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Garden Rainbow

FIRST 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, go on a scavenger hunt to match colors in the garden, and then reflect on their time in the garden.

SUBJECT

EXPLORE

TIME

30 MIN - 1 HR

MATERIALS

Read aloud book from the Garden Library

Paint color chip samples of various colors

Blank paper, 1 sheet per student

Crayons, various colors to share

Clipboards, 1 per student

Basket or container to hold color chips

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?
- Place all of the color chips in a basket and shake them up. Next, pull out a color and ask students to name different things in the garden that could match the color. Repeat a couple of times.
- Have students select a color chip from the basket and task them to explore the garden to find an exact match. To make sure, hold the color chip up behind different items in the garden.
- When students find an exact match, return to the basket for a new color.
- Keep searching until students have found every color of the rainbow in the garden. What colors did they see the most of? What colors did they see the least?
- If time allows, have students draw a picture of their favorite thing in the garden on a blank sheet of paper.

SOURCE

Adapted from:

- Growing Minds | [Garden Color Hunt](#)



Seasonal Planting

KINDER AND FIRST 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

Crayons, assortment to share

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: Write the following journal prompt on the board (or say aloud if you don't have a whiteboard): **My favorite thing to eat from the garden is _____**. Ask for a few students to share their favorites. Some students may not have eaten anything directly from the garden, so lead students to think of fruits and vegetables that they like to eat and make the connection that these foods grow in gardens and farms (not in grocery stores). Students will create a nature journal entry by drawing and coloring a picture of their favorite fruit or vegetable. If there are any fruiting plants in the garden, encourage students to observe the plants as they draw.
- Assign students to their groups and spend 5-10 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](#)



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		



Silly Worms

FIRST GRADE

EUSD's district-wide waste diversion system relies, in part, on composting our lunchtime fruit and vegetable scraps in a worm bin (vermicompost bin). First grade is when students will get a chance to use the "big" SCRAP Cart and can make the connection that the food scraps they put in the compost bucket are what we use to feed our pet worms.

SUBJECT

EXPLORE

TIME

30 - 45 MIN

MATERIALS

Diary of a Worm by Doreen Cronin

Sticks from the garden, one for each student (about 8 inches long)

Brown pipe cleaners, 1 per student

Googly eyes, 1 pair per student

Glue, several bottles to share

DIRECTIONS

- Gather students in the garden and read *Diary of a Worm* by Doreen Cronin. Ask students what they know about worms. Do they have eyes? (no but they can sense light and they don't like it) Do they know how many hearts they have? (FIVE!) Does that make them more lovable? (yes because they also help us so much) How do worms breathe? (through their skin)
- Tell students that we have thousands of pet worms in our worm compost bin. Explain that our worms eat our fruit and vegetable scraps from lunch. Ask students if they know how the worms get food scraps? The worms get food that students discard in the compost bucket on the SCRAP Cart. Make a point to tell students that the worms have a hard time eating whole fruit with a peel on it and that it is much easier for them when kids take a few bites first.
- Next walk students over to the worm bin and carefully select a worm to show students. Allow students to take turns holding worms by the bin making sure they treat them gently.
- After students visit the worms, tell them they will make a worm friend of their own to keep on their desk to remind them to put their fruit and veggie scraps in the compost bucket at lunch.
- Ask students to find a stick in the garden about 8 inches long.
- Show students how to wrap a pipe cleaner tightly around the body of the stick.
- Shape one end of the pipe cleaner into a small loop and attach googly eyes with glue. Remind students that real worms don't actually have eyes.

SOURCE

- BCK Programs



Sample Pictures



Credit: Pinterest



Credit: Kitchen Floor Crafts

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.
- 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.
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- 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.



G is for Garden: Alphabet Fun

FIRST GRADE

Students study the alphabet in the garden and create a useful learning tool to hang inside the classroom. This simple project will allow students to bring treasures from the garden back indoors as they create an alphabet strip to hang inside the classroom. Students use their observation skills and make the alphabet relatable in a fun setting.

