



Edible Schoolyard NYC Garden Curriculum

First Grade

Color Hike (September)*: Students explore the garden, looking for specific colors.

Sorting Seeds (October)*: Students sort seeds based on their characteristics and do basic addition within each category.

Soil Explorers (November)*: Students collect soil materials and draw all the objects in the soil, distinguishing living from non-living.

Who's in the Garden? (December)*: Students act as characters in the garden community and make connections between garden organisms.

Seed to Table (January)*: Students tell the story of how an apple got to our table.

Food From Our Neighborhood (February)*: Students taste mozzarella and tell the story of how it got there.

The Curious Garden (March)*: Students read the story of a boy whose garden changes the city.

Signs of Spring (April)*: Students take a spring scavenger hunt of the garden, tallying the various signs of spring they notice.

Leaf Study (May)*: Students examine and draw different leaves in the garden, discussing their function in photosynthesis.

Habitat Hunt (June)*: Students look for animals that make the garden home and describe their habitats.



Respect in the Garden: Color Hunt

Aim

Students become familiar with the garden, learn that it is a home to plants and animals, and create their own rules for garden behavior (with guidance!).

Summary

Students walk through the garden with a secret crayon, finding objects the color of their crayon to draw. Later, they name the objects they found and see if students can guess their color.

Standards

CCSS: ELA, Grade 1, SL 4.5: Describe people, places, things and events with relevant details, expressing ideas and feelings clearly. Add drawing or other visual displays to descriptions when appropriate to clarify ideas, thoughts and feelings.

NYS: Science, PS 3.1f: Objects and/or materials can be sorted according to various properties.

Materials

- Respect in the Garden handouts or poster
- Clipboards
- Crayons (small enough to fit inside a first grader's hand)
- Brightly colored flower, fruit, or vegetable from the garden
- Tasting

Vocabulary

- respect
- observe
- sight

Procedure: Day One

Opening Circle (15 minutes)

- *Welcome back to the garden*
- *When you walk around the garden in a few minutes, you will see that the garden has had a wonderful summer, to. See if you can notice some of the ways it has grown and changed since we were here in June.*

- *I bet you know some of the important things we have to do to keep our garden safe for ourselves and for all the living things in it. Let's see what you remember from last year.*
- Review Respect in the Garden, getting students' input on what it means to show respect to all the items—plants, animals, soil, water, tools, people

Inquiry Activity One (25 minutes)

- *Now we're going to explore the garden! Hold up a flower or a plant from the garden with an obvious color. Ask students:*
 - *What do you see? What can you tell me about this object just by looking at it? Take answers until one student points out its color.*
 - *What colors do you think we can see in the garden this time of year?*
- *You are going on a color hunt in the garden. Each of you gets paper and a crayon – but you need to keep the color of your crayon a secret.*
- Give each student a crayon. Be sneaky about giving out the crayons and tell the students to hide them inside their hands.
- Give each pair of students a clipboard and paper.
- *You are going to look for things in the garden that match your secret color.*
- *You are going to draw each object you find on your clipboards, and do your best to label each object. If you only know the first letter of your object, that's fine – write that.*
- Model for students how they can draw and label what they find.
- Circulate as students go on their color hunt.

Closing Circle (10 minutes)

- Ask for a volunteer to name one thing he or she found in the garden. Ask the rest of the class to guess what color the pair was looking for.
- Ask students for their observations about how the garden has changed since June.



Procedure: Day Two

Opening Circle (15 minutes)

- *Great job yesterday finding so many different colors in the garden. Who can remind me of something they found on the color hike yesterday? What color was it?*
- *Today we are going to do some garden work.*

Garden Activity (25 minutes)

- Now that we all know about Respect in the Garden, I think we're ready to get to work!
- Explain the garden jobs of the day and go out into the garden.

Adapted from "Earth is Home: First Grade Teacher Resource Manual," Life Lab Science, p. 14-19 and ESY Berkeley
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Closing Circle (10 minutes)

- Taste something from the garden
- Have students share one descriptive word about the tasting.

Common Core State Standard Extensions

ELA, Grade 1, Writing 2: Write informative/ explanatory texts in which they name a topic, supply some facts about the topic and provide a sense of closure.

- Students can write a book based on the colors they found in the garden – “Green in the Garden,” for example.

Other Extensions

Math: Students can return to the garden with their teacher and make tallies of different colors in the garden – how many green things do they find? Red, etc.? They can total their tallies and decide which is the most common color in the garden.

Math: Surveys of classmates’ favorite colors.

Respect in the Garden

These are our guidelines for behavior in the garden. Students generate these responses based on prompting questions, so that they can feel ownership and responsibility for adhering to them. Modify them to suit your students and your garden or outdoor space.



Plants and Soil

- Keep feet on the paths. Never step on plant beds.
- Walk in the garden. Walking is safer than running.
- Ask before you pick from any plant in the garden.
- Use soil carefully. Soil is precious!



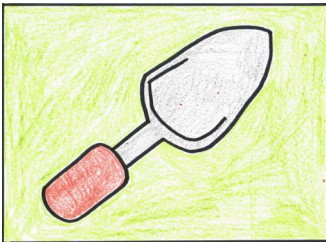
Animals and Insects

- Animals and insects have jobs to do in the garden. Give them space.
- Don't swat, hurt, or kill animals or insects in the garden.



Water

- Water is precious. It is not a toy!
- We use water for taking care of plants and for drinking.



Tools

- Always carry tools by the handle by your side, with the tool end pointing down.
- Clean and put away tools after using them.
- Tools are not toys! We only use tools for gardening jobs.



Gardeners

- Keep your hands to yourself.
- One voice speaks at a time, and everyone listens to the speaker.
- Share and work together in the garden.
- Use kind language with each other.



Sorting Seeds

Aim

Students will learn where seeds come from and understand some of the characteristics of seeds. Students will create and solve additional problems by sorting seeds, based on their properties.

Summary

Students save seeds from the garden and do an activity in which they sort, count and add seeds.

Standards

CCSS: Math, 1.0A: Represent and solve problems involving addition and subtraction

NYS: Science, LE 3.1: Describe how the structures of plants and animals complement the environment of the plant or animal.

NYS: Science, S13: Develop relationships among observations to conduct descriptions of objects and events to form their own tentative explanations of what they have observed.

NYS: Science, PS 3.1f: Objects and/or materials can be sorted according to various properties.

Materials

- Apples cut in half with seeds visible (and/or other fruits, vegetables, or flowers with seeds that students can see)
- Bowls or cups for putting seeds in
- Plates or trays filled with different kinds of seeds
- Clipboards
- Pencils
- Seed envelopes
- Seed Sorting worksheets
- Tasting (apples, or other seasonal tasting)

Vocabulary

- seeds

Procedure: Day One

Opening Circle (10 minutes)

- *I'm going to pass around these bowls. Take a look at what's inside. Use your sense of sight and your sense of touch to examine these objects. *
- Give students the small bowls or cups with apple seeds in them and tell them pass the bowls around the circle.
- *Does anyone recognize these objects? Yes, they are seeds, but can anyone tell me what kind of seeds they are? Yes, these are apple seeds! Where did these apple seeds come from? From the store? From a seed packet? Today, we are going to be learning about seeds and where they come from.*
- Split class in half – one half will do Activity 1, the other half will do Activity 2. They will switch on day 2.

Inquiry Activity One (30 minutes)

- *Looking around the garden, where else, other than an apple, do you think we can find seeds?*
- Take a few responses and choose a few suggestions to investigate. Have students help you figure out where on each plant to look for seeds until you actually find them.
- Pass out other examples of plants with seeds in them so students can see where they are. Have enough of each for them to touch and explore on their own.
- Demonstrate how to save seeds from a plant
- Students can label seed envelopes, time allowing.
- Save seeds from several different plants in the garden, if possible. Try to save seeds from a variety, including a flower, a fruit, an herb, a bean pod, etc., if possible. Pick plans that the students will be able to get seeds from with relative ease.

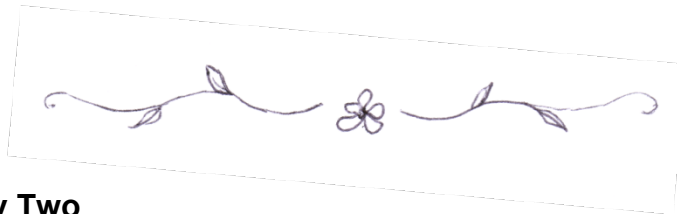
Inquiry Activity Two (30 minutes)

- Divide your small group into pairs. Give each pair two paper plates (or a tray) and a cup which has seeds in it (no more than 10 seeds total), clipboards, Seed Sorting worksheets, and pencils.
- Tell the students that they have a cup filled with different seeds. Some are big and some are small. They need to work with their partner to sort their seeds. They might not always agree right away which ones are big and which ones are small, but they can work it out. They can either sort them between the two plates, or on two sides of the tray.
- Circulate to help.
- Show students how to do the next step: count the big seeds and the small seeds, fill out the graphic organizer, and solve the math problem they have created.
- Circulate and help.

