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 **ICON INDICATES TWO-PART LESSON**



# What's in the Garden?

SECOND 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 to find various plants and insects.

## 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 insects and flowers 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 Scavenger Hunt



Find a plant in the garden. Do you know what it is?

Is it a plant you would like to eat?    Yes    No    Maybe

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

- 1.
- 2.
- 3.

Find the compost bin. Name three things in the pile.

- 1.
- 2.
- 3.

Find an insect.

What is it?

How many legs does it have?

What do you think it eats?

How does it travel?

Draw it 



# 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](mailto: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

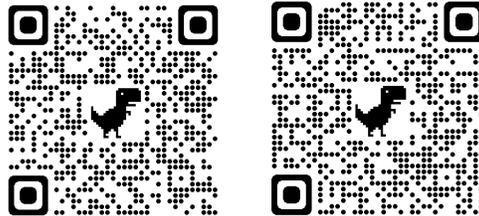


that they will be given specific instructions on how to plant their seeds when it's their turn to plant in the garden bed.

- 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.

<b>Plant Name</b>	
Planting Depth	
Plant Spacing	
Plant Height	
Other Planting Tips	

<b>Plant Name</b>	
Planting Depth	
Plant Spacing	
Plant Height	
Other Planting Tips	

<b>Plant Name</b>	
Planting Depth	
Plant Spacing	
Plant Height	
Other Planting Tips	

<b>Plant Name</b>	
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](mailto: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		



# Because of Worms

SECOND GRADE

In second grade students are introduced to the concept of cause and effect. There are many factors that make a garden successful and therefore lots of examples of cause and effect. In this activity students will learn all about the school's composting worms and the good work they do for our planet and the school garden.

## SUBJECT

EXPLORE

## TIME

30 - 45 MIN

## MATERIALS

*Diary of a Worm* by Doreen Cronin

Worm bin

Magnifying lens, 1 per student (optional)

Cardboard trays, several from the worm bin

Qtips, 1 per student

Newspaper, enough to cover tables

## DIRECTIONS.

- Gather students in the garden and read them the story *Diary of a Worm* by Doreen Cronin. Give students the following fun facts about worms:
  - Worms breathe through their skin.
  - If their skin dries out, they will die.
  - Worms can eat more than half their weight in food every day.
  - They have no teeth but grind the food in their gizzard.
  - Worms don't have eyes - they sense light and try to get away from it.
  - They lay eggs that can produce 10 or more babies.
- Ask students if they know about the work the worms do at our school site and why it helps our garden and our planet.
  - Answer: Our worms help us break down uneaten fruit and vegetable scraps at school so they do not go to the landfill. Ask students if they have seen the compost collection bucket on the SCRAP Cart. Also tell students, our worms also make a manure (poop) that is nutrient rich (because they eat healthy fruits and vegetables) and this helps our plants in the garden grow very strong.
- Cover the tables with newspaper and then put a little bit of compost from the worm bin in each cardboard tray. Let students find the worms and explore the compost with the magnifying glass. Gently move the worm about with Qtips. Make sure students are gentle with the worms and return them to the worm bin after exploring them.
- When the observation activity has ended:
  - Throw away any trash.
  - Return the cardboard trays to the worm bin.
  - Cover the piles in the worm bin with burlap or cardboard and close the hard lid.
  - Wash hands.

## 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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- 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.



# Nature Love Letters

SECOND GRADE

Use the garden as an inspiration for letter writing. Students will tour the school garden and take in all it has to offer using all of their senses. After the visit, students will write a letter to a family member describing their experience and listing what they enjoyed most. Next, students will create their own garden-inspired stamp depicting their favorite part of the garden.