SUBJECT

ENGLISH LANGUAGE
ARTS/ART

TIME

30 MIN - 45 MIN

MATERIALS

A book from the
Garden Library

White cardstock, 1
sheet per student

Crayons or colored
pencils, an assortment
of colors to share

Clipboards, 1 per
student

Alphabet suggestion
guide, 1 copy

DIRECTIONS

- Visit the garden by yourself before the lesson and make sure there are multiple opportunities for students to find a garden feature that starts with letters of the alphabet. Use the suggestion sheet as a guide.
- Find a shady spot and read aloud a book from the Garden Library. Have students share ideas of things in the garden that start with each letter.
- Pass out clipboards and cardstock and assign each student a letter of the alphabet and ask them to find one item in the garden that starts with that letter. Students assigned an unusual letter like Q or Z might need extra help.
- Tell students they will be drawing a picture of the garden item. Once students find their alphabet item, ask them to take a mental snapshot or find a place to sit near the item.
- Next, direct students to write their assigned letter on the cardstock in capital form and big in size.
- After drawing the large letter on the cardstock, have students draw a picture of the item they found.
- Finally, have students finish by making their pictures as colorful as possible.
- Collect all drawings and hang them on the wall.

SOURCE

Adapted from:

- Growing Minds Farm to School | [Garden Alphabet](#)



Alphabet Suggestion Guide

A Aloe Ant Aphid Apple Asparagus Avocado	B Basil Beatle Bee Blossom Blue Broccoli Bush Butterfly	C Cabbage Carrot Caterpillar Circle Cloud Compost Corn Crop
D Daisy Dandelion Dig Dill Dirt	E Earthworm Egg (insect/ chicken) Eggplant Eucalyptus Tree	F Fern Fig Flower Fly Food Fruit
G Garden Gloves Grapes Grass Green Grow	H Habitat Hay Hibiscus Hoe Hose Huge	I Inchworm Insects Investigate Irrigation
J Jacaranda Tree Jade Jalapeno Juicy Junebug	K Kale Kernel Kids Knot	L Ladybug Lavender Leaves Lemon Lettuce Lime
M Mint Moon Mulch Mum	N Native Plant Nectar Nectarine Nest Nightcrawler Nutrients	O Observation Onion Orange Organic Outdoors Owl box
P Parseley Pear Peas Pest Plant Pollinator Purple Pink	Q Queen Bee Quiet	R Rain barrel Rake Red Ripe Rock Roly poly Roots Rose
S Seeds Shovel Sky Soil Spider Stem Strawberry Sun	T Thermometer Tools Trees Triangle Trowel	U Underground Unique Useful
V Variety Vegetables Vine Violet	W Watering Can Weeds Wheelbarrow Wildflower Wind Wing Wood Worms	X eXplore
Y Yam Yellow Yellow jacket Yummy	Z Zen Zest Zucchini	



Plant Parts Journal

FIRST GRADE

By exploring the stems, roots, leaves, and flowers of plants in the garden, students will gain an introduction to plant biology and learn the important role each plant part plays to keep it alive.

SUBJECT

SCIENCE

TIME

45 MIN - 1 HR

MATERIALS

Read aloud book from the Garden Library

Plant Part Diagram laminated cards, 3

Blank lined paper, 1 per student

Clipboards, 1 per student

Plant parts picked from the garden:

- Root
- Leaf
- Stem
- Flower
- Fruit (if available)
- Seed (if available)

Optional for tasting:

- Carrot (root)
- Lettuce (leaf)
- Celery (stem)
- Broccoli (flower)
- Cucumber (fruit)
- Beans (seed)