- When the pairs are done sorting, bring your group together and discuss their findings.
 - *Did any of the seeds surprise you?*
 - Some common misperceptions are that things that they recognize as something else—rice, nuts—are not seeds (because they are rice, nuts). *Did you know that rice is a seed? Did you know that nuts are seeds? Did you know that you eat many things that are seeds? Is there anything else in here that is a seed that you sometimes eat?*
- Time allowing, they can do the other side of the paper: dark seeds and light seeds.
- If there is time lefty over, do a short garden job and/or a short tour of the garden looking for seeds.

Closing Circle (10 minutes)

- Hold up an apple and ask students: *What's inside? Seeds! How many seeds do you think are inside this apple?*
- Share an apple tasting. Have students try several different varieties of apples, saving and counting the seeds from them and noticing their similarities/differences.



Procedure: Day Two

Opening Circle (10 minutes)

- Remind class what they did yesterday, asking students to recap.

Inquiry Activity (30 minutes)

- Have students switch activities so they try the one they did not try the day before. (Please see above for lesson plan instructions.)

Closing Circle (10 minutes)

- Hold out a handful of seeds.
- *Who can tell me what all of these are? Seeds!*
- *Are these seeds alive? Why or why not? Seeds hold life inside of them and are waiting to be planted so they can grow. Do you have any questions about seeds?*

Common Core State Standard Extensions

ELA, Grade 1, Reading 1: Ask and answer questions about key details in text.
ELA, Grade 1, Writing 1: Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. Read "The Story of Johnny Appleseed," by Alike or "Johnny Appleseed," by Reeve Linbergh or "Miss Rumphius," by Barbara Cooney. Ask students what seeds they would plant all over the country if they could be like Johnny Appleseed or Miss Rumphius. Have students create their own story about seeds.

Other Extensions

Ask students to estimate how many seeds are in a pumpkin. Have students make estimates of several, different sized pumpkins. Then have students open up the pumpkins, count the seeds and make a chart of the results.

Students write descriptions of different seeds.

1. How many BIG seeds do you have?

Draw your BIG seeds here:

2. How many SMALL seeds do you have?

Draw your SMALL seeds here:

3. How many SEEDS do you have all together?

BIG seeds + SMALL seeds = _____



1. How many DARK seeds do you have?

Draw your DARK seeds here:

2. How many LIGHT seeds do you have?

Draw your LIGHT seeds here:

3. How many SEEDS do you have all together?

DARK seeds + LIGHT seeds = _____





Soil Explorers

Aim

Students will explore soil and learn that it is made of both organic and inorganic matter.

Summary

Explore trays of soil and tally all the different things they find—sticks, worms, rocks, etc.—and sort these things into categories: living (organic) and non-living (inorganic)

Standards

CCSS: Math, Grade 1, 1.0A: Add and subtract within 20.

NYS: Science, PS 3.1f: Sort of describe objects according to their properties: texture, color, shape, etc.

NYS: Science, PS 2.1 d: Soil is composed of broken down pieces of living and non-living materials

Materials

- Dry erase board and markers
- Trays
- Trowels
- Markers
- Plant labels
- Paper and clipboards
- Pencils
- Four distinct types of soil, if possible (i.e. compost, bed soil, path soil)
- Seasonal tasting

Vocabulary

- soil
- mixture
- pebbles
- roots
- insects
- leaves
- clay



Procedure: Day One

Opening Circle (5 minutes)

- *What is soil? Does anyone know what soil is made of? Is it made of just one thing or lots of different things? Are they big things or little things? How do you think we can find out?*
- Take students' ideas and then explain that today we are going to explore soil.

Inquiry Activity One (30 minutes)

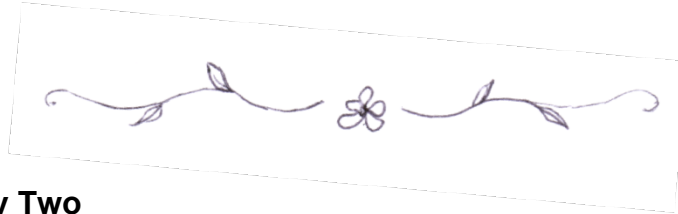
- Divide into two groups and go out into the garden to places where you can dig in the soil.
- Take each small group to one location to dig in the soil. Have this small group fill up two flat, shallow trays with soil. As students work, ask, *What do you see? What do you feel? Can you find anything living in the soil? Do you think plants like this soil? Why or why not?*
- When you are finished, you can mark these trays with a plant label referencing the location ("vegetable bed," "compost bin," etc.).
- Find a second location in the garden, preferably with somewhat different soil. Continue the same procedure as before, having students fill two trays at this location, then labeling the trays.
- Find a spot to sit in the garden. Assign small groups of students to each tray.
- Explain that you want the students to dig through the soil carefully, pulling out any objects they can find. Ask students to find as many different things as possible. If students are able to label what they find, have them do so. If not, they can draw pictures of the objects. You can also ask groups to count the number of objects that they find.
- Circulate as students are working, asking them to share what they found. *Were these things big, medium, or little? Were these things living or not living? Do you think some of these things used to be alive? How did they get in the soil in the first place? Do you notice any differences between the soil samples from different parts of the garden?*
- Time allowing, make a mixture of the soil sample with water.

Closing Circle (15 minutes)

- Have groups share what they have in their soil sample trays. *What was the most interesting or surprising thing you found in the soil?* Revisit some of the questions from the opening circle and see if students can answer them now. Have the two groups compare their findings.
- Divide the white board into two sections: "living" and "non-living." As they give their answers, write them in the appropriate spot, although they don't need to explain that, and neither do you, just yet. Make sure you emphasize the things you want them to know about that are in the soil: leaves, twigs, roots, insects, air, water, pebbles.



- Mention that some things in soil are living (list them on the board), and other things are non-living (list them). Explain that by “living” means plants and animals, things that are alive now or were once alive. “Non-living” means things like rocks and sand and clay—things that have never been alive.



Procedure: Day Two

Opening Circle (10 minutes)

- Have students share some of what they learned from the first soil activity.
- *Who can think back to what we learned yesterday and remind me what soil is made of? Why is soil so important? Why do we want to learn about soil and what it's made of?*
- Take some ideas and then explain that without soil, we would not have a garden. *Our plants need soil to survive. Without soil, we wouldn't have any food to eat.*
- *Yesterday, you explored soil looking for different things in it. What did you find? Was the soil made of just one thing or lots of things? Soil is made of lots of things. Does anyone know what that's called when something is made up of lots of different things? It's called a mixture.*
- *Today we are going to make our own soil mixtures out in the garden.*

Garden Job (30 minutes)

- Make sure the garden job involves amending soil and/or watering, so they can get the concept of making a mixture.

Closing Circle (10 minutes)

- Have a seasonal tasting.
- *What does this vegetable have to do with learning about soil? Because it grew in soil!*



Common Core State Standard Extensions

ELA, Grade 1, W 2: Write informative/ explanatory texts in which they name a topic, supply some facts about the topic, and provide a sense of closure.

- Using the vocabulary from the garden lesson, students write and illustrate an explanation of what soil is made of.

Math, Grade 1, OA, 2: Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

- Have students generate the list of objects they found in the soil. Write their answers on the board. Have the students illustrate each item and add up all the items. How many components were in their soil?

Other Extensions

Science: Have the teacher bring one jar back to the classroom and have students observe the jar as it settles over the next couple of days. What happens? What do you see?



Who's in the Garden?

Aim

Students will be able to identify organisms in the garden community and the jobs that organisms do in the garden community.

Summary

Students read a story and play a game to simulate how plants, animals, bugs, and people contribute to the garden community

Standards

CCSS: ELA, Grade 1, SL2: Ask and answer questions about key details in a text read aloud or information presented orally or through other media.

Materials

- Dry erase board and markers
- Construction paper, cut into strips to be worn as hats
- Tape or staplers
- Find a Friend worksheet
- Frankie and the Garden storybook
- Colored pencils or markers (optional)
- Blank paper (optional)
- Seasonal tasting

Vocabulary

- community
- pollinate
- pollen

Procedure: Day One

Opening Circle (5 minutes)

- *Today we're talking about communities. What is a community? Can someone define it for me?*
- Write up a definition of community on the board.
- *Who are some people in our human community?* Take a few suggestions.
- *What do these people in our community do? These people all have a specific job to do.*

- *Do you think our garden is a community? Why or why not? It turns out that our garden is a community! Today we're going to learn about who's who in our garden community, and what their jobs might be.*

Inquiry Activity One (20 minutes)

- Tell students that they are going to be Garden Characters in our garden community. *These are all living things that are in our garden and have a job to do.* Model for students how to read the hats: their character name on the one side, and the description of the character's role on the back.
- If time allows, students can decorate their hats.
- As students finish, help students assemble and put on their hats.
- Once students finish, tell them that you are going to read them a story that has all the characters from our garden community. Ask them to listen for their character and for what their character is doing in the story. They can even act out as their character when they hear their name (i.e. moving their hands like a worm, using their arms as branches like a tree, etc.).
- After reading the Frankie and the Garden story, ask a few volunteers to name their characters and what they were doing in the story. If necessary, go over unfamiliar terms: compost, pollen, pollinate.

