower Anatomy Spring, Summer or Fall

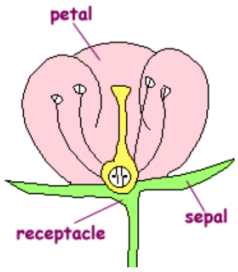
Time: 15 minutes

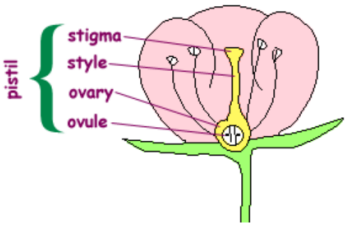
Description/Objective: Students will learn the function of a flower. They will also review its different parts. The flower can be divided into two main parts: the male part or *stamen* and the female part or *pistil*. *Anthers* and *filaments* make up the stamen. Anthers create pollen while the filaments support the anther. The *stigma, style,* and *ovary* make up the pistil. The stigma is sticky and is located at the top of the pistil and traps any pollen that is floating in the air or arrives with a pollinator. The style supports the stigma and delivers pollen to the ovary. The ovary contains ovules (eggs), which become seeds when they are fertilized by pollen. *Petals* attract pollinators such as bees and butterflies and *sepals* are small green petal-like parts that protect a developing flower bud.

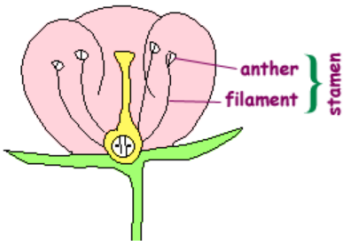
Materials: Clipboards, paper, pencils, magnifying glasses, flower diagram, tape

Procedure:

- Students can quickly choose a flower from the garden.
- Have students first recognize the individual parts within the whole flower and draw the flower.
- Have students dissect their flowers by peeling back the petals, removing the individual parts, and analyzing them with a magnifying glass. They can tape flower parts to their paper.
- Come together and have the students share with the group.
- On a white board or chalk on pavement, draw a picture of a flower and label the different parts.
- Review the function of each part.







Discussion Questions:

- What parts did you discover within your flower? What do you think is the function of each part of the flower?
- Does a fruit come from a flower? How/When does a flower turn into a fruit?
- What is pollination? Can you describe a pollinator?

Garden Maintenance Activities:

Seed Harvesting: Summer, Fall

Time: 15 minutes

Description/Objective: Students will learn how to save seeds and the importance of doing so. Saving seeds helps to develop resilient local food systems. Biological and social diversity is decreasing, limiting our adaptability to changes. Around 75% of agricultural crop diversity has been lost since the beginning of last century. Saving seeds can help counteract this problem and increase our resilience.

Materials: Paper bags or seed envelopes, paper plates, pens, wax paper, large bowl, spoon, water, strainer, small knife, paper towels, napkins, scrap container

Procedure:

- Establish one or several seed saving stations. Identify harvestable seeds such as tomato, lettuce, kale, beans, corn, etc.
- Before the activity begins, tell students that they will be focusing on saving seeds and ask the students to think about why they would want to save seeds.
- **Saving seeds from corn**: Evaluate the ears of corn on the stalk and choose one to harvest that is from a strong healthy plant. The corn should be mature and dry on the stalks. After picking one ear, rub kernels of the ears with your hands onto a plate. Have students take turns rubbing a small section of kernels off the ear of the corn and place them in a paper bag or individual seed envelopes for students to take home. Label with the variety and the date.
- **Saving seeds from lettuce:** Have students carefully gather a few seeds from a lettuce plant with their fingers and observe the tiny seeds with their little parachutes. Use a magnifying glass to observe, remove the parachute and place seeds on a piece of wax paper on a plate. Use the wax paper to carefully pour the seeds into an envelope.
- **Saving seeds from tomatoes:** Have students pick a few tomatoes. To clean wet seeds, scoop the seeds from the fruit, pulp and all. Students can squeeze seeds and pulp into a bowl with water (healthy seeds will sink to the bottom, while dead seeds and the pulp will float). Use a sieve to gather floating seeds and discard. Retrieve the good seeds from the water and leave to dry on paper towel or napkin on a plate.