## SUBJECT

ENGLISH LANGUAGE  
ARTS

## TIME

30 MIN - 45 MIN

## MATERIALS

Lined paper, 1 sheet per student

Pencils, 1 per student

Clipboards, 1 per student

Sample letter and envelope template, 1 per student

Envelopes, 1 per student

Blank Postage Stamp Template, 1 per student

Crayons (or markers)

## DIRECTIONS

- Take students on a walk through the garden. Try locating things students can enjoy with each of their senses. For example, are there herbs for students to smell? Can students hear any garden sounds when everyone is quiet? Can students find a worm in the worm bin and feel it wiggle in their palm? Are there vibrant colored flowers for students to see?
- After your walk, gather in the outdoor classroom and talk about writing friendly letters. Ask students if they have ever written letters before? What are the parts of a letter? A friendly letter contains the date, the greeting, the body, the closing, and the signature. Read the sample letter aloud. If you have a whiteboard, write the parts of a letter on the board. Have students give their ideas about what goes in each part of a letter and brainstorm different closings.
- Hand out the clipboards, paper, envelopes, pencils, and sample letter and envelope worksheet.
- Ask students to write a friendly letter to a family member about what they loved most about the garden. Help students fill out envelopes with the school's address. Point out where the stamp would go and explain that they will be taking their letter home instead of sending their letters through the mail. If they choose to write to an out-of-town family member, have them ask their parents for a stamp to mail their letter.
- Finally, direct students to create their own special postage stamp that depicts their favorite part of the school garden. Hand out the postage stamp templates and crayons or markers.

## SOURCE

- BCK Programs



August 21, 2021

Dear Mom and Dad,

Today was a wonderful day at school. I worked really hard and made many new friends. My whole class visited the school garden today. My favorite thing in the garden was the smell of the lavender. It smelled really good. Can we plant some lavender at our house? I hope so.

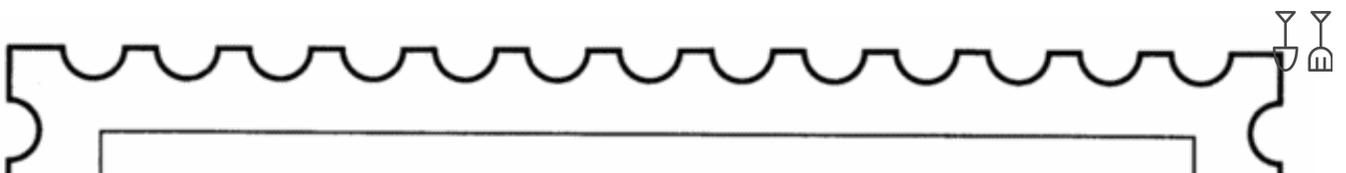
Sincerely,

Sally

My School Address  
Ask My Teacher  
Carlsbad, CA 92009



My Parents  
111 Palm Tree Street  
Carlsbad, CA 92009



# Zoomed-in Insect Art

SECOND GRADE

This is a great project when flowers are in bloom and bees, and butterflies are busy hopping from flower to flower. Spend a few minutes observing pollinators and other insects at work prior to this lesson. The students will want to make observations of flower and plant shapes and colors, as well as decide on their favorite insect to make the object in their “magnifying glasses.”