Inquiry Activity Two (15 minutes)

- *Now we're going to play a game to get to meet the other Garden Characters in our community.*
- Pass out the Find a Friend worksheet to each student. *You're going to be getting up and moving around the room and meeting the other Garden Characters. When you meet a new Garden Character, shake their hand and say, "Hello, garden friends!" Can we practice that?* Have students practice this.
- *On your worksheet, you have to fill in the names of different Garden Characters. Let's look at the first one together. It says, "Name a plant that makes seeds."*
- *When I meet a Garden Character who fits in that particular box, they write their name – their Garden Character name, not their real name.*
- If necessary, read through all nine boxes first together, so students have a sense of who they are looking for.
- Have all students stand up and start to mingle. Work together with students who might have trouble with the reading, and help them find matches for their worksheet.
- When students have filled in all nine boxes, or when time is up, have the group sit together in a circle again. Ask students to share out responses, and ask prompting questions. *Who did you meet who makes seeds? Who did you meet who makes leaves?* Specifically prompt students for ideas of how organisms might relate in the garden.
- If your students have a lower literacy level, substitute the Find a Friend worksheet with a different activity. Have students instead draw a picture of their Garden Character in the garden, doing their job in the garden (i.e.



birds eating bugs, bees pollinating flowers, etc.). Students can then share with each other, or add in different characters.

Closing Circle (5 minutes)

- *Let's think back to our initial question. Is our garden a community? Who are the characters in our garden community? How do they work together? What are the jobs of some of these characters? We're going to be studying more during this year about the jobs of the bugs, birds, plants, and people in our garden community.*
- Share a seasonal tasting.

Common Core State Standard Extensions

ELA, Grade 1, W3: Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure.

- Have students write their own garden story. Assign each student two or three characters from the garden story (i.e. chicken, worm, bee). Have students write and illustrate a book, with a sequence of events, telling what each creature does in the garden.

Other Extensions

Science: Have students go on an observation walk to find these creatures in the garden. Have them use magnifying glasses to observe. Students can write or draw on blank paper what creatures they observe.

Name: _____

Find a Friend!

Write in the name of a Garden Character that matches each box.

Name a plant that makes seeds.	Name a plant that makes fruit.	Name an animal that pollinates flowers.
Name an animal that eats bugs.	Name an animal that makes compost.	Name a plant that needs sun and water to grow.
Name a plant that makes leaves.	Name a person who helps the plants grow.	Name a plant that makes roots.

Suggestions for Garden Characters

Spider - eats bugs

Bird - eats bugs

Bee - pollinates flowers

Butterfly - pollinates flowers

Gardener - helps plants grow

Worm - makes compost

Roly poly - makes compost

Apple tree - makes fruit

Pear tree - makes fruit

Lettuce plant - makes leaves

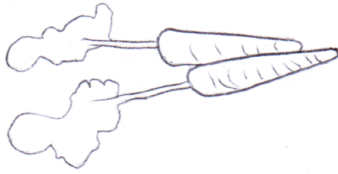
Kale plant - makes leaves

Carrot plant - makes roots

Sunflower - makes seeds

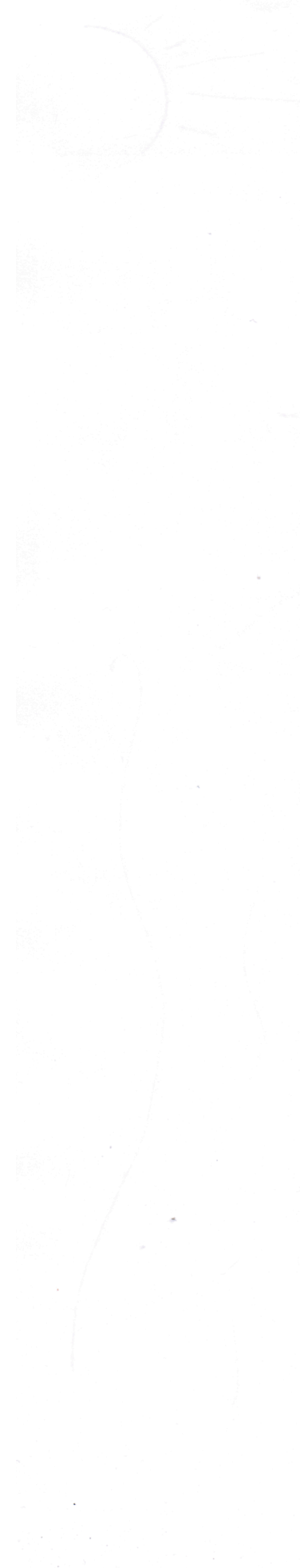
Frankie and the Garden

A P.S. 216 Story





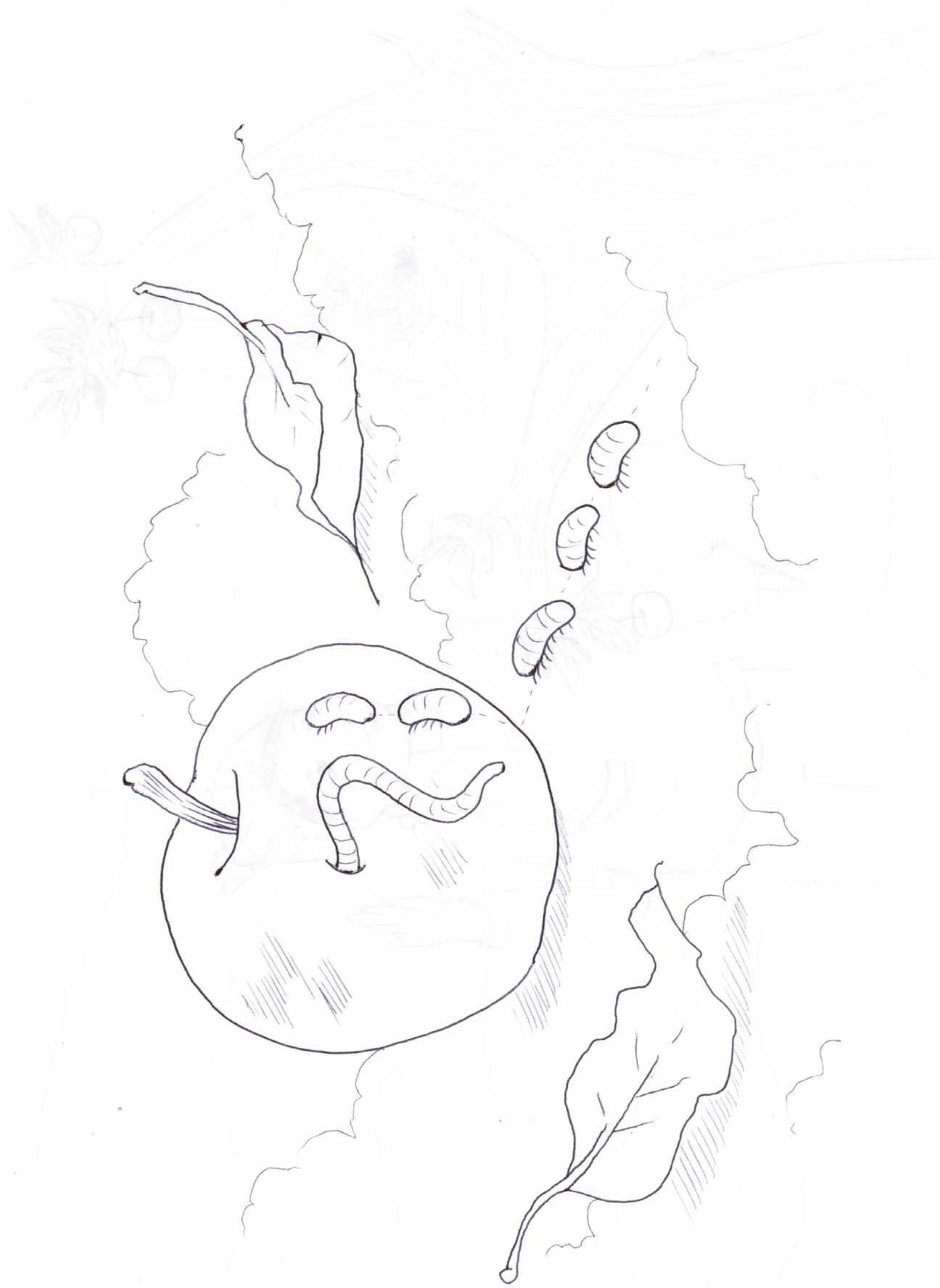
One day in the autumn, Frankie was walking in the PS 216 garden. The garden was full of sunshine, and Frankie was admiring the light on the beautiful fall leaves. A bluebird flew into its nest on a faraway branch and munched on a bug.



Frankie walked into the orchard, where the fruit trees grow. As he looked more closely at the apple tree near him, Frankie saw a small spider web nestled among the red apples. Caught in the spider's web, he saw a cabbage moth.

"Thank you, little spider," said Frankie. "That cabbage moth was eating the cabbage plants that I wanted to share with my friends. You helped the garden. I'm so happy that you're in my garden community."