DIRECTIONS

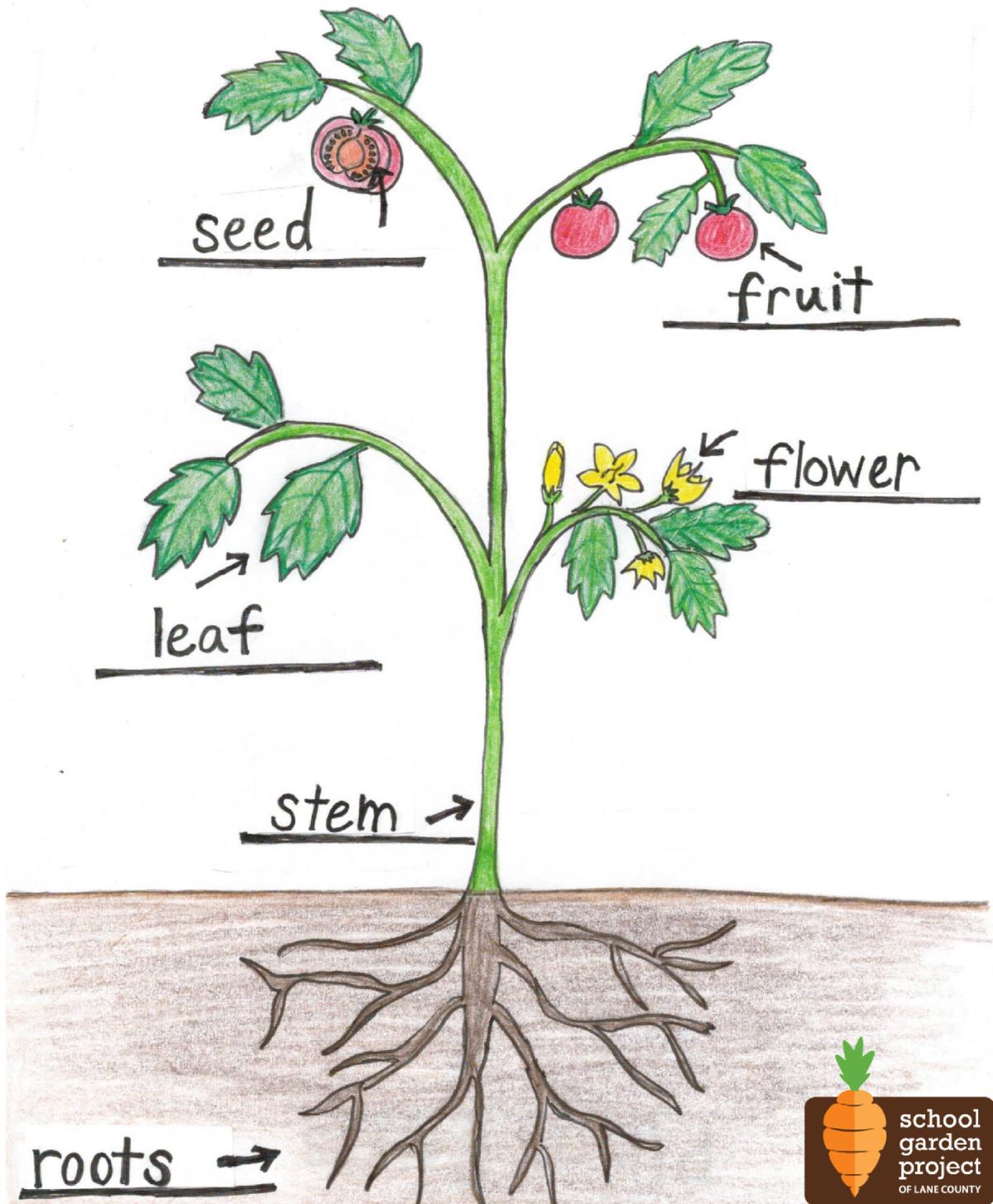
- Before students arrive at the garden, collect each of the plant parts from the materials list and set up three stations around the garden to allow for space during the activity. Set two of the plant parts out in each station. Lay a copy of the Plant Part diagram out in front of the items.
- Have students explore what is growing in the garden beds. Ask them to pay attention to the different parts of the plants that they see. Can they name any of the parts of the plants?
- Gather students around one garden bed that has at least one healthy plant growing in it. Tell them (or ask if anyone knows) what kind of plant it is and what type of fruit or vegetable comes from it. Ask students to share any stories about growing their own plants at home.
- Next, gather students in a shady spot and read aloud a book from the Garden Library. Ask if they can name any of the plant parts and their functions (e.g., the root brings water to the plant).
- Next, assign groups of students to the stations with the plant parts laid out. Give groups a few minutes at each station to pick up and smell the plant parts and to read the labels. After groups have visited all the stations, ask students to pick their favorite plant part to make a journal entry.
- Ask students to write the name of their favorite plant part (from the label), draw a picture of it, and say why they like it.
- To close the activity, ask students which parts of the plant we eat. (All of them.) Then, give examples of each type of plant part that we eat.
- Optional extension: Make a plant part salad in the garden using one item from each plant.