Discussion Questions

- Why do we save seeds? What can we use seeds for? Three good reasons to save seeds include: 1) because it preserves diversity of genetic material in seeds that may grow well in different conditions or be resistant to diseases 2) to save money$$ and 3) to save the seeds of plants that are well adapted to our climate and soils

Making Compost - Spring, Summer or Fall

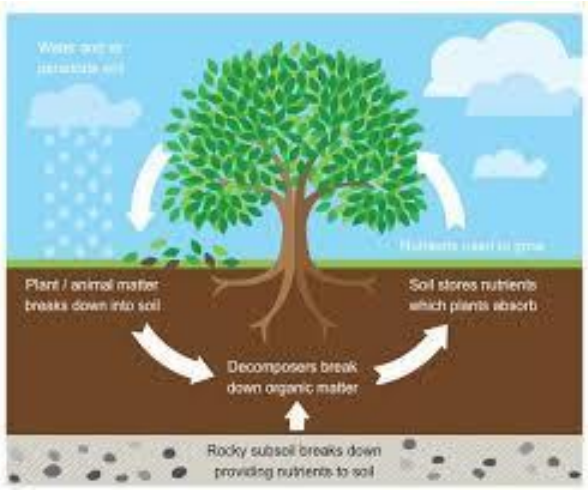
Time: 15-20 minutes

Description/Objective: Students will learn how to build a compost pile. They will also discuss decomposition and the nutrient cycle.

Materials: Compostable materials (brown materials rich in carbon: dried leaves, straw or wood shavings; green materials rich in nitrogen: kitchen scraps, lawn clippings, recently pulled garden debris, coffee grounds/tea bags; and a little soil or compost to add microbes), trowels, wheelbarrow, water access, whiteboard, meter stick, compost cards with different foods/objects

Procedure:

- Discuss the nutrient cycle (see below). Explain the process of decomposition and the organisms that are involved in the process (bacteria, fungi, and worms to name a few).
- Hand out the cards of different foods/objects and ask students what can/cannot decompose. Have one student at a time describe why their item can/cannot be composted.
- Demonstrate with good listener student help how to build a mini compost pile with samples of browns (dead plant material), greens (fresh materials), and soil.
- Have each student build their own mini pile with a few twigs, then layering some green leaves, and brown leaves.
- Divide students into three groups: Browns, Greens, and Soil. Provide soil students with a trowel. Assign one student to be the waterer. After describing what garden materials are available for composting, have each group search the garden for their given materials.
- Have the Browns start building the brown layer, then have the Greens and Soil build on top of that. Brown and green layers should be 4-6 inches while soil layers should be 1-2 inches. This can also occur into a tumbler. Layer browns, greens, and soil repeatedly in that order. The waterer should water and measure each layer. This will need to be considered one batch of compost and no new materials should be added. Turning the pile after a few months will aerate it and facilitate decomposition.



Discussion Questions:

- What are the ingredients of compost pile?
- What will the pile look like in a few months? What does compost turn into?
- What are decomposers? What do they do?
- What can we do with compost?
- What can be composted? What cannot be composted?

Harvesting Fruits and Vegetables Summer or Fall

Time: 15 minutes

Description/Objective: Students will pick produce from the garden and will sort them based on ripeness (ripe vs. overripe). Describe the ways to use sight, sound, feel and smell to determine ripeness before picking, and to divide picked produce into ripe and overripe groups. Students will learn not to pick unripe produce, and to throw over-ripe produce into the compost pile. Good produce that the students pick can be used for a cooking activity.

Procedure:

- Identify the section of the garden to be harvested.
- Before students begin to pick produce, have them form a circle. Ask them whether the garden produce is a fruit or a vegetable and have them defend their answer. (*A fruit is anything with seeds inside.)*
- Then, have students review rules regarding picking: pick what is ripe/overripe only, pick only the number described (e.g. 3 per student) depending on the amount available and whether future classes/clubs also will be picking. Emphasize the use of senses in determining what is ripe. Some tomato varieties are green when ripe so you must depend on other senses besides color. A ripe tomato is firm but yields to gentle pressing. A ripe tomato smells different from an unripe tomato. An overripe tomato is very soft of might have mold. Use color as an indicator when a ripe fruit is different from an unripe version.
- Harvest and separate the produce! Overripe produce can still be useful as compost.

Note on Determining Ripeness: When they pick produce, students should decide whether the fruit or vegetable is good enough to eat. If it feels very soft like liquid, has mold or is ruined by pests or smells like it is rotting, students should throw it into a designated bucket. If it is too hard, green (or color indicating unripe), or too small, instruct students to leave them on the vine. All edible produce can be placed in a large bowl. Remember to leave enough fruits/vegetables on the vine for all groups to participate in this activity.

Weeding

Time: 15 - 20 minutes

Description/Objective: Students learn to identify weeds in the garden and to use garden tools safely to help remove weeds effectivley from the school garden.

Materials: trowels, gloves, buckets, rulers, Weed ID sheets. ID up to five weeds in the garden and place numbered stakes next to each one. Create an answer key on the whiteboard. Write and print descriptions of these different weeds which may include height, leaf shape, color, feel, etc.