## SUBJECT

ART

## TIME

45 MIN - 1 HR

## MATERIALS

Read aloud book from the Garden Library

White construction paper (9x12), 1 sheet per student

Pencils and erasers, 1 of each per student

Crayons of various colors, assortment to share

Copy of the magnifying glass on card stock, 1 per student

Scissors, 1 per student

Glue, several to share

Optional: Example of a completed project

Optional: Images of various insects as drawing aids

## DIRECTIONS

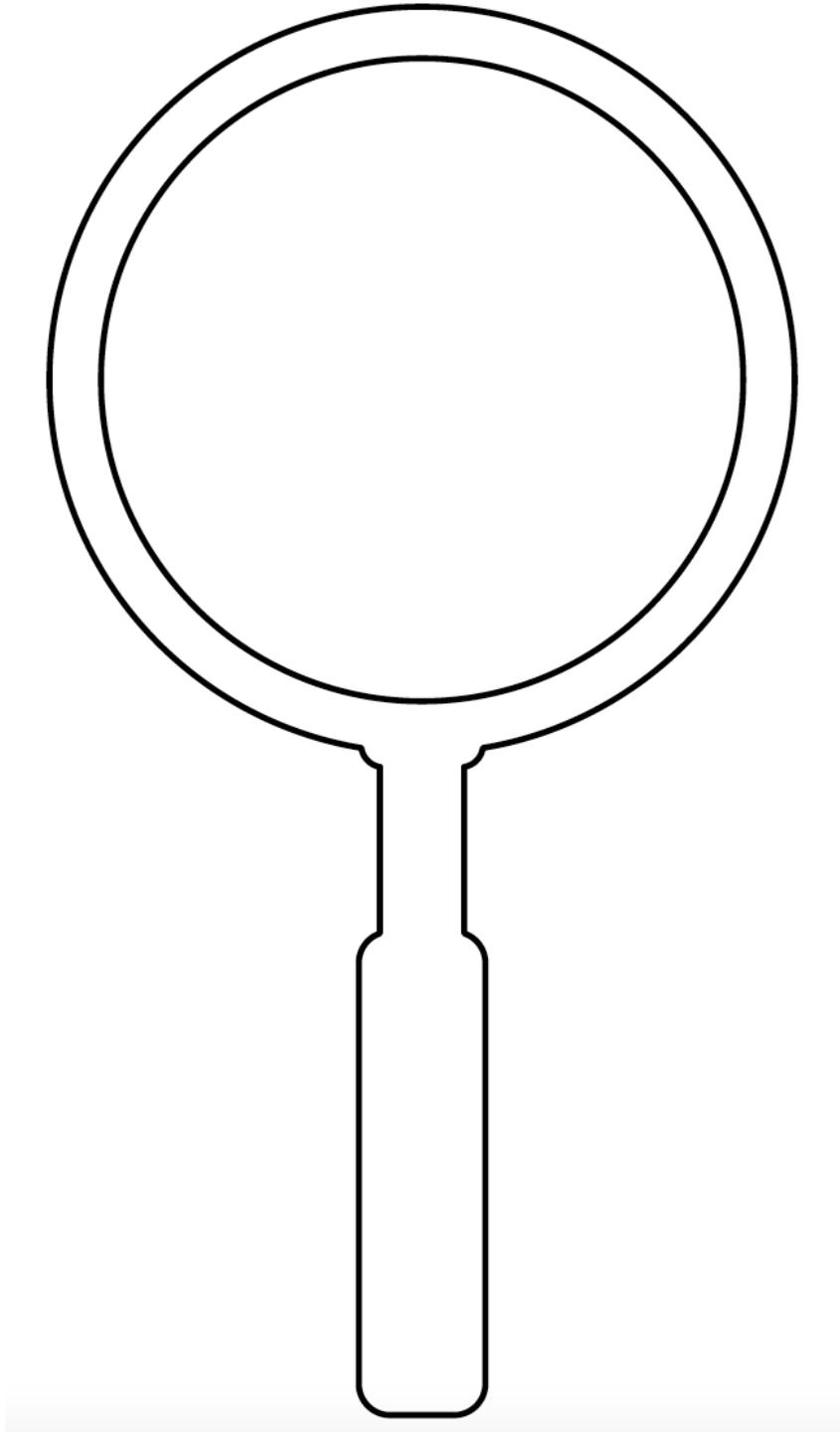
- Find a shady spot in the garden and read aloud a book of your choice from the garden library. A selection about flowers or insects would be fitting for this activity.
- Go for a walk with your students around the garden and/or school grounds and make several stops to closely observe plant and insect habitats.
- Have students select their favorite flowers and insects to draw for the art project (make a mental note, do not pick).
- Students will begin by drawing their “garden” on white paper using pencils. They should sketch their gardens as if they are looking down at a garden bed. Encourage them to draw large flowers, stems, and leaves; filling the entire paper with details, even if they go off the paper. Show the example of a completed project for reference.
- Once the pencil drawings are finished, instruct students to outline their drawings with a permanent marker.
- Next, instruct students to color in their gardens.
- Once their gardens are complete, hand the students their copy of a magnifying glass.
- In the center of the magnifying glass, guide students to draw a “zoomed-in” version of their insect; filling most of the space. Encourage them to include as much detail as possible. This is where drawing aids come in handy.
- Students can then color in the frame and handle of the magnifying glass.
- Finally, instruct students to cut out and glue down their magnifying glasses in a desired spot on their gardens.

## SOURCE

*Adapted from:*

- TinyArtRoom | [Ready for Spring!](#)
- Pattern Universe | [Magnifying Glass Pattern](#)





# Example Art Project



# Pollinate This!

## Start Seeds

PART 1 OF 2

SECOND GRADE

Germinating seeds in a bag is a fun way for kids to view how seeds transform into plants, a process normally hidden by soil. Seeds have everything they need to start growing under the right conditions, so as long as they have moisture, you can place them in a sunny window, and they will start sprouting right away. Students will germinate pollinator seeds to start a pollinator garden.

