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Garden Senses

THIRD GRADE

The first time students enter the garden is the best time to set expectations and also take some time to explore. Students will be involved in the rule-making process, then go on a scavenger hunt using four of their five senses.

SUBJECT

EXPLORE

TIME

30 MIN - 1 HR

MATERIALS

Read aloud book from the Garden Library

Garden Scavenger Hunt Worksheets, 1 per student

Pencils, 1 per student

Crayons, various colors to share

Clipboards, 1 per student

DIRECTIONS

- If your school garden does not have an outdoor classroom with a whiteboard, begin the lesson inside the classroom to make the garden rules.
- Ask students to come up with rules for the garden and record them on the whiteboard. Basic garden rules may include: be respectful to others and your surroundings, only pick flowers, plants, or vegetables with permission from an adult, handle plants and animals gently, only touch animals when an adult says it's okay (never touch spiders or bees), use tools safely, and walk at all times.
- Find a shady spot to read aloud a book from the Garden Library. Ask students what they know about gardens. Why do people have gardens? Why do schools have gardens? Have they been to the school garden before? What do they remember about it? What do they think they'll find in the school garden?
- Hand out clipboards, pencils, and Scavenger Hunt worksheets and task students to find each item on the list.
- Students may explore the garden in pairs or small groups.
- Students can color their drawings when they finish, and if they have extra time, ask them to draw a picture of their favorite thing in the garden on the back of the worksheet.

EXTENSION

- Make a sign with the garden rules.

SOURCE

- BCK Programs



Garden

Sensory Scavenger Hunt



Sight

List all of the colors you see in one of the garden beds:

Smell

Take a walk around the garden and stop along the way to smell the plants and flowers. What was your favorite smell? What did it smell like?

Sound

Find a comfortable spot and sit with your eyes closed. Count silently to 10, then listen to the sounds around you. What do you hear? Move to a different spot. Did you hear anything different?

Touch

Walk around the garden and gently touch the leaves. How many different textures did you find? Use adjectives to describe how they felt.



Seasonal Planting

SECOND AND THIRD GRADE

Everybody loves to plant in the garden! Due to the seasonal nature of growing a garden and the logistics of sharing garden space, just a little bit of advance planning will ensure a successful class crop. In this activity, students will plant seeds in a garden bed, make a nature journal entry, and pitch in to do some garden care tasks. Have fun!

SUBJECT

EXPLORE

TIME

1 HR

MATERIALS

Empty garden bed (filled with soil but not plants) or empty spaces in the garden beds

Seeds or seedlings to plant

Comprehensive Planting Chart for Zones 9 and 10

Trowels

Watering cans

Finished compost to sift (if applicable)

Black nursery trays

Buckets

Wheelbarrow (if available)

Blank paper, 1 per student

Pencils, 8-10

Clipboards, 8-10

DIRECTIONS

- A few main tasks will be important to work out as you plan this activity. You will need to:
 - Identify a garden bed to plant in. The assignment of garden beds varies from school to school, so it's best to get in touch with your school's garden coordinator for guidance. If your school doesn't have one, reach out to the district's garden liaison, Barbara Larson of BCK Programs (barbara@bckprograms.com).
 - Identify what you are going to plant. If you are in touch with Barbara, she may be able to get seedlings for your class to plant. If you want to go with seeds, refer to the laminated planting guide titled "Comprehensive Planting Chart for Zones 9 and 10" from the San Diego Seed Company. Locate the month and then look for the O symbol to identify the "Crop Family" varieties that can be planted from seed in that month. Then check to see which of those varieties you have in the Seed Library.
 - From the seeds you selected, read the back of the seed packet and note the planting information so you can plan out the garden bed and direct students on how to plant their seeds (generally, students can use their finger to poke a hole for their seed). You can place trowels or popsicle sticks in the places where students should plant - look for spaces near the emitters in the irrigation tubes so they are planted close to water. Use the Crop Planting Worksheet to record the information from the seed packet, if desired. Plan for students to water the bed after they plant their seeds.
 - Refer to the Garden To Do List and survey the garden to predetermine the tasks that you will assign to students. You may want to keep it simple with the younger kids and limit the tasks to watering, weeding the garden beds (easier to pull than weeds growing directly into the ground, just making sure students know how to identify a weed), and picking up litter. Younger students can also sift compost or separate worm castings under supervision.
 - Schedule one or two volunteers for the day of the activity to help supervise the rotations.
 - Plan to divide students into three groups to rotate through the following stations: Planting, Garden Care, and Nature Journaling.
- On planting day, gather students in the outdoor classroom and introduce each of the three stations.
 - Station 1 Planting: Share with students the types of crops they will be planting and any information about why these were selected. Explain

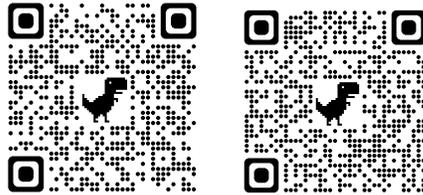


that they will be given specific instructions on how to plant their seeds when it's their turn to plant in the garden bed.