SOURCE

- BCK Programs | Plant Parts Journal
- School Garden Project of Lane County | [Plant Part Diagram](#)



Plant Part Diagram



Symmetry Butterfly Art

FIRST GRADE

Symmetry and patterns are all around us in nature. A perfect example and introduction to the concept of symmetry for young students is the butterfly. This outdoor activity combines exploration, science, and art as students take a “nature walk” through the garden and school campus, collecting materials to make a symmetrical butterfly.

SUBJECT

ART

TIME

1 HR

MATERIALS

Blank paper, 1 per student

Paper bags to hold collected items, 1 per student

Glue - several bottles to share

Scissors - 1 per student

Colored pencils (optional)

Picture of butterfly

DIRECTIONS

- Plan your nature walk route prior to the lesson. Be sure there are plenty of leaves, twigs, and other plant matter for students to collect. Many school sites also have a dedicated butterfly garden, which would be a perfect stop on the nature walk.
- Lead a class discussion to introduce the concept of symmetry. Have students turn to look at a partner and ask them to imagine that their partner has a line down the middle of their face (lengthwise) and compare the right side of the face to the left side of the face. Are they similar? What is similar about them? When an object is divided in half, and both sides are about the same, they are symmetrical. Show a photo of a butterfly and ask them to name what parts are symmetrical about the butterfly.
- Next, tell students they are going to create a symmetrical butterfly using only the leaves and natural elements they find on their nature walk. Hand out one paper bag to each child and head outside for your nature walk. Remind students they will likely need two of each thing they collect and encourage collecting a variety of sizes, colors, and shapes.
- Upon return to the outdoor classroom, give each student white paper and ask them to begin designing their butterflies in a symmetrical pattern. As an example, they might arrange the leaves for the wings or use stems as the body and pine needles for antennae.
- Once their design is set, have students glue all parts in place and then allow time to dry.
- Optional: After the pieces have dried, use colored pencils to fill in the background.