### SUBJECT

SCIENCE

### TIME

30 MIN

### MATERIALS

Read aloud book about germination from the Garden Library (optional)

Sandwich size resealable plastic bags, 1 per student

Paper towels, 1 per student

Spray bottles with water, several to share

Pollinator seeds, assortment, at least a few per student

Black permanent marker, 1 per student or several to share

### DIRECTIONS

- Find a shady spot in the garden and read a book about seed germination from the Garden Library (optional).
- Introduce the activity by asking students what seeds need to grow. Do they need soil? Sunlight? Water? By germinating seeds in a bag, students will be able to answer these questions definitively.
- Distribute a plastic sandwich bag and paper towel to each student. Have students write their names on the bag and then moisten the paper towel using spray bottles.
- Fold the paper towel and tuck it into the bottom of the plastic bag.
- Place several seeds inside the bag between the paper towel and the bag so that the seeds are visible from the outside. Close the bag.
- Keep the bag in a warm location, such as taping it to a sunny window. At first, seeds do not need sunlight, but once the plant has leaves, it will need sunshine to make food.
- Ask students what they should do with the seeds once they have sprouted. Suggest planting a pollinator garden, which is Part 2 of this activity.
- The seeds will sprout at different rates. Keep an eye on them every few days to see the changes and get ready for lesson Part 2 in a few weeks. Make sure the paper towels stay moist.

### EXTENSION

- Track the growth of the seeds by recording the date and observations every few days. After leaves emerge, the height can be measured with a ruler every few days.

### SOURCE

- BCK Programs



# Pollinate This!

## Plant Sprouts

PART 2 OF 2

SECOND GRADE

Bees and butterflies are extraordinary! Without them, our gardens wouldn't grow. Every fruit or vegetable starts as a flower on a plant. Plants rely on outside factors—like wind, birds, butterflies, and bees—to spread pollen from flower to flower. By doing a few simple things, you can plant a butterfly garden for your school.

### SUBJECT

SCIENCE

### TIME

30 MIN - 45 MIN

### MATERIALS

Read Aloud book about pollinators from the Garden Library (optional)

Pollinator sprouts (from Pollinate This! Start Seeds activity)

Potting soil, enough to fill all of the paper pots

Plastic scoops, 1 per student

Spray bottles, several to share

Toothpicks, 1 per student

Permanent markers, 1 per student or several to share

Newspapers, several

Tomato paste cans or wooden dowels, 8

### DIRECTIONS

- Begin with a read aloud book about pollinators from the Garden Library (optional).
- Distribute each student's plastic bag containing pollinator sprouts. Let students observe their seedlings, then ask the following questions. What did your seeds need to grow? What would happen to your seedlings if you left them in the bag?
- Explain that the seedlings are special because they will grow into plants that attract pollinators. Discuss a good location to eventually plant a pollinator garden (planting flowers in and around garden beds is a great choice to attract pollinators to the school garden). Today's activity will be transplanting the seedlings into handmade newspaper pots to give them some extra time to grow before being planted in the garden.
- Follow the directions on the following page to make newspaper pots. It may be useful to model this for students.
- Using a plastic scoop, fill each pot nearly to the top with potting soil and press down. Make a small hole in the middle, just big enough to plant the seedling.
- Remove the paper towel and moisten it before removing seedlings. Use a toothpick to untangle the roots to get the seedling out. It is okay to plant a little piece of the paper towel if the roots are stuck. Be very gentle with the roots.
- Gently place the seedling in the middle of the pot. Carefully cover the seedling with soil.
- Water the soil with a spray bottle until it is moist but not overflowing.
- Place one pot for each student outside of the classroom and water regularly. Seedlings will not survive if they dry out. Send students home with the additional pots.
- After a few weeks, transplant the seedlings into the school garden to create a pollinator garden.

### SOURCE

- BCK Programs



# 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.



# Bee Magic! Pollination

SECOND GRADE

Nearly all of the fruit, vegetables, and grains that we eat every day grow because of a process called pollination. Pollen is a fine powder found inside flowering plants that must be shared for plants to reproduce. We rely on bees (and other creatures) to spread pollen from flower to flower, a process that is demonstrated in this activity.