- Station 2 Garden Care: Identify the tasks that students will complete and any tools they will be using. Talk about how to use tools safely and other garden rules (walk at all times, keep tools below the waste, etc.).
- Station 3 Nature Journaling: Students will do an activity called "My Secret Plant" where they will record detailed observations of a plant using words, pictures and numbers and then challenge a partner to find their plant using their notes. Ask students what clues they could include so their partner finds their plant (number of leaves, seed pods, fruits, or branches, number of unique features like bug bites or holes, a map showing the location, colors, etc.). Set clear boundaries for the activity so students know where to look for the mystery plant. Keep track of time before the 10 minute rotation is up so that students can swap notes and find each other's secret plant.
- Assign students to their groups and spend 10 minutes at each rotation. Spend the final 5 minutes enlisting students' help to put away tools and tidy up the garden.

SOURCE

- BCK Programs | Seasonal Planting
- San Diego Seed Company | [Planting Chart](#)
- John Muir Laws | [My Secret Plant](#)



Crop Planting Worksheet

Refer to the planting instructions on the seed packet and record the information in the table below.

Plant Name	
Planting Depth	
Plant Spacing	
Plant Height	
Other Planting Tips	

Plant Name	
Planting Depth	
Plant Spacing	
Plant Height	
Other Planting Tips	

Plant Name	
Planting Depth	
Plant Spacing	
Plant Height	
Other Planting Tips	

Plant Name	
Planting Depth	
Plant Spacing	
Plant Height	
Other Planting Tips	



Garden To Do List

- 1. WEED.** Check for weeds inside and around the outside of garden beds, in the pathways, and around the perimeter of the garden. Use a trowel to pull weeds out from the roots. Collect weeds in one pile, and make sure it's out of the pathway. This will be the debris pile for the garden and will be collected by the grounds crew within a couple weeks.
- 2. WATER.** Fill up a watering can and check for thirsty plants. If there are rain tanks in your garden, use that water for any ornamental plants but not in the garden beds. Signs to look for are plants that are droopy, have yellow or brown leaves, or have leaves that are falling off. Water the soil around each plant for about 5-10 seconds, just enough to saturate the ground around them. If your garden has any potted plants, they will surely need a drink. Water potted plants for 5-10 seconds each, let the water seep in, and water for another 5-10 seconds.
- 3. RAKE UP LEAVES.** Check for areas in the garden where trees have dropped their leaves. Rake the leaves and place them in a pile next to the compost bins. The leaves will be combined with food scraps to make compost. You will be doing the composters a favor by collecting the leaves as they are essential for composting.
- 4. COLLECT SEEDS FROM SPENT PLANTS.** Check the garden beds and perimeter of the garden for plants with spent flowers. Spent flowers are flowers that have finished flowering and are dying off. The dead part of the flower usually contains seeds. Provide seed envelopes from the garden activities supplies. Have students label the seed packet with the name of the plant (if known) and any other information you can find. Place one seed packet of each type in the Seed Library and send home any extra packets. Place the remainder of the dead plants in the debris pile, or make a new pile out of the pathway.
- 5. SIFT COMPOST.** Check the active stack compost pile (this is different from the worm bin, and should have a sign next to it). If the pile looks dark brown, does not have any visible food pieces in it, and no or very few noticeable leaves and twigs, it is ready to sift. Grab a black nursery tray and place a scoop of compost in the tray. Grab a bucket or wheelbarrow and sift the compost over it. Discard any trash pieces in the trash and return the larger objects and any insects (like worms) to the compost pile. Feed the plants with your sifted compost by spreading a handful around each plant in a garden bed. **NOTE:** Please do not sift all the compost to share this activity with other classes.
- 6. HARVEST WORM COMPOST.** Worm castings are the digested dark matter in the worm bin that does not have visible signs of food- the "Black Gold"). To separate castings, grab 3 small paper trays for each small group of students (these should be located inside the worm bin). Place a small scoop (1-2 cups) of the digested compost in one tray (this will be from the side of the pile that has no visible signs of food and is a dark brown/black). Bring the trays to the tables and pick out the worms placing them in tray 2 and pick out any trash and placing it in tray 3. Place the worms back in the worm bin, throw away the trash and sprinkle the castings around the base of the plants in the garden beds. Use a watering can to water over the applied castings.
- 7. CLEAR AND ORGANIZE CLUTTER.** Sometimes things get left in the garden and need to be organized from time to time. Collect all buckets and stack them in one spot, do the same with nursery pots, organize the potting supplies and put away tools and gloves.
- 8. PICK UP LITTER AND EMPTY TRASH.** Grab a bucket and take a walk around the garden and pick up any litter you find. Be sure to check the perimeter next to fences, where litter tends to collect. Collect all the litter into one bucket and discard it in the nearest trash can. Return the bucket to the garden.
- 9. EXTRA TASKS:** Make a list of extra tasks that need to be done in the garden, like trimming trees, more weeding, etc. and give the list to your teacher so they can give it to the garden coordinator.