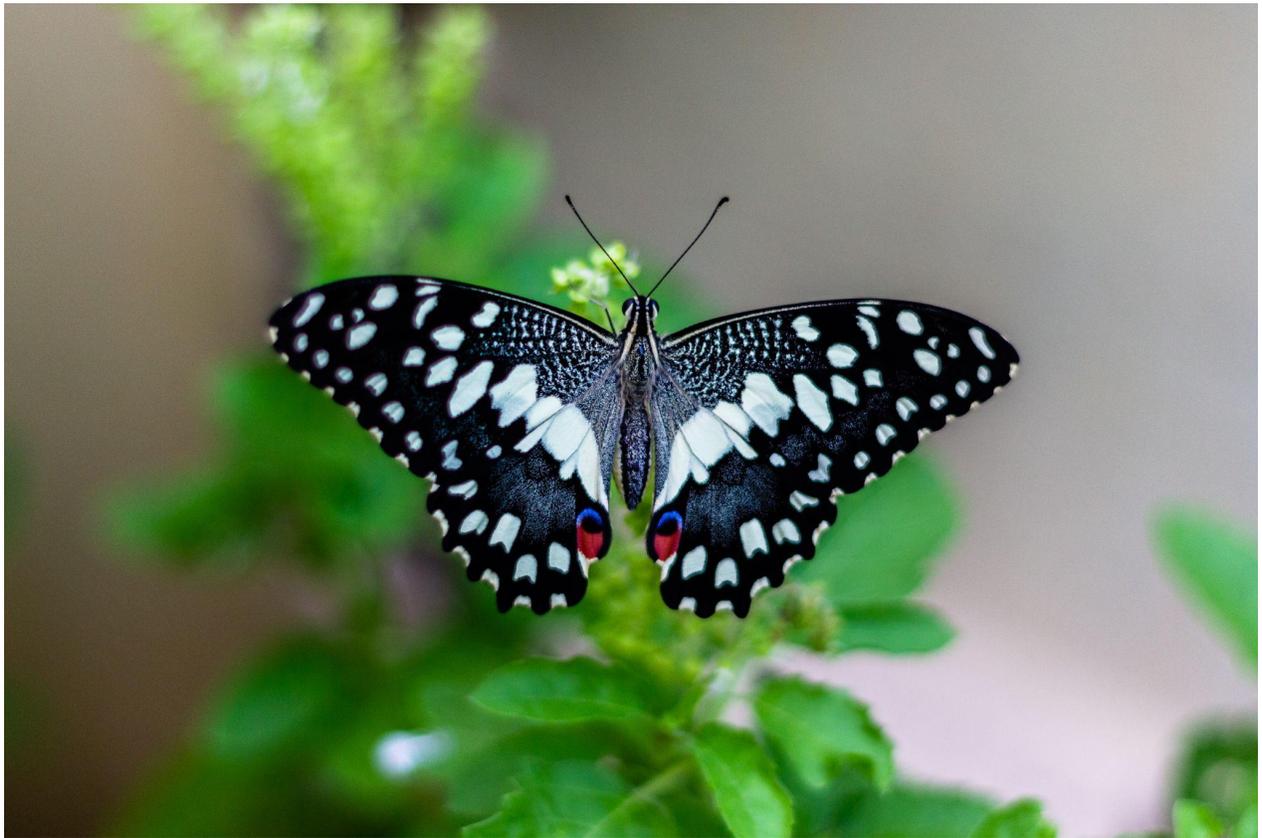
SOURCE

Adapted from:

- One Little Project at a Time | [Autumn Leaf Butterflies](#)



Photo of Butterfly



Examples of Art Project



Credit: One Little Project at a Time



Time for Sunshine

FIRST GRADE

Since telling time is a skill most first graders are perfecting, heading outside to make a sundial is a perfect way to integrate the garden into grade-level standards. Of course, you must have a sunny day for this activity to work.

SUBJECT

ART/TIME TELLING

TIME

30 MIN

MATERIALS

Paper plates, 1 per student

Crayons, assortment to share

Markers (assortment to share)

Straws, 1 per student

Pencils, several to share

Glue, several to share

Clock template, 1 per student

Scissors, 1 per student

Example of a finished sundial

Compass to locate north

DIRECTIONS

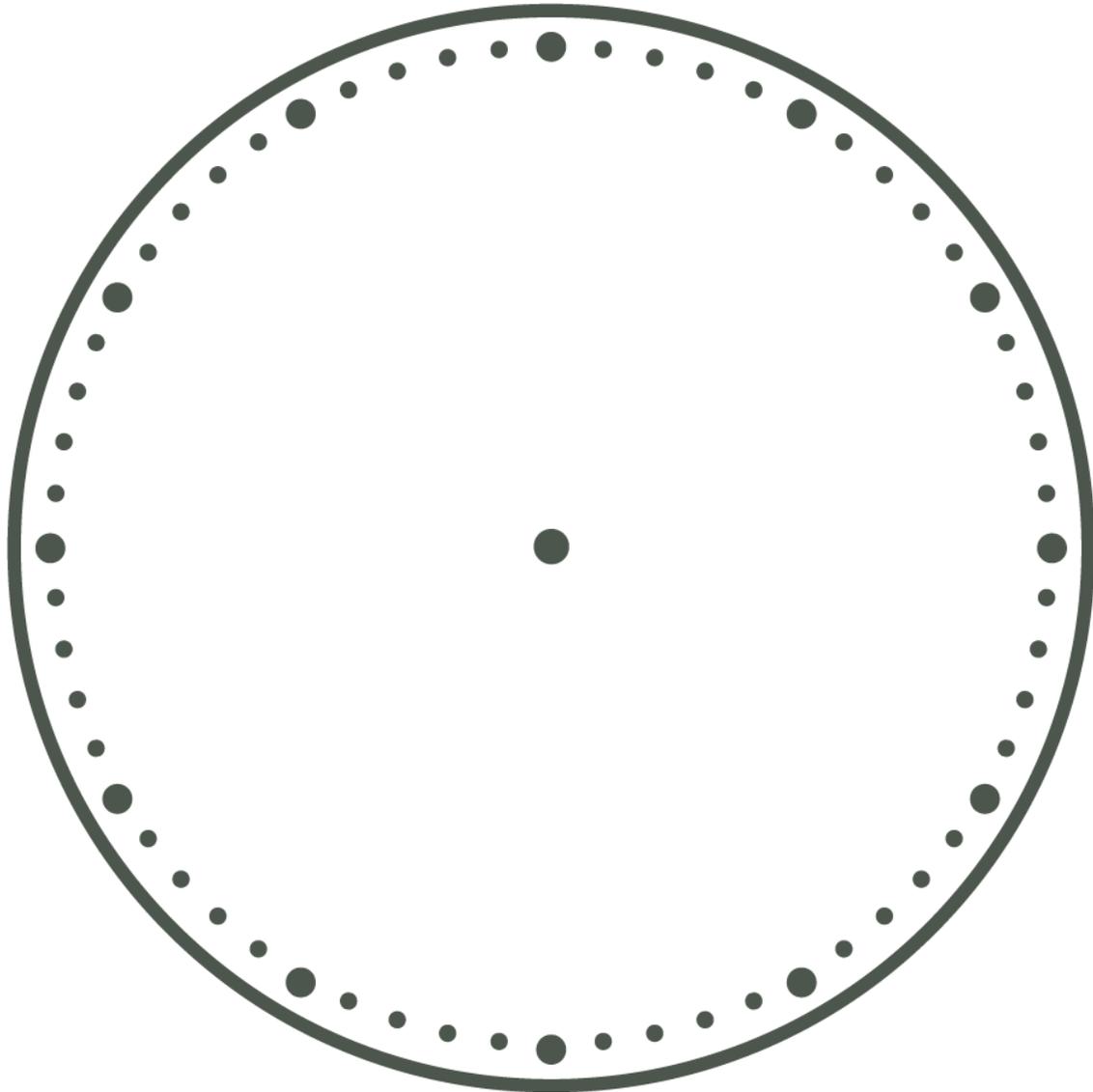
- Gather students in the garden. Pass out a paper plate, a straw, and the clock template to each student. Tell students they will be making their own sundials in the garden. Sundials are how people told time long ago, before the invention of clocks. A sundial uses the position of the sun to tell time.
- Ask students to color the back of the paper plate on the outer rim (the rest will be covered).
- Next, have students cut out the round clock face and glue it to the center of the back of the plate (show example). Make sure students DO NOT color the clock face.
- Have students label the "hour" numbers on the clock face (1-12) in the appropriate positions.
- Poke a hole in the center mark on the clock face template. Then, insert a straw through the hole so that the straw stands vertically.
- Using a compass, locate which direction is north and have students place their clocks with the 12 o'clock of their sundials pointing north. Ask students where the shadow falls on their clock face? What time is it? How accurate is the time?