## SUBJECT

SCIENCE

## TIME

30 - 45 MIN

## MATERIALS

Read Aloud Book from the Garden Library

Magnifying lenses, 1 per student

Copy of Flower Template, 1 per student

Colored chalk, 1 per student

Cotton balls, 1 per student

Crayons of various colors, assortment to share

Clipboards, 1 per student



## DIRECTIONS

- Take students on a walk through the garden and/or school grounds in search of flowering plants (summer/early fall and spring are best for this activity).
- Make stops along the way for students to observe the flowers with their magnifying lenses. Have them look at the center of the flowers and allow them to touch carefully. What did they observe? Did powder come off the flower onto their fingers? This is pollen. Pollen may not be present in every flower, but allowing students to explore the flowers will give them a frame of reference for the simulation activity.
- Return to a shady spot in the garden and read a book from the Garden Library. A book about pollination would work well with this activity.
- Introduce the activity by telling students that they are going to imagine that they are bees pollinating flowers. Ask for their ideas on how bees pollinate.
- Distribute flower templates, clipboards, and crayons. Using crayons, color in all of the flower petals on the flower template. **IMPORTANT: Leave the center of each flower blank.**
- Next, distribute chalk and cotton balls. Color in the center of each flower with chalk, pressing down hard to create a bit of dust. This represents the pollen.
- Then rub the center of each flower with the cotton ball, swishing all around the chalky center. This simulates pollen being picked up by bees.
- Then instruct students to repeat the previous step on the next flower, moving the cotton ball from flower to flower. Visit the chalk centers of each flower, then observe the cotton ball.
- Lead a class discussion and ask the following questions: What do you notice when you look at the cotton ball? How did the pollen (chalk) from the flowers get mixed together? How do bees spread pollen from one flower to another?