Harvesting Kindness

ALL GRADES

Gardening programs offer many opportunities to show kindness to each other, to the community, and to our planet. This lesson is designed specifically for when there is an abundance of produce to harvest, more than just one class could use, to inspire students to think of others. Students will harvest their crops, conduct a taste test, and then decide how to donate the excess of their harvest.

SUBJECT

EXPLORE/KINDNESS

TIME

OPEN-ENDED

MATERIALS

Read aloud book from the Garden Library (optional)

Buckets (or containers to collect harvest)

Scissors

Trowels

Colanders

Sink or hose

Paper towels

Food-grade bowls (if available)

Taste Test Evaluation, 1 sheet per student

Pencils, 1 per student

Clipboards, 1 per student

DIRECTIONS

- The garden is a great place for teaching empathy for others and modeling kindness. Often the school garden operates in “boom or bust” cycles, meaning there are times when plants are germinating and very little appears to be happening to the naked eye, or conversely an entire garden bed of lettuce must be harvested before it goes to seed. This lesson is designed to get students thinking about what to do when we have abundant resources and to model compassionate behaviors.
- If your class notices that some garden beds are bursting with crops ready to be harvested, but you didn't plant the crops, check with your school's garden coordinator before harvesting to ensure the crops are not already spoken for.
- Gather students in the garden around a garden bed with a successful crop that you plan to harvest. For younger students read *If You Plant a Seed* by Kadir Nelson or *Katie's Cabbage* by Katie Stagliano and ask questions about sharing and how it makes them feel when their friends share with them in class or when their siblings share with them at home.
- As a group, discuss how you might conduct an act of kindness with the food growing in the garden bed. Below are some examples of successful sharing outcomes from EUSD schools.
- **K-2 Salad Party:** Students harvest an entire garden bed of lettuce and celebrate with a huge salad for their class **AND** a salad for all of the teachers. Students write thank you notes for teachers and school staff and place the salad in the Teachers' Lounge.
- **3rd-4th Taste Test Sharing:** Students harvest a crop, like snap peas, peaches, cherry tomatoes, figs, passion fruit, grapes... and hold a taste test first for the class **AND** set up a “taste-test” table during their lunch to share the harvest with fellow classmates.
- **4th-6th: Food Pantry:** Students harvest a crop and prepare it to be delivered to a local food pantry. Often food pantries do not receive fresh fruit and vegetables. There are several food pantries nearby EUSD schools. Contact the district's garden liaison, Barbara Larson of BCK Programs (barbara@bckprograms.com) to arrange for the crop to be delivered.
- Harvesting vegetables that students grew can be a thrilling experience, but can also get chaotic with an entire class gathered around one garden bed. Some tips to help manage the large group are to:



- Set up several different stations so students can eventually spread out. Older students can manage the stations, while younger students will need assistance (additional help from another adult is ideal).
 - Set out colanders at the sink or hose and assign students to the **Washing Station** where they will rinse all the soil off the vegetables and then take them to the Drying Station.
 - Set up a clean table with paper towels and bowls (if you have them) and assign students to a **Drying Station** where they will dry the vegetables using paper towels.
 - After all the plants have been harvested, assign students to the **Clearing Station** where they will pull out the remaining plants and place them in a pile. Have students wash their hands after this task.
 - After the vegetables are washed and dried, gather in the outdoor classroom and conduct a taste test. How do students rate their crops? Distribute the Taste Test Evaluation to students.
 - Pack up the remaining crops to share with others.
- **NOTE:** Whichever manner your students choose to use to share the crops, make sure the produce is thoroughly washed.

SOURCE

- BCK Programs



Taste Test Evaluation

Food Tasted: _____

	Rate one to five stars (draw) ★★★★★	Description
Look		
Smell		
Texture		
Taste		
Overall Rating		



Happy Harvesting

THIRD GRADE

EUSD's practice of food scrap composting is one of the reasons why our schools divert over 80% of waste from the landfill. Students in 3rd grade are likely very familiar with composting their food scraps during lunch time by using the SCRAP Cart. In this activity students get a chance to "harvest" the compost from the worm bin.

NOTE: Check with the school's garden coordinator or EUSD's compost manager, barbara@bckprograms.com to make sure the worm bin is ready for harvesting.