By the base of the tree, Frankie saw some apples that had fallen. The apples must have been there for a while, because they were starting to rot. Some roly-polies were walking in a line over the apple. From one of the apples a little earthworm tail was sticking out.

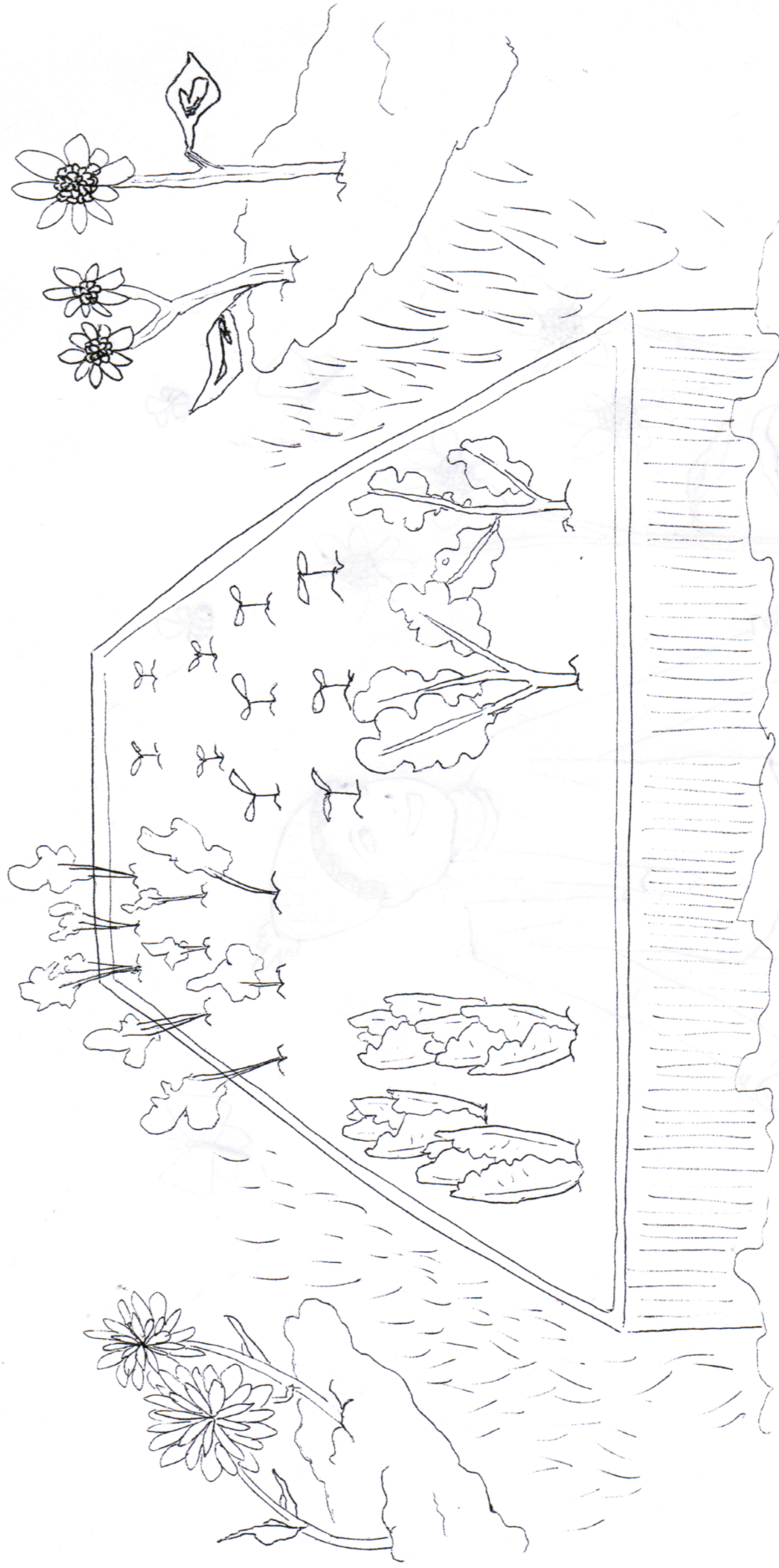
Frankie leaned down and whispered, "Thank you, little earthworm and roly polies. You're eating that apple and turning it into rich compost for the garden. You're helping! I am so happy that you're in my garden community."

Frankie watched for a minute as the earthworm slipped out of the apple and slithered into the ground. The earthworm lived in the soil.



Frankie stood up and took a few steps further. He reached up and picked a pear off the nearby tree. He took a big bite, and it made a loud crunching sound. The pear was sweet and so fresh.

Frankie swallowed his bite of yummy pear and said, "Thank you, pear tree. You make delicious fruit for me and my friends to eat. You help us! I am so happy that you are in my garden community."



Frankie strolled further and passed a garden bed full of lettuce, carrots, and kale plants, all growing side by side. Around the plants were yellow sunflowers and bright right dahlia flowers.



Humming around the vegetables and flowers were butterflies and bees. The colorful butterflies landed on the flowers and dipped their long tongues into the sweet nectar inside the flowers. Soon they were covered in powdery yellow pollen.

Frankie stood up on his tippy toes and called up to a monarch butterfly visiting a sunflower above his head. "Thank you, butterflies and bees! When you visit the flowers, you spread their pollen around to other flowers and help them grow! Our garden wouldn't work without you. You help so much. I am so happy that you're in my garden community." The butterfly landed on Frankie's finger for a moment, then flew away.



Ms. Esther and Ms. Cecilia came out of the greenhouse and waved to Frankie across the garden. They walked towards him and smiled. "Thank you, Frankie! You are a wonderful gardener. You take care of the plants, the compost and the insects. You help so much. We're very happy that you are in our garden community!"



How Do We Get Apples?

Aim

Students will build upon their seed-to-table knowledge and begin to discuss the impact of transportation and processing on food.

Summary

Students will read and illustrate about where apples come from in the winter.

Standards

CCSS: ELA, Grade 1, SL4: Describe people, places, things and events with relevant details, expressing ideas and feelings clearly.

CCSS: ELA, Grade 1, SL5: Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts and feelings.

NYS: Social Studies, 4.1a: Know some ways individuals and groups attempt to satisfy their basic needs and wants by utilizing scarce resources.

Materials

- Apple tasting
- Apple for demonstration
- Map
- Crayons or colored pencils
- Apple story
- Coloring sheets

Vocabulary

- fresh
- seasonal

Procedure: Day One

Opening Circle (10 minutes)

- Hand out tastings of apples. *Who knows what these are? Apples!*
- *There are no apples on the apple trees in our garden because it is too cold for them to grow right now. They like growing when it is a little warmer.*

- *But I have a fresh apple right here! I didn't get it from the garden. Who can guess where I got it from? And who can guess where the store got it from? Apples are not growing in New York right now. It's too cold!*
- *If it's too cold in New York to grow a lot of food, do you think our food comes from farms in New York, or does it have to come from far away where the weather is warmer?*
- *So, if I have a fresh apple, it might mean that it came from far away. In other places in the world, far away, it's much warmer, and there are still apples on the apple trees.*
- *Hold up a map and point to your location on the map. This is where we are! It's very cold here right now. But in other places in Central America, South America, Africa and parts of Asia (where many apples are grown), it is warm. Circle these places on the map while you talk about them.*
- *How do you think apples, or other food that is grown in these places, can get all the way to us? There are many countries and oceans that they have to pass over to get to us. How do they get here? Show on the map the journey they'd need to take to you.*

Inquiry Activity One (15 minutes)

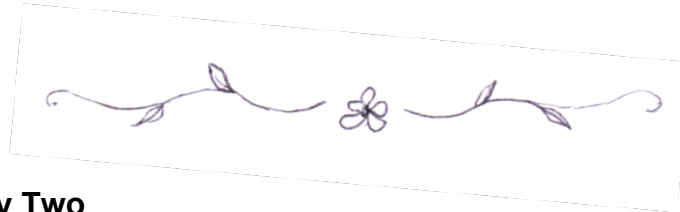
- *Those were all great guesses about how an apple might get to us here! We're going to read a story about how apples can travel very long ways to get to us. Let's see where it has to go! Have students act along with the story: pretend to plant seeds, pretend to pick apples, etc.*

Inquiry Activity Two (15 minutes)

- *Now we are going to make our own illustrations for the story!*
- *Distribute to each student one coloring page of the apple story. Students spend the rest of the period coloring and labeling a picture. At the end (or after class, time depending), you could choose to staple the drawings together in order as a book.*

Closing Circle (5 minutes)

- *The next time you go to the store and buy an apple, ask yourself: Where did this apple come from? It might even have a sticker on it to tell you where it came from!*



Procedure: Day Two

Opening Circle (10 minutes)

- *Welcome students back to garden class. What did we learn about last time? How did the apple get to us in our story?*
- *Recap the previous lesson on how the apple got to us.*

Inquiry Activity (30 minutes)

- *Even though many things are not growing in our garden right now, there are still things we can do to get our garden ready for the spring.*
- Lead students in a seasonal job, such as seed saving or making potting soil.

Closing Circle (5 minutes)

- Have students share their reflections on the work they did today.