Procedure:

- Ask "What is a weed?" Have students pair and share. (*A weed is any plant growing in an area it was not intended to grow).*
- Ask students if they think weeds are good or bad, pair and share. Have them show thumbs up if they think weeds are good, thumbs down if weeds are bad. Explain that weeds are both good and bad. They compete with our cultivated crops, but can be beneficial (some are edible, medicinal, fix nutrients, deter pests, etc.) It is a balance to determine when and which weeds need to be removed.
- Some plants are considered noxious weeds which are defined as non-native plants that grow aggressively and lack natural enemies. They are considered highly destructive and difficult to control. These weeds reduce crop yields, destroy native habitat, clog waterways, create erosion problems and fire hazards.
- Review safety: keep the tool low, near the soil, never near your or over your neighbor's head; never flick soil when digging; demonstrate proper weed/root removal (digging straight down near the root, knock the soil off the roots into the bed with the trowel); when finished using a tool, clean it and put it away, don't leave it on the ground.
- Students can compare the roots to determine if they are tap roots (dandelion, globe mallow), fibrous roots (many grasses, shallow rooted weeds) or rhizomatous (Bermuda grass, bindweed/morning glory). Put them in separate buckets to compare.
- If time permits, take time to taste available produce or edible weed leaves (purslane, goose foot, dandelion). Be sure students know not to taste weeds in an area that may have been sprayed (like the playground).

Scavenger Hunts:

6 of 1 Half Dozen of the Other
Time: 15 minutes **Description/Objective:** In pairs, students will use their senses to find and identify contrasting objects within the garden. **Materials:** Egg cartons with opposite words written on the bottom **Preparation**: On the bottom of an egg carton (one per student pair), write two words that are opposite of each other and invoke a sense such as touch or smell. Examples: wet/dry light/dark colorful/drab rough/smooth soft/hard scented/unscented symmetrical/asymmetrical. Avoid words that involve taste; students should not eat garden object without asking. **Procedure:** ➢ Prior to handing out the cartons describe the activity and tell the students to keep the words on the bottom of the carton a secret from the other pairs. ➢ Divide the group into pairs and distribute one egg carton to each pair. ➢ Describe the area from which the students will be searching – set the boundaries. ➢ They will then have to collect 12 items that relate to the words found on the bottom of the carton: 6 items should relate to one word and be placed on one side of the carton, while the other 6 items should relate to the opposite word and be placed on the other side of the carton. For example, for the words “smooth and rough,” they would find 6 smooth objects and 6 rough objects. ➢ Once the students find their objects, gather the students together and have each pair switch cartons with another pair. Without looking at the words on the bottom of the cartons, the students should guess the other pair’s words by using their senses (e.g. sight, smell, touch) and determining what the items have in common with one another in contrast to the items on the opposite side.    

Trail of Cards

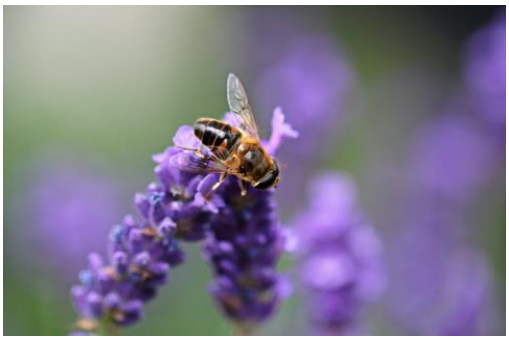
Description/Objective: Students will walk around the garden and will use their 5 senses to answer specific questions written on preplaced cards.