SUBJECT

SCIENCE

TIME

30 - 45 MIN

MATERIALS

Compost from the worm bin

Buckets, 1 per group

Cardboard trays, 1 per group

Newspaper, a few sheets per group

Hand trowels, several to share

Watering cans, several to share

DIRECTIONS

- Bring students to the garden and ask them if they use the SCRAP cart during lunchtime. Ask if they know what SCRAP stands for (Separate, Compost, Recycle and Protect). Ask them why they think the "P" stands for Protect (recycling and composting are actions we do to help conserve resources and combat climate change).
- Next, explain that another great result from composting is that we are able to create an organic nutrient-rich fertilizer that we can use in our gardens. In the activity planned, tell students they will get to collect or "harvest" the finished compost.
- Have students sit together in groups of five or six. Give each group newspapers to lay out on a table, a bucket and a cardboard tray.
- Have one person from each group fill their bucket half full of finished compost from the worm bin.
- Empty the bucket onto the newspaper in each station and make a large mound.
- Direct students to work gently from the outside of the mound by taking a small handful of compost and removing any worms and placing them in the cardboard trays. Worms should be kept out of the sun as much as possible. Cover the worms with some of the compost to keep them cool and shaded.
- Students should place the remaining compost in their hands without the worms back into the (now empty) bucket. Any plastic bits, fruit stickers or large pits should go in the trash.
- When the cardboard tray gets full of worms, ask students to gently return them to the bin.
- Repeat the process as time allows, leaving a few minutes to "feed" the garden beds and trees in the garden. If garden beds have plants in them students can sprinkle a handful of the compost on top and then water with watering cans.
- If garden beds are empty, students can "feed" the soil by mixing the compost in with hand trowels. Water with watering cans.

SOURCE

- BCK Programs



Anytime Garden Care

ALL GRADES

A gardener's work is never done! To keep your school garden healthy and inviting there are a few basic chores that always need attention. Follow this garden care activity anytime you want to spend time outdoors and keep students tuned in to the garden.

SUBJECT

EXPLORE/
COMMUNITY BUILDING

TIME

OPEN ENDED

MATERIALS

Trowels

Watering cans

Rakes

Seed envelopes (if applicable)

Finished compost to sift (if applicable)

Black nursery trays

Buckets

Wheelbarrow (if available)

Garden To Do List

DIRECTIONS

- Prior to the activity, refer to the Garden To Do List and survey the garden to predetermine the tasks that you will assign to students, then plan to split the class into groups. When a whole class works in the garden, it is a good practice to split up into smaller groups and rotate through tasks to avoid overcrowding.
- Gather students in the garden and ask them to share their favorite parts of the garden. Then ask if they know who takes care of the garden to make sure they can do all of their favorite things? Explain that caring for a school garden is a huge task and today they will be showing kindness to their fellow students and to the garden's caregivers by spending time keeping the school garden in good shape. Caring for the garden will also give students a sense of ownership and community.
- Divide students into groups and explain the tasks to be accomplished, referring to the instructions in the Garden To Do List. Assign each group to one task (i.e., Group 1 - weed, Group 2 - water, Group 3 - sift compost, etc.). Some of the tasks may need to be modeled for younger students.
- Give students 5-10 minutes at the first task and then rotate so students can participate in all tasks.
- After all tasks are complete (or you run out of time) gather students and ask how they feel after pitching in to maintain the garden? Are there any tasks that they need extra help with (such as trimming fruit trees, too many weeds to clear, etc.). Make a list of extra tasks and provide it to your school's garden coordinator.

SOURCE

- BCK Programs



Garden To Do List

- 1. WEED.** Check for weeds inside and around the outside of garden beds, in the pathways, and around the perimeter of the garden. Use a trowel to pull weeds out from the roots. Collect weeds in one pile, and make sure it's out of the pathway. This will be the debris pile for the garden and will be collected by the grounds crew within a couple weeks.
- 2. WATER.** Fill up a watering can and check for thirsty plants. If there are rain tanks in your garden, use that water for any ornamental plants but not in the garden beds. Signs to look for are plants that are droopy, have yellow or brown leaves, or have leaves that are falling off. Water the soil around each plant for about 5-10 seconds, just enough to saturate the ground around them. If your garden has any potted plants, they will surely need a drink. Water potted plants for 5-10 seconds each, let the water seep in, and water for another 5-10 seconds.
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- 6. HARVEST WORM COMPOST.** Worm castings are the digested dark matter in the worm bin that does not have visible signs of food- the "Black Gold". To separate castings, grab 3 small paper trays for each small group of students (these should be located inside the worm bin). Place a small scoop (1-2 cups) of the digested compost in one tray (this will be from the side of the pile that has no visible signs of food and is a dark brown/black). Bring the trays to the tables and pick out the worms placing them in tray 2 and pick out any trash and placing it in tray 3. Place the worms back in the worm bin, throw away the trash and sprinkle the castings around the base of the plants in the garden beds. Use a watering can to water over the applied castings.
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- 9. EXTRA TASKS:** Make a list of extra tasks that need to be done in the garden, like trimming trees, more weeding, etc. and give the list to your teacher so they can give it to the garden coordinator.