Common Core State Standard Extensions

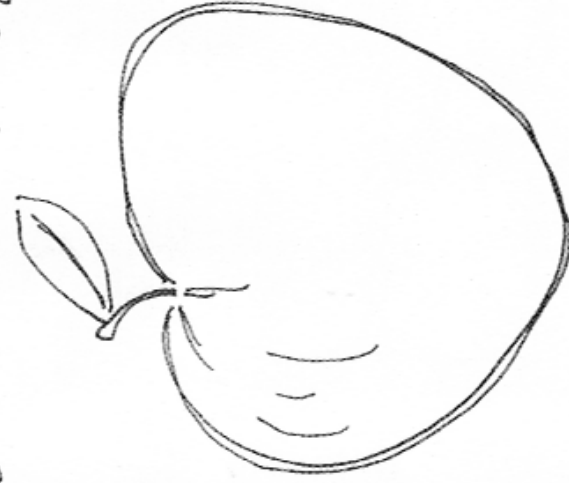
ELA, Grade 1, W2: Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure.

- After discussing the path from seed to table of another food (peanut butter, cheese, a carrot), students can write and illustrate this food's story.

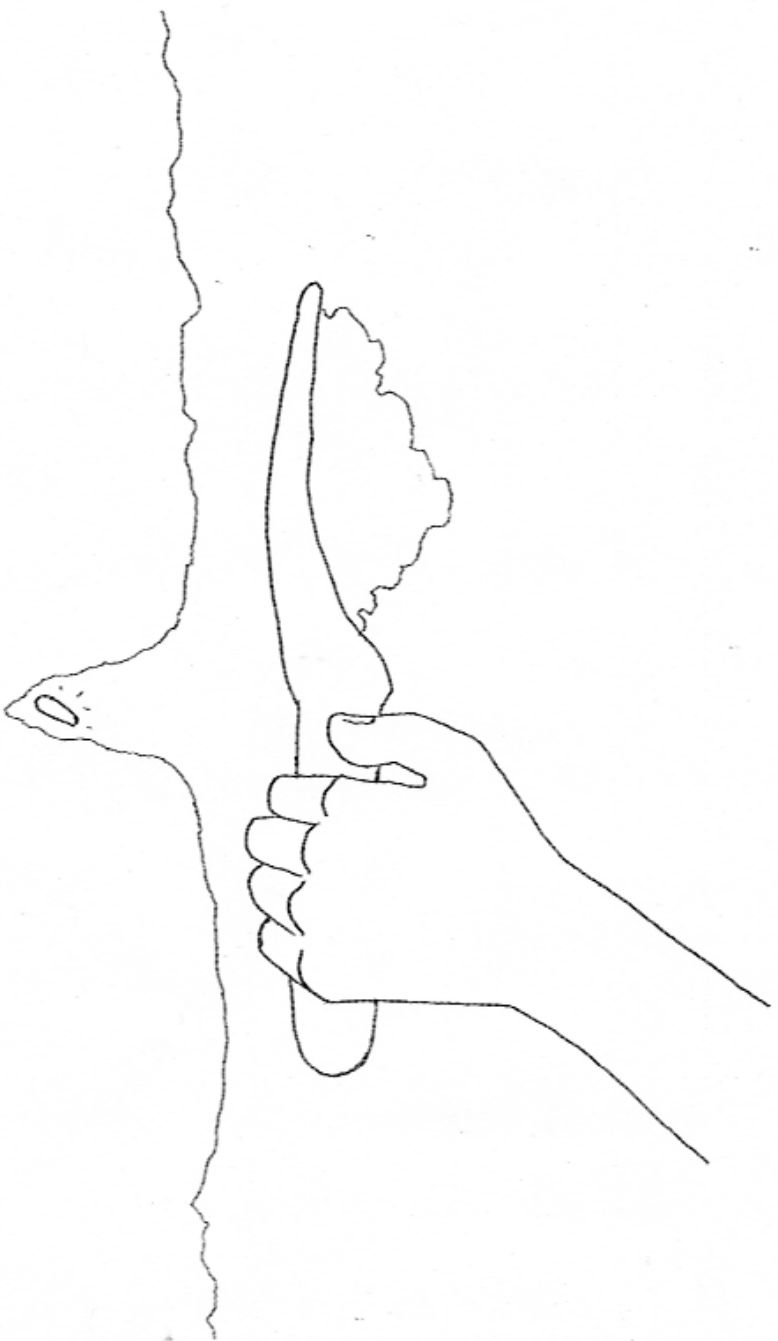
Other Extensions

Social Studies: Host a guest speaker or take a neighborhood walk in which students can interview a storekeeper about where different foods in the store came from.

From SEED to TABLE...

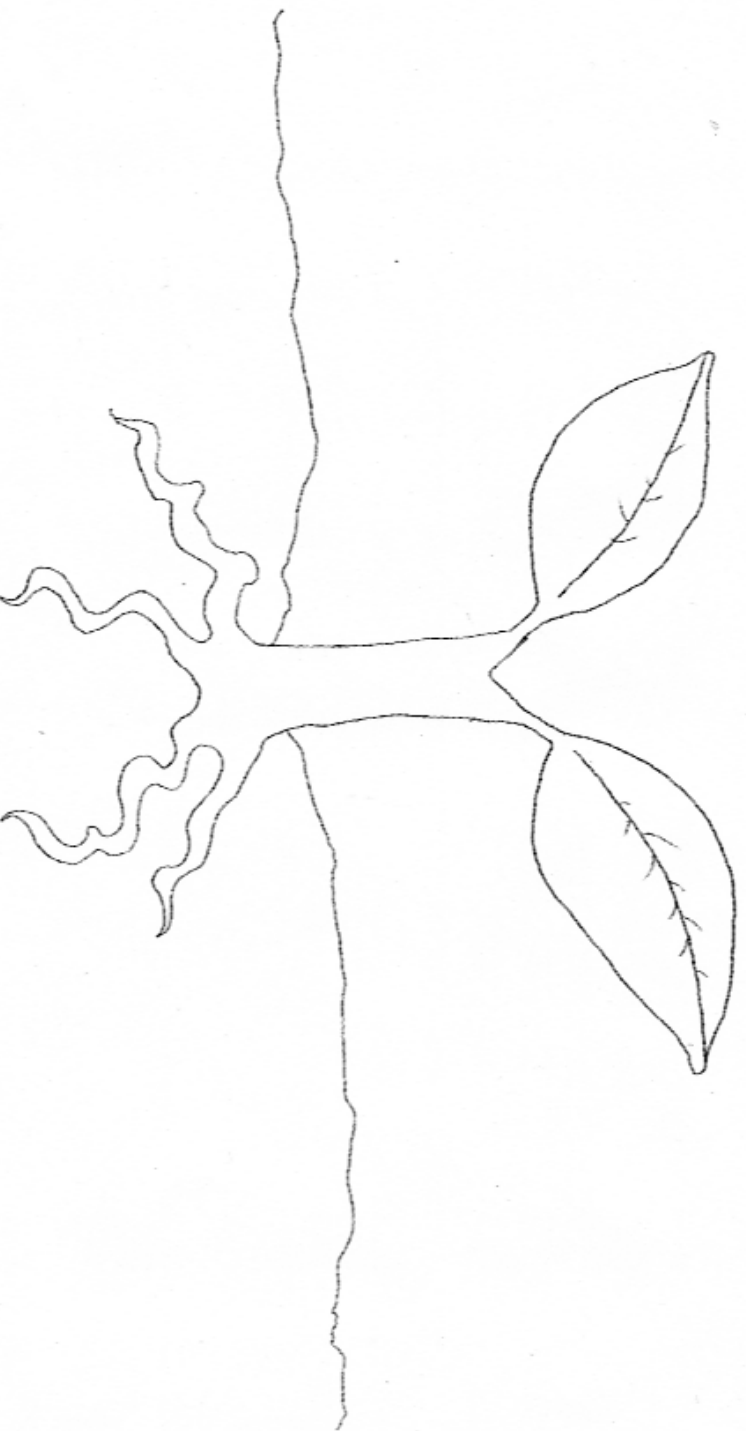


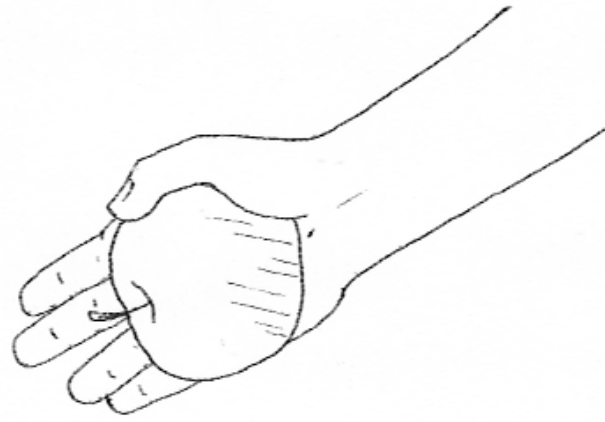
How do we get apples?