Materials: Notecards with questions/commands related to the five senses

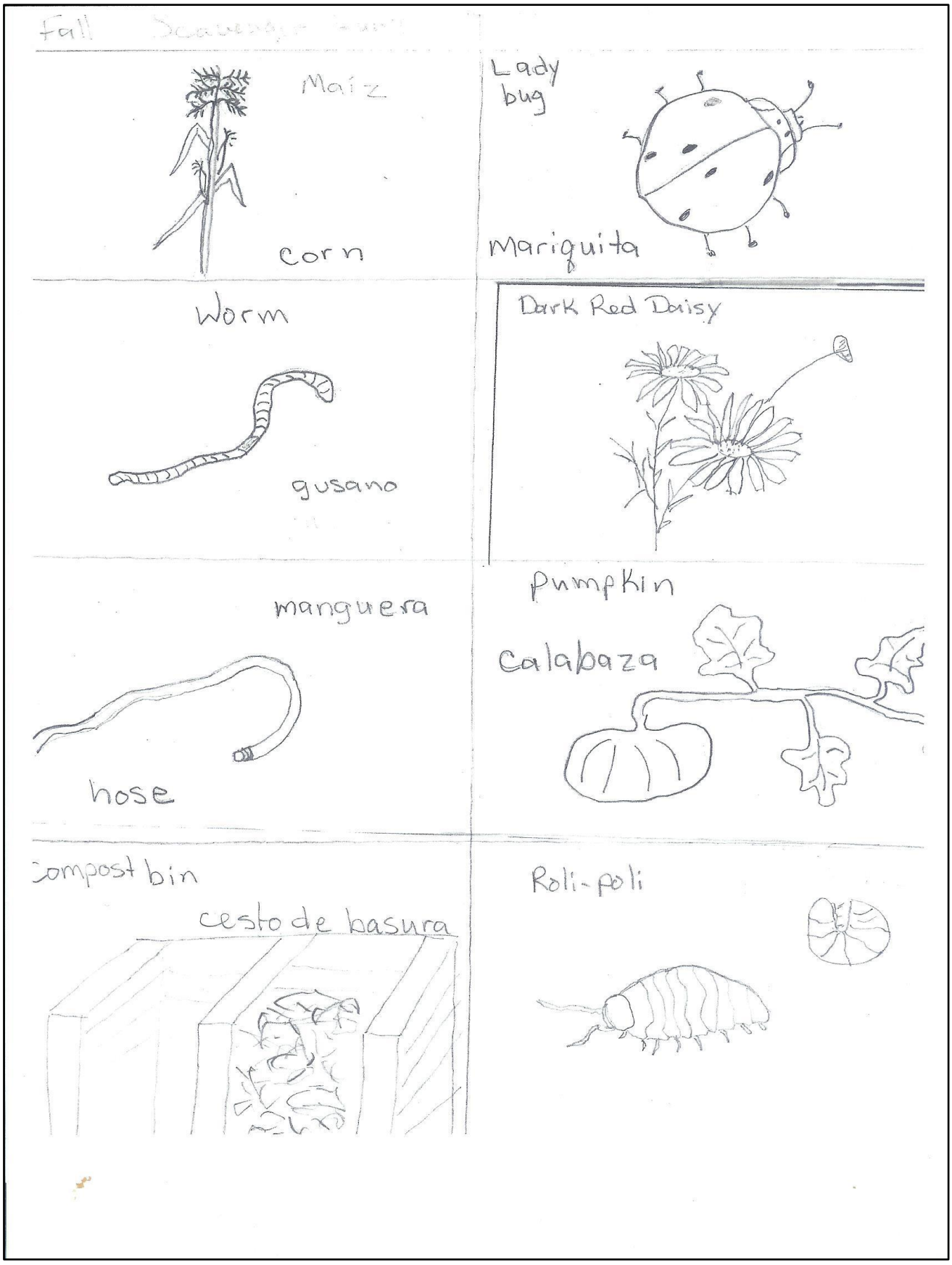
Preparation: Gather or make 6-8 notecards with a written question. Examples of questions include 1) Can you find a leaf with a strong smell when crushed in between your fingers, what does it smell like? 2) What color are the fruits of this plant? 3) Listen for two sounds from nature, what are they?
Then, place these cards around the garden at the appropriate place depending on the question being asked and where they will be easy to see (punch a hole and tie a piece of bright yarn or flagging to the card).

Procedure:

- Describe the activity to the students and emphasize that they will be using all 5 senses to answer questions on the cards around the garden.
- Make sure students understand that everyone will be staying together as a group and each student will have a chance to answer the question before moving on to the next card.
- Leave the card in its original place after using it.
- Plan on taking 2-3 minutes per card, extend your time by making sure each student understands the question and answer and is investigating several plants at each station to answer the questions.



Can you locate these things in the garden?



Human Camera

Time: 10-12 minutes

Description/Objective: Students will use their sense of sight to describe objects in the garden. Students will pair up. They will take turns leading a partner with eyes closed to something beautiful in the garden. Students will take a "snapshot" of what they see then describe it with descriptive words.

Procedure:

- Ask your students: Why would a photographer want to take pictures? Why is it important?
- Explain that the students will take turns leading their partner, who has their eyes closed, to something they find beautiful in the garden to "take a picture."
- Once at their chosen spot, the leader will tap their partner on the shoulder to signal to open their eyes for a second and take a "snapshot" of what they see.
- Demonstrate proper arm-holding/leading technique on a volunteer or nearby student.
- Outline the boundaries of the area that the students will stay within. Make sure students understand the boundaries and are not tempted to travel far and wide.
- Partner the students and tell them to listen for your word (Go, Start, etc.) and then head out to find a snapshot. Pick a transition signal (another word, sound, etc.), and instruct the students to switch partners when they hear it the first time, and to come back into a circle when they hear it the second time.
- Begin with your starting word and watch them take their snapshots; give students 3 minutes and then signal to switch. After a few more minutes for the second photographer, reassemble the students into a circle.
- Ask them to share their snapshot with the group. Did they notice something special or different? What did they find most memorable about their photo?