Word Salad

THIRD GRADE

So many colorful phrases are “rooted” in the garden. In this activity, students will talk about the difference between literal and figurative language. Students will explore the garden using their senses and come up with their own garden-inspired similes.

SUBJECT

ENGLISH LANGUAGE
ARTS

TIME

30 MIN

MATERIALS

Clipboards, 1 per student

Pencils, 1 per student

Garden Similes worksheet, 1
per student

Crayons or markers, several
to share

Lined paper to write stories
(optional)

DIRECTIONS

- Lead a discussion with students about figurative language and literal language. Ask if they know what the word literal means. Explain that literal means something that is real and accurate. Non-fiction writing is literal. Do they know what the word figurative means? What are their ideas? Figurative is different from literal because it uses words to describe things in a way that is not real. Usually, writers use figurative language to make their writing more interesting. An example of figurative language is the saying: That spelling test was as easy as pie. What does the spelling test have to do with pie? It really means that the spelling test was very easy.
- This type of figurative language is called a simile. Similes make comparisons using the words **like** or **as**. For example, the cloud is as puffy as a pillow.
- Explain to students that they will explore the garden and create their own similes. To give the activity a little more structure, students will use four of their senses to describe things in the garden: touch, smell, sound, and sight. Give an example: The leaves of the plant are as soft as a kitten.
- Hand out clipboards, pencils, and the Garden Similes worksheet and send students to explore the garden for inspiration using their senses.
- Extension: Ask students to write a short story using some of their garden-inspired similes.

SOURCE

- BCK Programs



Garden Similes

Example:

The flowers smell **as** sweet as a lollipop.

Circle either the word "like" or "as."

1. The _____ smells (like/as) _____

_____.

2. The _____ looks (like/as) _____

_____.

3. The _____ feels (like/as) _____

_____.

4. The _____ sounds (like/as) _____

_____.

5. Write your own garden simile:

—

_____.

6. Draw pictures of your similes on the back of this paper.



Three Sisters Garden

THIRD GRADE

The “Three Sisters” garden has roots in Native American culture. The legend personifies gardens planted with beans, corn, and pumpkins by comparing their symbiotic relationship to the three Native American sisters who were inseparable. Students will hear the legend, discuss symbiotic relationships, and plant a three sisters garden. **Do this activity in the spring.**

SUBJECT

SOCIAL SCIENCE

TIME

30 - 45 MIN

MATERIALS

Copy of Three Sisters Legend

Bean, corn, and pumpkin seeds

Garden bed for planting

DIRECTIONS

- Find a shady spot to sit and read aloud the legend of the Three Sisters. Explain that there are many versions of the legend and many different Native American tribes spoke of the legend. All of them have one thing in common; the planting of beans, corn, and pumpkins together.
- Ask students which of the sisters represent corn, beans, and pumpkins. If some guidance is needed, say that the corn plant grows tall and strong (eldest sister), the bean plant grows in vines that can grow in any which direction (the middle sister), and the pumpkin plants grow close to the ground (the youngest sister). Ask how the sisters felt when their sister(s) disappeared? How did they feel when they were reunited?
- Introduce the concept of symbiotic relationships - two or more plants or animals that provide a benefit to one another.
- A three sisters garden has symbiotic relationships because the pumpkin plants shade the ground, keeping it cool and free of weeds, the bean plants provide nutrients (nitrogen) to the corn, and the corn provides a sturdy support for the bean vines to grow around. This type of gardening is also called companion planting.
- Divide the class into three groups to represent each of the three sisters. Have students discuss how they think the seeds should be planted. Generally, the corn is planted in the center, the beans planted around the corn, and the pumpkins around the beans.
- Distribute the corresponding seeds to each group and have students follow the directions on the seed packet to plant directly into a garden bed. Water thoroughly.
- Visit the garden in the fall with your new class, read the legend, and observe the Three Sisters Garden from the previous class. How successful were the companion plantings?

SOURCE

- BCK Programs | Three Sisters Garden
- Ganondagan | [Legend of the Three Sisters](#)



Three Sisters Legend

Once upon a time, very long ago, there were three sisters who lived together in a field. These sisters were quite different from one another in their size and also in their way of dressing. One of the three was a little sister, so young that she could only crawl at first and she was dressed in green. The second of the three wore a frock of bright yellow and she had a way of running off by herself when the sun shone and the soft wind blew in her face. The third was the eldest sister, standing always very straight and tall above the other sisters and trying to guard them. She wore a pale green shawl, and she had long yellow hair that tossed about her head in the breezes.