First, a farmer that lives
far away plants an apple
seed in the ground

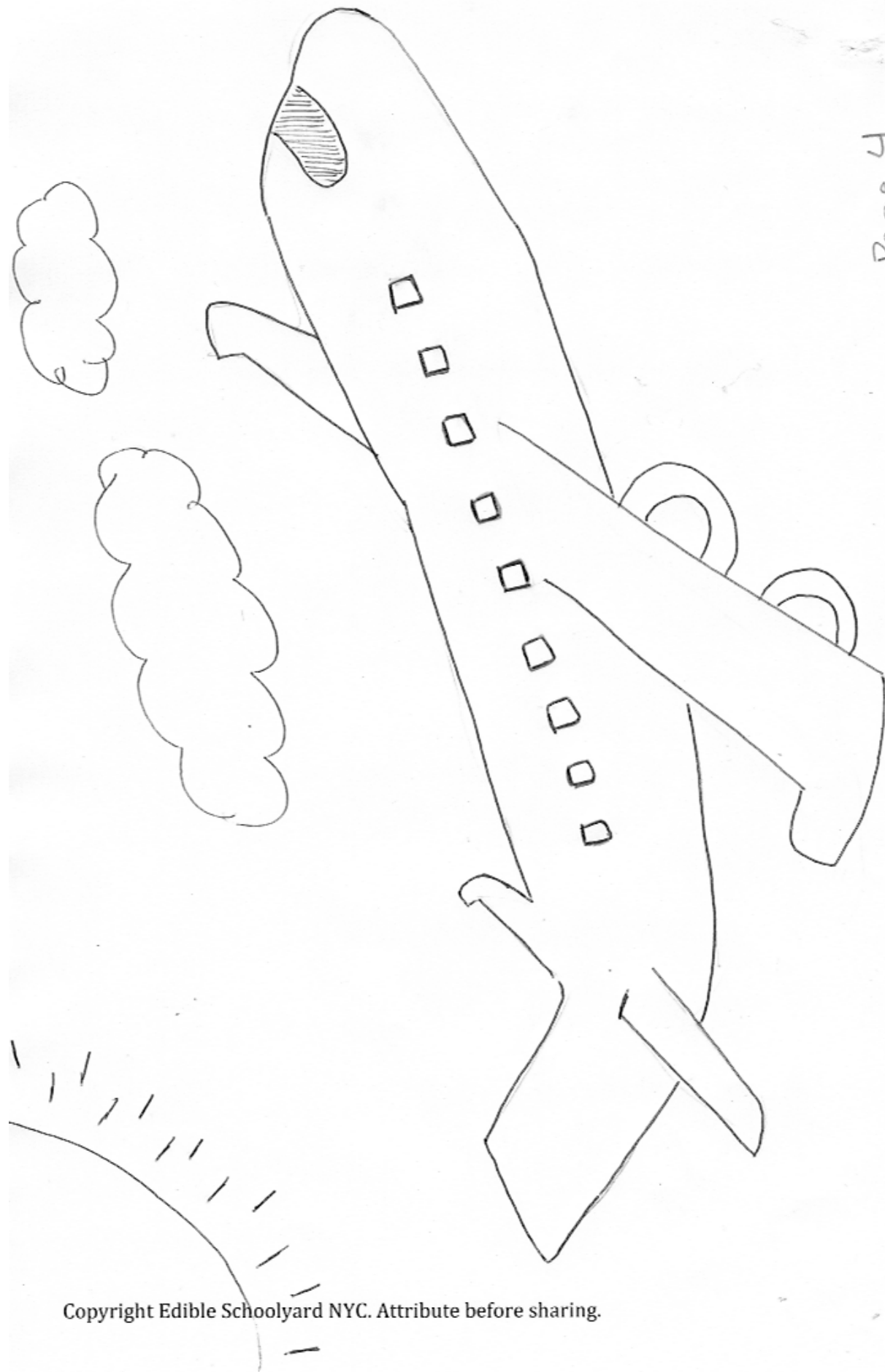
After a while the apple seed
grows into an apple tree





Page 3

Once the apples are ready, the farmer will pick them

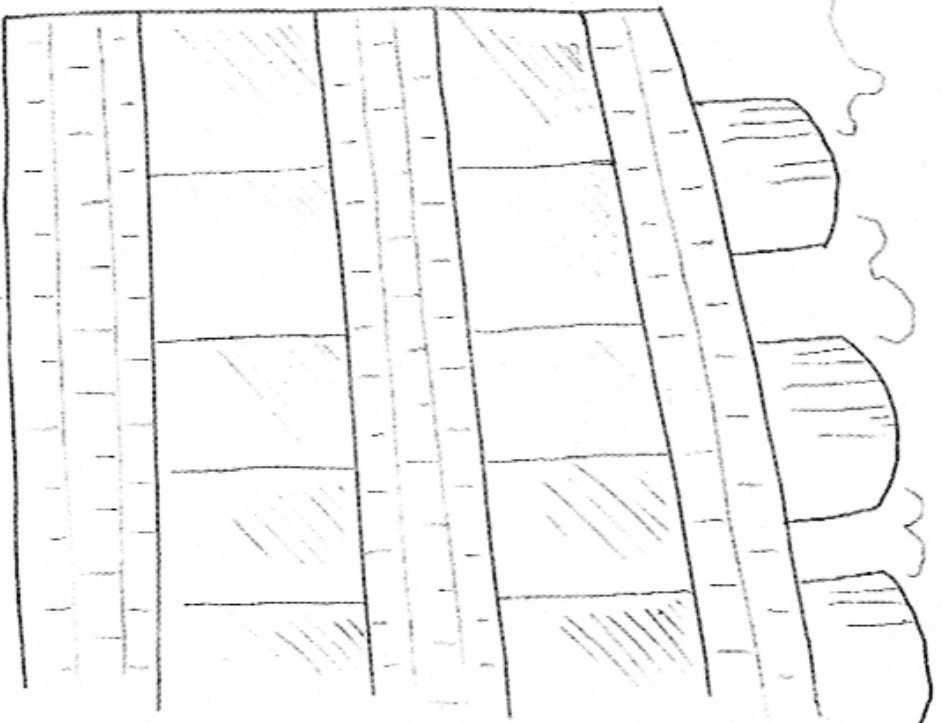
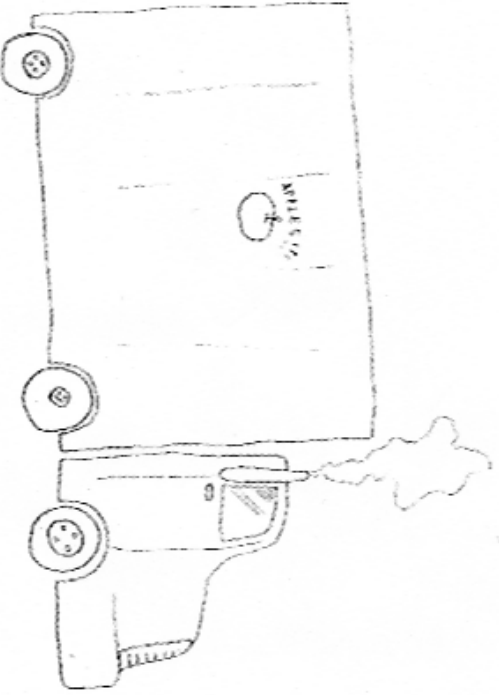