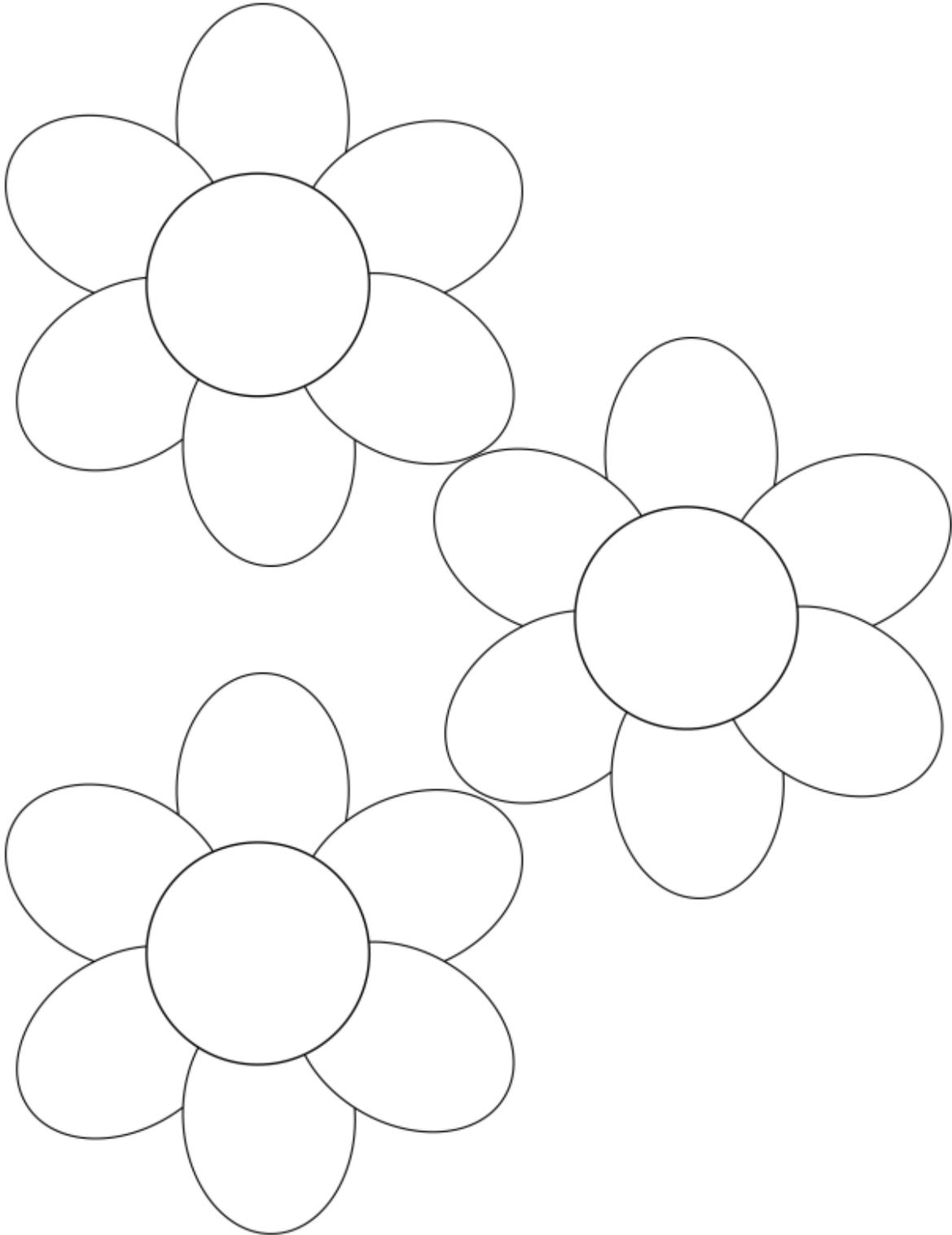
## SOURCE

Adapted from:

- Young Naturalists Club | [What is Pollination?](#)



# Flower Template



# A-MAZE-ing Plants

SECOND GRADE

Plants create their own food using sunlight through a process called photosynthesis. In this “must-do” experiment, you will challenge a bean seedling to find its way through a maze made inside a shoebox by blocking most of its light. Will the plant find the light? Be sure to ask students to bring a shoebox from home prior to the experiment.

## SUBJECT SCIENCE

## TIME

45 MIN - 1 HR

+

5 MIN follow-up every few days

## MATERIALS

Shoebox, 1 per student  
**(bring from home, not provided)**

Read aloud book from the Garden Library (optional)

Dark-colored cardstock, 1 sheet per student

Masking tape, several rolls to share

Scissors, 1 per student

Heavy-duty scissors, 1 per adult

Clear plastic cup, 1 per student

Fava or lima bean seeds, 1 per student

Black permanent markers, several to share

Potting soil, enough to fill the plastic cups

Plastic scoops, several to share

Spray bottles with water, several to share



## DIRECTIONS

- Introduce the activity with a discussion about photosynthesis or read a book about photosynthesis and plants from the Garden Library. Ask why plants need light? What would happen to a plant if it didn't get enough sunlight?
- Tell students they will build a maze for a seedling and block most of its light. Have them predict what will happen to the seedling.
- First, students will plant a bean seed in a cup. Distribute one plastic cup, one seed, and a permanent marker to each student. Label the cup with their names.
- Use a plastic scoop to fill the cup almost to the top with potting soil.
- Poke a hole about one inch deep with your finger and put the seed in the hole. Cover with soil and moisten with a spray bottle, so it is completely moistened but not soggy.
- Next, build a maze for each shoebox. Set the shoebox on its bottom end so that it stands at its tallest. Have an adult cut a 2-3" hole at the top end of the shoebox.
- Create a maze inside the box using the pieces of cardstock. Cut the cardstock to fit inside the box and cut openings into the cardstock. These openings are for light to enter the maze and for the plant to fit through. Tape the cardstock to the sides of the box. See the picture of a completed maze for reference.
- Return to the classroom with the seed cups and completed mazes. Keep the soil moist until the seeds start to sprout (a few days to a week). Then place them at the bottom of the maze. Keep the box closed at all times, except to water the soil to keep it moist.
- After a week or two, you should see the plant start to peek up through the hole at the top of the box. Lead a class discussion about their original predictions and their experiment. Did some plants make it out and others didn't? How are these plants different from plants that grow in full sunlight?
- Use the plants as a natural fertilizer. Tear them apart and till them into a garden bed. As the plants break down they will add nitrogen to the soil. Return the cups to the bin for use next year to practice sustainability.

## SOURCE

Adapted from:

- Greensboro Science Center | [DIY Science: Light Maze](#)



# Example of Shoe Box Maze