There was only one way in which the three sisters were alike. They loved one another very dearly, and they were never separated. They were sure that they would not be able to live apart.

After a while, a stranger came to the field of the three sisters, a little Indian boy. He was as straight as an arrow and as fearless as the eagle that circled the sky above his head. He knew the way of talking to the birds and the small brothers of the earth, the shrew, the chipmunk, and the young foxes. And the three sisters, the one who was just able to crawl, the one in the yellow frock, and the one with the flowing hair, were very much interested in the little Indian boy. They watched him fit his arrow in his bow, saw him carve a bowl with his stone knife, and wondered where he went at night.

Late in the summer of the first coming of the Indian boy to their field, one of the three sisters disappeared. This was the youngest sister in green, the sister who could only creep. She was scarcely able to stand alone in the field unless she had a stick to which she clung. Her sisters mourned for her until the fall, but she did not return.

Once more, the Indian boy came to the field of the three sisters. He came to gather reeds at the edge of a stream nearby to make arrow shafts. The two sisters who were left watched him and gazed with wonder at the prints of his moccasins in the earth that marked his trail. That night the second of the sisters left, the one who was dressed in yellow and who always wanted to run away. She left no mark of her going, but it may have been that she set her feet in the moccasin tracks of the little Indian boy.

Now there was but one of the sisters left. Tall and straight she stood in the field not once bowing her head with sorrow, but it seemed to her she could not live there alone. The days grew shorter and the nights were colder. Her green shawl faded and grew thin and old. Her hair, once long and golden, was tangled by the wind. Day and night she sighed for her sisters to return to her, but they did not hear her. Her voice when she tried to call to them was low and plaintive like the wind.

But one day, when it was the season of the harvest, the little Indian boy heard the crying of the third sister who had been left to mourn there in the field. He felt sorry for her, and he took her in his arms and carried her to the lodge of his father and mother. Oh what a surprise awaited her there! Her two lost sisters were there in the lodge of the little Indian boy, safe and very glad to see her. They had been curious about the Indian boy, and they had gone home with him to see how and where he lived. They had liked his warm cave so well that they had decided now that winter was coming on to stay with him. And they were doing all they could to be useful.

The little sister in green, now quite grown up, was helping to keep the dinner pot full. The sister in yellow sat on the shelf drying herself, for she planned to fill the dinner pot later. The third sister joined them, ready to grind meal for the Native boy. And the three were never separated again.

Submitted by Mohawk Elder

SOURCE: Ganondagan, <https://ganondagan.org/learn/legend-of-the-three-sisters>



Wildflower Suncatchers

THIRD GRADE

Making wildflower suncatchers is a fun and simple way for students to gather and display beautiful wildflowers in the spring or autumn leaves.

SUBJECT

ART

TIME

30 MIN - 45 MIN

MATERIALS

Read aloud book of choice from the Garden Library (optional)

Gathered assortment of wildflowers, petals, or leaves

Paper bags to hold collected items, 1 per student

Self laminating sheets, 1 sheet per student

Twine for hanging

Access to hole punchers

DIRECTIONS

- Introduce the activity by reading a book to the class on a topic such as wildflowers, leaves, nature, or something seasonally appropriate (optional). Reading aloud is a great way to get students primed for the activity.
- Go for a nature walk around the school garden or school grounds to gather flat natural objects to include in the suncatcher. Students should place their objects in their paper bags.
- Return to the garden and distribute one self laminating sheet per student. Peel off the backing paper on half of the sheet and lay it on the table sticky side up.
- Have students place the wildflowers/leaves in any way they choose on the sticky side of the paper. Make sure that the objects don't hang off of the edges of the paper.
- Once the objects are in place, peel off the rest of the backing paper and fold the sticky side down on top of the first half of the sheet. Press down firmly.
- Punch two holes at the top and add twine to hang the wildflower suncatchers in a large classroom window or send them home with the students to hang in a sunny window.

SOURCE

- BCK Programs



Wildflower Suncatcher Example



Succulent Superheroes

THIRD GRADE

Succulents are interesting; not only can they survive on little to no water, but they can also grow entirely new plants from their leaves or stems. This is called propagation. Plant propagation sparks kids' curiosity and enables them to better understand plant life, growth, and development in a very personal way. Succulents propagate in several ways, including cuttings, leaves, offsets, or seeds. In this activity, students will use leaves to propagate new plants.