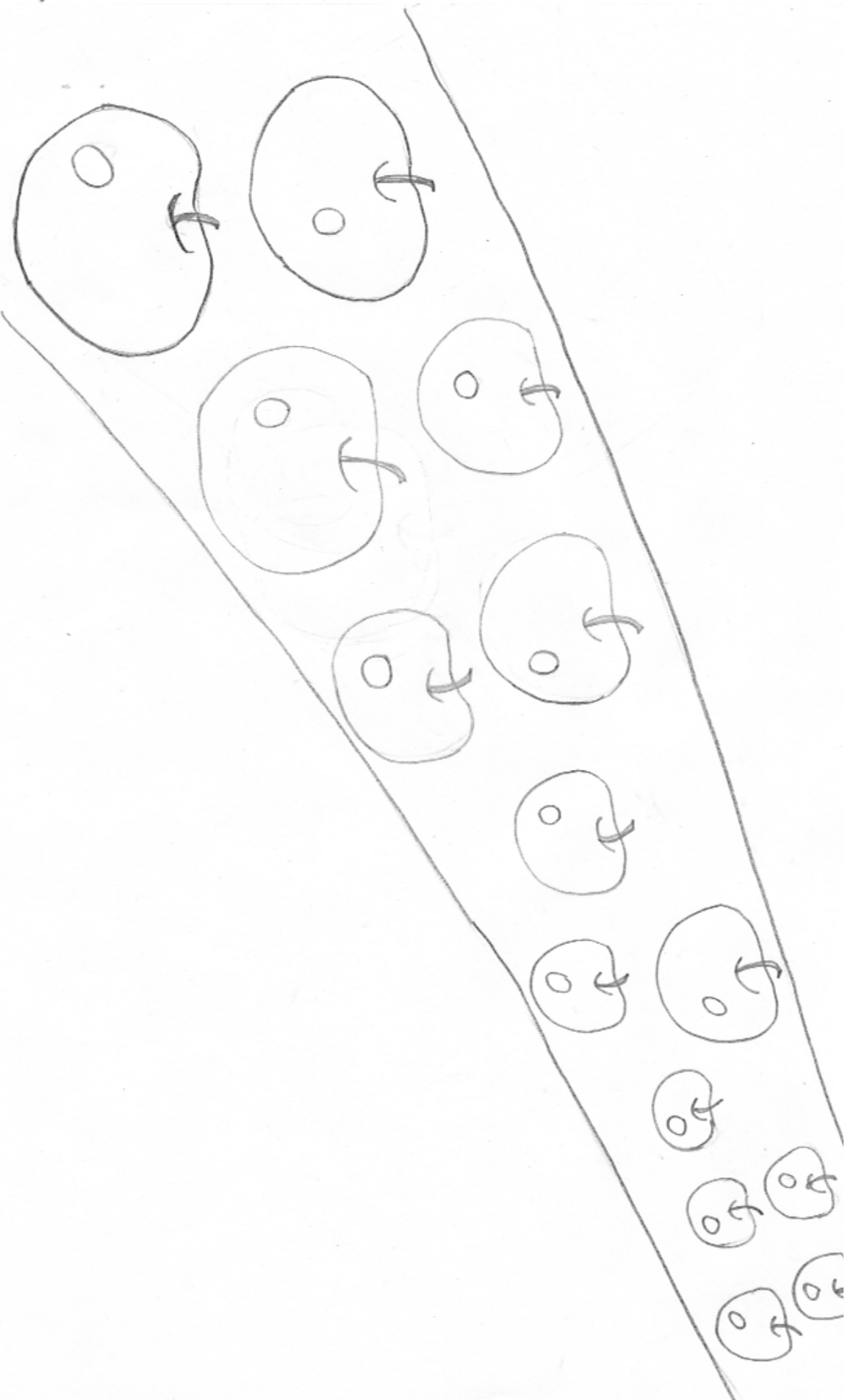
Page 4

He puts the apples on an airplane to New York.

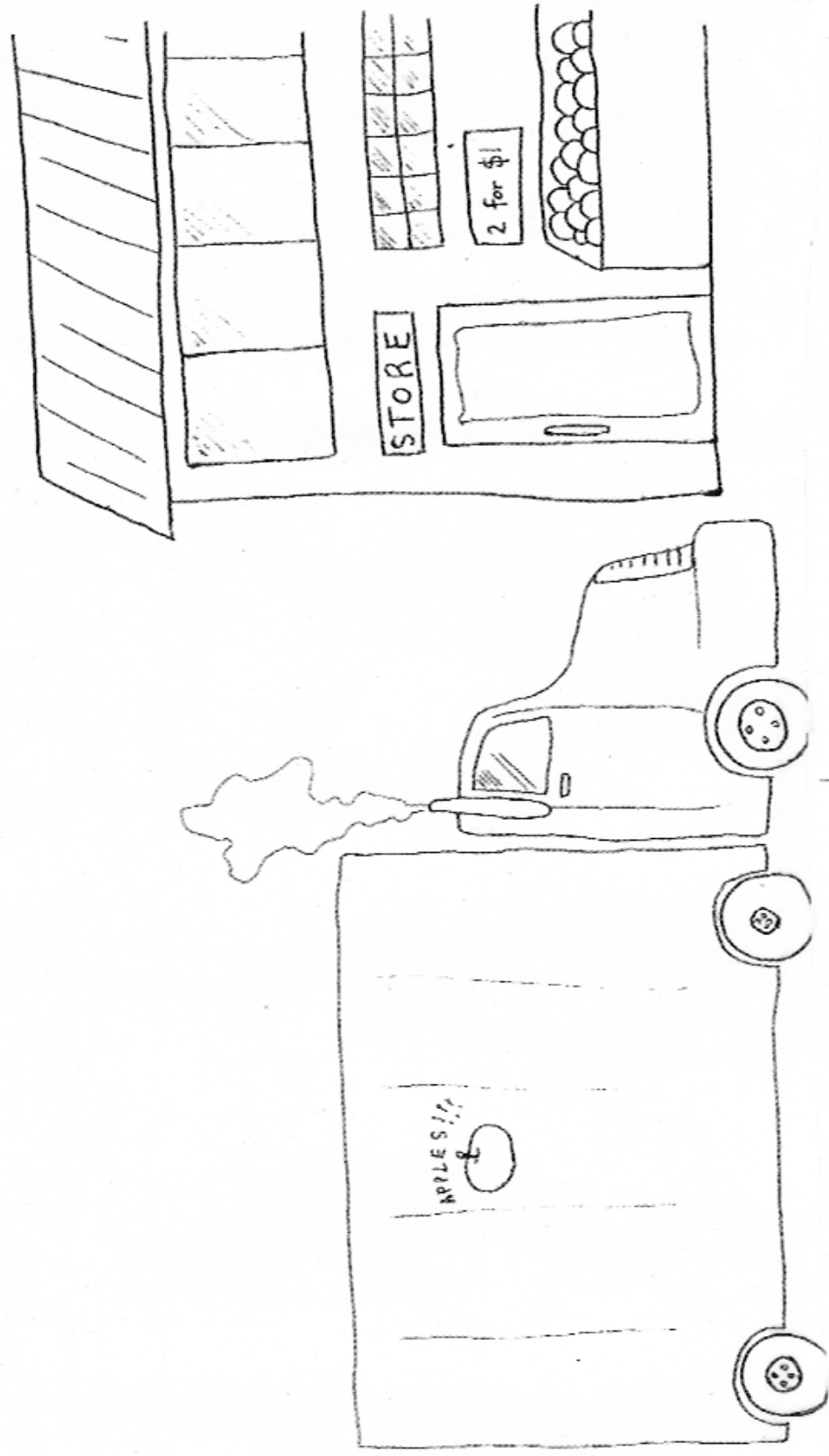
Page 5

In New York, the apples go on a truck to a factory.





At the factory the apples are washed
and they get a sticker.



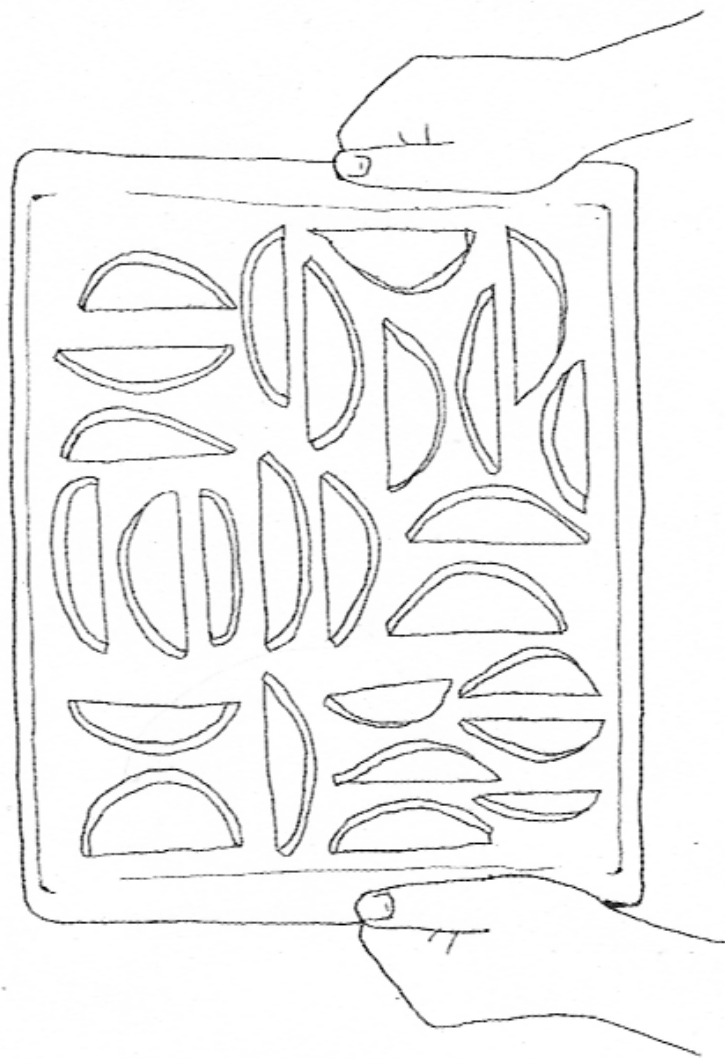
Next the apples have to go on another truck to go from the factory to the store.