SOURCE

- BCK Programs



Clock Template



Sundial Example



Gone 2 Seed

FIRST GRADE

Saving seeds is important. It ensures we keep a wide variety of fruits and vegetables available, and it also allows us to promote the plants we know will grow under challenging circumstances. Once farmers identify the hardiest varieties of produce, they make them available to people around the world that might have difficulties growing food. Even home gardeners save the seeds from their most successful plants and use them in their garden the following year.

SUBJECT

SCIENCE

TIME

30 - 45 MIN
+
10 MIN FOLLOW-UP
ONE WEEK LATER

MATERIALS

Book of choice from the Garden Library

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 fully developed seeds

Sign: DO NOT TOUCH SEED EXPERIMENT IN PROCESS (Optional)

DIRECTIONS

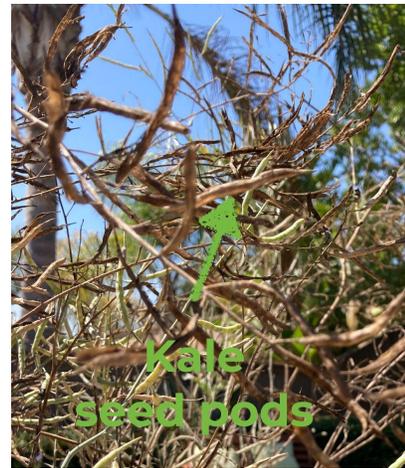
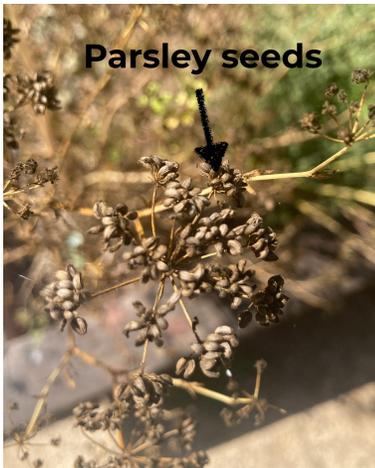
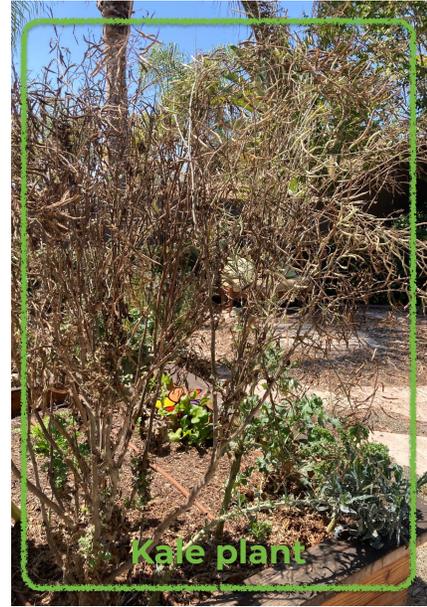
- Prior to the activity, visit the garden and look for plants that have produced seeds (beans, peas, corn, sunflowers, lettuce, tomato, flowers, etc.). Look for plants that are dried up, have "fuzz" growing from the stems, or have produced pods (see examples on the following page). Allow the seeds to dry on the plants before collecting. Identify the plants you want students to collect seeds from. Place "Do not Touch" signs around the plants to ensure they are not accidentally removed prior to your lesson (optional). Plan to set up stations for students to extract seeds.
- On the day of the activity, find a shady spot in the garden and read a book from the Garden Library. A book about plants or seeds would be a good fit.
- Ask students what these plants produced before they went to seed. Then, ask students if they like to eat that particular food. Tell them there is a very easy way to grow the same type of plant next year and ask how they think they could do this.
- 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.
- After collecting seeds from the plants, direct students to the stations. Have students remove the seeds from the bean and seed pods (use scissors if necessary), remove sunflower 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 decorate their seed envelopes, including the plant's name, the date seeds were collected, and a picture of the plant. Include planting information (if known) or add this as an extension to research in the classroom.
- Put the seed trays indoors and store them 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



A Cup with a View

FIRST GRADE

In this tried and true observation activity, students make predictions and record observations while comparing and contrasting subtle changes that occur while growing a seed in a clear plastic cup. As a bonus, the surviving seeds can be planted directly into a garden bed for further observation. Do this lesson **Fall through early Spring** to transplant sugar snap peas in the garden.

SUBJECT

SCIENCE

TIME

30 MIN

+

5 MIN observations every few days

MATERIALS

Book of choice from the Garden Library

Observation worksheet, 1 per student

Clear 8 oz cup, 1 per student

Small paper bag, 1 per student

Scissors, 1 per student

Permanent marker, 1 per student or several to share

Snap pea seeds, 3 per student

Potting soil, enough to fill the plastic cups

Plastic scoops, 1 per student or several to share

Spray bottles with water, several to share

DIRECTIONS

- To introduce the activity, gather students in the garden/outdoor classroom and read a book from the Garden Library; a book about seeds or germination would be a good choice.
- Tell students they are going to conduct a scientific experiment. They will make a prediction based on what they currently know and then carefully keep track of visual data.
- Hand out a permanent marker, plastic cup, a small paper bag, and the activity observation sheet.
- Tell students to use the marker and write their name on the paper bag, the plastic cup, and the observation sheet. Then write the date on the worksheet. Explain that this is important scientific information and it must match exactly.
- Cut each paper bag to the same height of the plastic cup.
- Direct students to fill their clear cup $\frac{3}{4}$ of the way with soil using their hands or a plastic scoop. Then, have students press their seeds against the edge of the cup just far enough so the soil covers it.
- Gently water each seed using a spray bottle.
- Place the cup in the paper bag, so the roots are kept in the dark. Place all the bags next to a sunny window in the classroom or outside the classroom if there is no window inside.
- Every few days, have students retrieve their cup and record observations on their worksheets—regularly water so that the soil does not dry out.
- When the seedlings have sprouted and are about two inches tall, they can be transplanted to larger pots or planted in the school garden. Plant October through April.
- Return the cups to the bin for use next year to practice sustainability.

SOURCE

- BCK Programs | A Cup with a View



Observation Worksheet

Name:

Date:

Predict: How do you think the seed will change over time?

Observation 1 Date:	Draw a picture of your seed.
Observation 2 Date:	
Observation 3 Date:	
Observation 4 Date:	

What changes did you see after the final observation?