SUBJECT

SCIENCE

TIME

30 MIN

+

Regular watering

MATERIALS

Book of choice from the Garden Library

Succulent cuttings to retrieve leaves from

Newspaper

Newspaper Pot Instruction Sheet

Tomato paste cans or dowels, 8

Potting soil, enough to fill nursery containers

Spoons or trowels, 1 per student



DIRECTIONS

- Prior to the activity, cut a few succulent heads from the succulent pot in the school garden or other succulents on the school grounds. Be sure that the cuttings have enough leaves for at least one per student.
- Find a shady spot in the garden and read a book from the Garden Library; a book about plant reproduction would be fitting.
- Start a discussion about plant reproduction by referencing back to the book, prompting students to talk about some of the ways plants reproduce. Then explain to students that succulents are a special kind of plant because they can reproduce, or propagate, in many ways. Students will grow a brand new succulent plant from just one leaf. Succulents are also special because they don't need a lot of water to grow, and they store water in their leaves.
- Have students fill the nursery pots almost to the top and tamp down the soil.
- Distribute the succulent cuttings to groups of students. Instruct students to gently twist a leaf at the spot where the leaf meets the stem. The leaf should fall right off. It is important to retrieve the entire leaf, so students may have to try a couple of times.
- Have students place their leaves on top of the soil (do not press it into the soil). That's it!
- Return to the classroom and wait a few days before watering, so the fleshy end of the leaf dries out a bit. After that, water regularly.
- Within a few weeks, you should start to see roots growing from the end of the leaf and then a teen-tiny succulent plant.
- The original leaf will eventually dry out, and the new succulents can be taken home or planted back into the succulent pot in the garden.
- Optional extension: Record and graph the growth of the succulent at weekly intervals.

SOURCE

- BCK Programs | Succulent Superheroes
- Google Image Search | [Succulent Propagation from Leaf](#)



How to Make Newspaper Pots



1. Fold newspaper to about the same length as the dowel or can.



2. Wrap the newspaper around the dowel, leaving a ½" - 1" overhang.



3. Fold the bottoms toward the center.



4. Fold the top down to secure



5. Fill with soil.



Seed Library

THIRD GRADE

Saving seeds dates back to the beginning of civilization and is one of the earliest agricultural practices. In some cultures, seeds are so treasured that they have been passed down from generation to generation for hundreds of years. Saving seeds from the school garden has many benefits, like saving money (saving seeds is free!) and building a sense of community by starting your own school tradition of passing down seeds from year to year.

SUBJECT

SCIENCE/SOCIAL
SCIENCE

TIME

30 MIN
+
15 MIN FOLLOW-UP
ONE WEEK LATER

MATERIALS

Read aloud book from the Garden Library (optional)

Newspaper and nursery trays for drying seeds, about 5

Small envelopes, at least 1 per student

Colored pencils, crayons, or markers, assortment to share

Small paper bags, 3-5

Scissors, 1 per student

Garden clippers, 1 per adult

Garden plants with full-sized seeds

DIRECTIONS

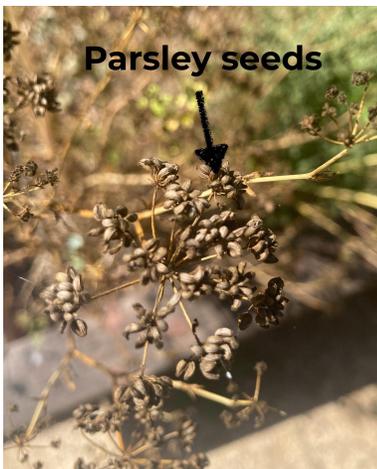
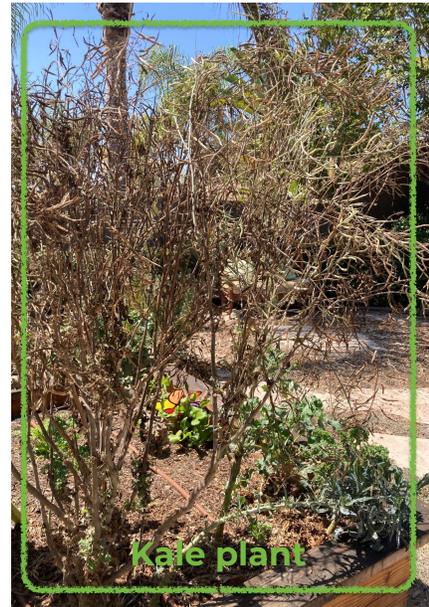
- Prior to the activity, visit the garden and look for plants that have produced full-size seeds (beans, peas, corn, sunflowers, lettuce, tomato, marigolds/ornamental flowers, etc.). Look for plants that are dried up, have “fuzz” growing from the stems, or have produced pods (see examples on the following page). Allow the seeds to dry on the plants before collecting. Identify the plants you want students to collect seeds from. Plan to set up stations for students to extract seeds.
- Introduce the activity by asking students what they know about libraries. Do they visit the school library? The community library? What is the purpose of a library? What are the benefits of libraries? How do they think a seed library would work?
- Lead a discussion about saving seeds or read a book from the Garden Library that explains that new plants come from the seeds of living plants. If discussing, ask where do new plants come from? (seeds) Where do the seeds come from? (the fruits and flowers of existing plants). Explain that students will be collecting seeds from the garden to start a seed library for the school.
- Direct students to the plants they will gather seeds from. They can use scissors to remove pea pods, lettuce branches, and tomatoes. Stronger clippers may be needed to remove ears of corn and sunflower heads.
- Designate one station, or area, per seed type to avoid mixing. Remove the seeds from bean and seed pods (use scissors if necessary), remove sunflower seeds and other flower seeds by hand, break open tomatoes to extract seeds (this can get messy!), and shake lettuce branches into paper bags to release the seeds. Keep all the seed types separate, so they don't get mixed up. Place the seeds on newspaper-lined nursery trays.
- Have students label their seed envelopes and include the plant name, date, and a picture of it. List the good qualities of the crop with details like flavor, size, harvest yield, etc. Include planting information (if known) or add this as an extension to research in the classroom.
- Store seed trays indoors in a dry space for about a week. Then pour the seeds into the envelopes. Send students home with their seed envelopes to give as gifts or plant at home. Collect 1 bag of seeds of each type and add it to the school's seed library.

SOURCE

- BCK Programs



Examples of Plants and Seeds



Seed Travels

THIRD GRADE

We all know pollinators are important for plant reproduction, but plants reproduce another important way. For instance, have you ever seen a plant in a garden that just seemingly pops up out of nowhere? We typically call this a “volunteer.” Weeds are the most common type of volunteer. But how did it get there if no one planted it? This activity will explore how seeds move from one place to another, and students will make their own seed balls.

SUBJECT

SCIENCE

TIME

45 MIN - 1 HR

MATERIALS

Mixed seeds, 1 bag

Hand fans, 4

Pieces of velcro, 4

Blank paper, 8 sheets

Seed balls, a few

Seed Ball Clay, 1 cup

Compost, 1 cup

Wildflower seed mix, 1
Tbsp

Cayenne pepper, 1
Tbsp

Water, about $\frac{2}{3}$ cup

Nursery trays lined
with newspaper

Measuring cup

Measuring spoon

Bucket

Trowel

DIRECTIONS

- Ask, have you ever seen a plant that seemed to pop up out of nowhere? What kind of plant? If someone didn't plant it, how did it get there?
- Explain that students will demonstrate how seeds are dispersed or spread to new locations by mimicking the wind, the fur of animals, and animal scat. Ask students if they've ever been on a hike and came home with seeds stuck to their socks? This is one way that seeds disperse - they have characteristics that grab onto things, like socks and animal fur. Another way seeds disperse is by being carried by the wind. These seeds have a “fuzz” that helps them get picked up by the wind. And yet another way seeds disperse is when animals eat them and then poop them out.
- Divide students into groups of 3 and hand out a blank piece of paper to each group. This is best done with students at a table, otherwise sitting on the ground with clipboards to create a flat and level surface.
- Pass out hand fans to four groups and a piece of velcro to 4 groups. Ask students which type of seed dispersal method goes with which tool? The hand fan mimics the wind and the velcro mimics fur.
- Have students take a pinch of seeds from the mixed seeds bag and place them on the paper. Give students a few minutes to demonstrate seed dispersal with their tools. Did some seeds disperse better than others? Why?
- Have groups switch tools and then distribute another pinch of seeds to repeat the activity with the new tool.
- After students explore each station, pass around the seed balls and ask students which dispersal method it mimics. (animal scat).
- Then make the recipe on the next page for the whole class and have students roll their own wildflower seed balls.

SOURCE

- BCK Programs



Seed Ball Recipe

INGREDIENTS

- 1 cup Seed Bomb Clay
- 1-2 cups sifted compost (start with 1 cup and add more as needed)
- 1 Tbsp cayenne pepper powder (to deter pests)
- 1 Tbsp wildflower seed mix
- ½-1 cup water (start with ½ cup and add more as needed)

YIELD

- This recipe yields 25-30 teaspoon-sized seed balls.

DIRECTIONS

- Add seed bomb clay, compost, cayenne, wildflower seed mix, and water to a bucket and mix together with a trowel. If the mix is too dry, add a bit more water, the consistency should be workable enough to combine but not too wet.
- Distribute small portions of the mixture to each student, about 1 teaspoon each.
- Instruct students to roll their portion into a ball.
- Place rolled seed balls on the newspaper-lined tray to dry.
- When thoroughly dried (1-3 days), students can take their seed balls home to plant in their yard, or you can plant them around the school garden.