PRODUCE



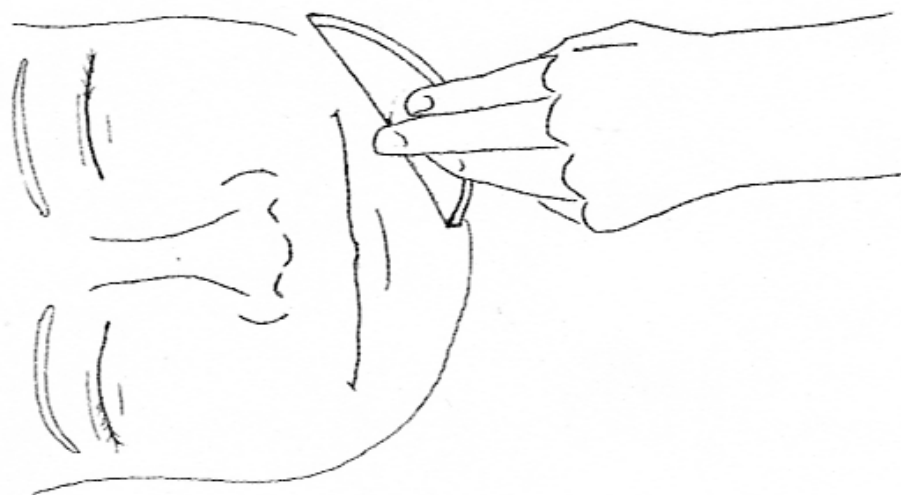
FRUITS & VEGGIES

We go to the store to buy some apples.



Page 9

Ms. Cecilia cuts up the apples
for us to taste in class.



Page 10

we taste! Yum!



Food in Our Neighborhood

Aim

Students begin to understand some of the steps food takes to get on their plates. Students explore where food comes from in their neighborhood.

Summary

Students taste cheese, put visuals in order, and do a drawing about how cheese gets from the cow on the farm to the store in our neighborhood.

Standards

CCSS: ELA, Grade 1, SL1: Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.

CCSS: ELA, Grade 1, W3: Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure.

NYS: Social Studies, 4.1a: Know some ways individuals and groups attempt to satisfy their basic needs and wants by utilizing scarce resources.

Materials

- Dry erase board and markers
- Visuals of garden, ocean, and animal
- Envelopes with visuals of steps in cheese-making process
- Steps in the Life of Cheese worksheet
- Before I Ate My Cheese worksheets
- Crayons or colored pencils
- Cheese tasting

Vocabulary

- dairy
- truck
- store

Procedure: Day One

Opening Circle (5 minutes)

- *How do you get the food you eat at home? Where does it come from? Who buys it? Who makes it? Do you ever help?*
- *Even though we have a wonderful garden here at school, we still get a lot of our food from the store. Have you ever wondered how that food got to the store and where it was before? Does anyone have any ideas about that?*

Inquiry Activity One (20 minutes)

- *We are going to be detectives and investigate where food comes from in our neighborhood. When we can't get food directly from our garden, where else can we get it? Yes, a store. What kinds of stores sell food?*
- *OK, so the first clue in your investigation is to taste a yummy piece of food that comes from very close to the school. I'm not going to tell you what this food is. Part of your job as detectives is to figure it out.*
- *Hand out mozzarella without telling students what it is.*
- *Who knows what we just ate? Take a few guesses if need be and if need be tell them what it is.*
- *OK, so now we need to figure out the story of this cheese. Does anyone know a place very near to the school that sells cheese like this? Take a few guesses; there could be more than one right answer.*
- *Another thing we need to figure out, as detectives, is where this cheese started out. Most of our food starts out in one of three places: it can grow, like the food in our garden. It can come from the sea. Or it can come from an animal. So, you get three choices about where this cheese started out. Don't shout your answers. Just think about it while I give you all the choices. Then you can vote on the one you think is right.*
- *Hold up the picture of the tree: Think about the cheese you just ate. Did it grow on a tree and get picked?*
- *Hold up the picture of the person fishing. Did the cheese come out of the sea?*
- *Hold up the picture of the cow getting milked. Or, did the cheese come from an animal?*
- *Tally their responses on the board. Raise your hand if you think it grew on a tree. Raise your hand if you think it came from the sea. Raise your hand if you think it came from an animal.*
- *Give the right answer. Who can explain how it comes from a cow—are we eating part of the cow? Can anyone think of anything else we eat or drink that comes from cow's milk?*
- *So now we know the cheese started from a cow and ended at the store in our neighborhood. Now you need to continue your detective work and figure out all the steps it took to get there. You are going to work in groups and try to put the steps in order, from first to last, of how the cheese got to us here at school.*

- Put students in group. Give each group copies of the pictures: a cow eating grass, a cow getting milked, a dairy truck, someone making cheese, someone buying something from a store. Give each group the Steps in the Life of Cheese worksheet.
- Hold up the worksheet and explain model what you will do. *So, I need to figure out what the first step in the life of cheese is. I have five choices—each of these five pictures. I decide which step is the first step, and I put it next to the number 1 on my sheet. You will need to talk together to figure out what is happening in each picture, and where you think it should go.*
- Circulate and help them get going. Work with them to understand what is happening in each picture. If possible, help them figure it out, rather than telling them directly.
- When students are done, ask them to share out the steps. Let different groups share different steps. Ask them to explain what is happening in each step. Post pictures on the board in the right order.

Inquiry Activity Two (15 minutes)

- Give students the Before I Ate My Cheese worksheet, and tell them to draw and write about any step in the process of the life of cheese.
- Assemble pictures into a book in order; you can use one or many pages of each step of the process.

Closing Circle (5 minutes)

- Time allowing, read the students book they wrote.
- *Who can tell me something they learned about food in our neighborhood today?*
- *Who can tell me one of the steps it takes before we can eat cheese?*
- *When we grow food in our garden, does it take more steps or fewer steps to get to our plate?*

Common Core State Standard Extensions

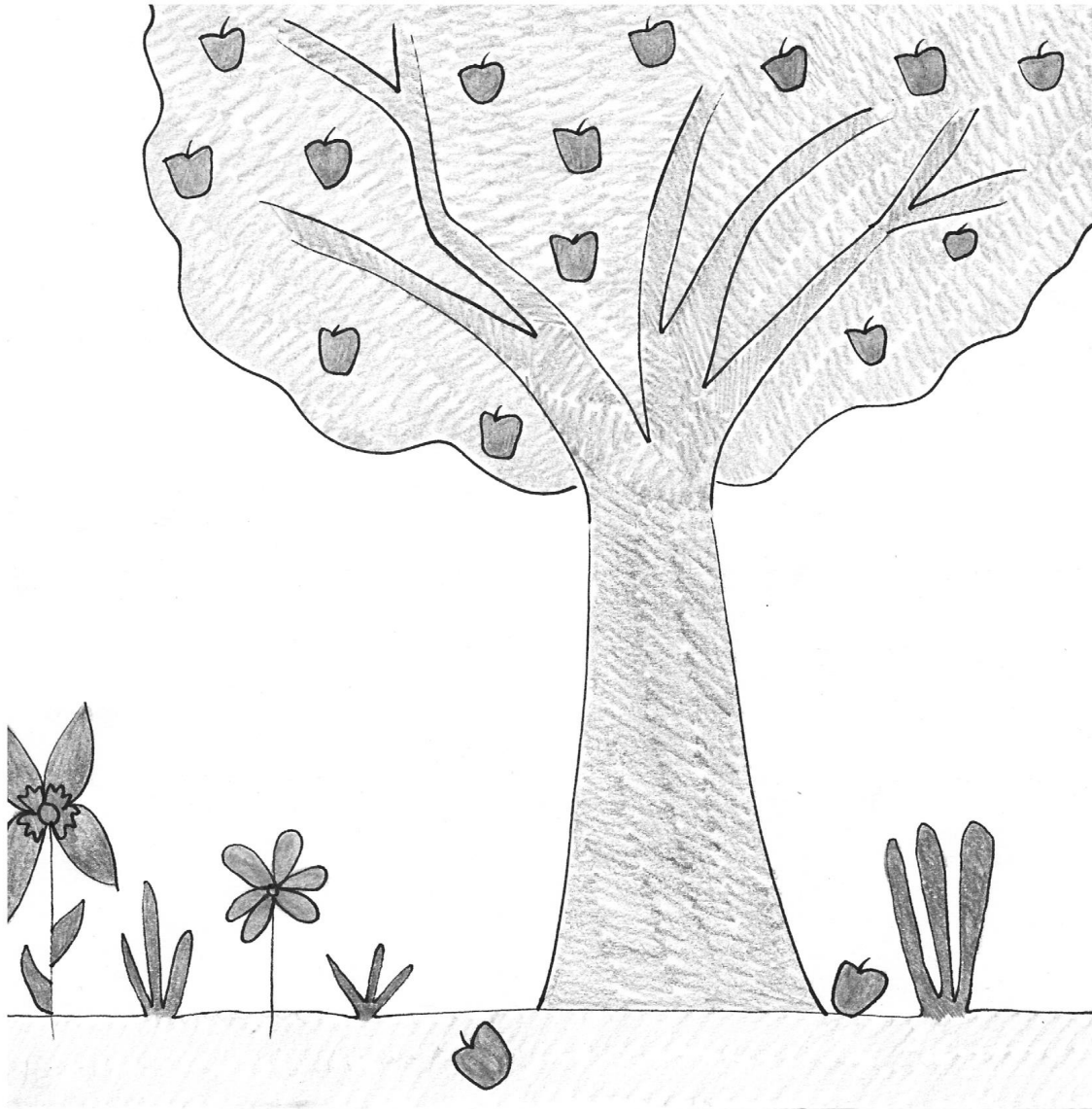
ELA, Grade 1, W3: Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure.

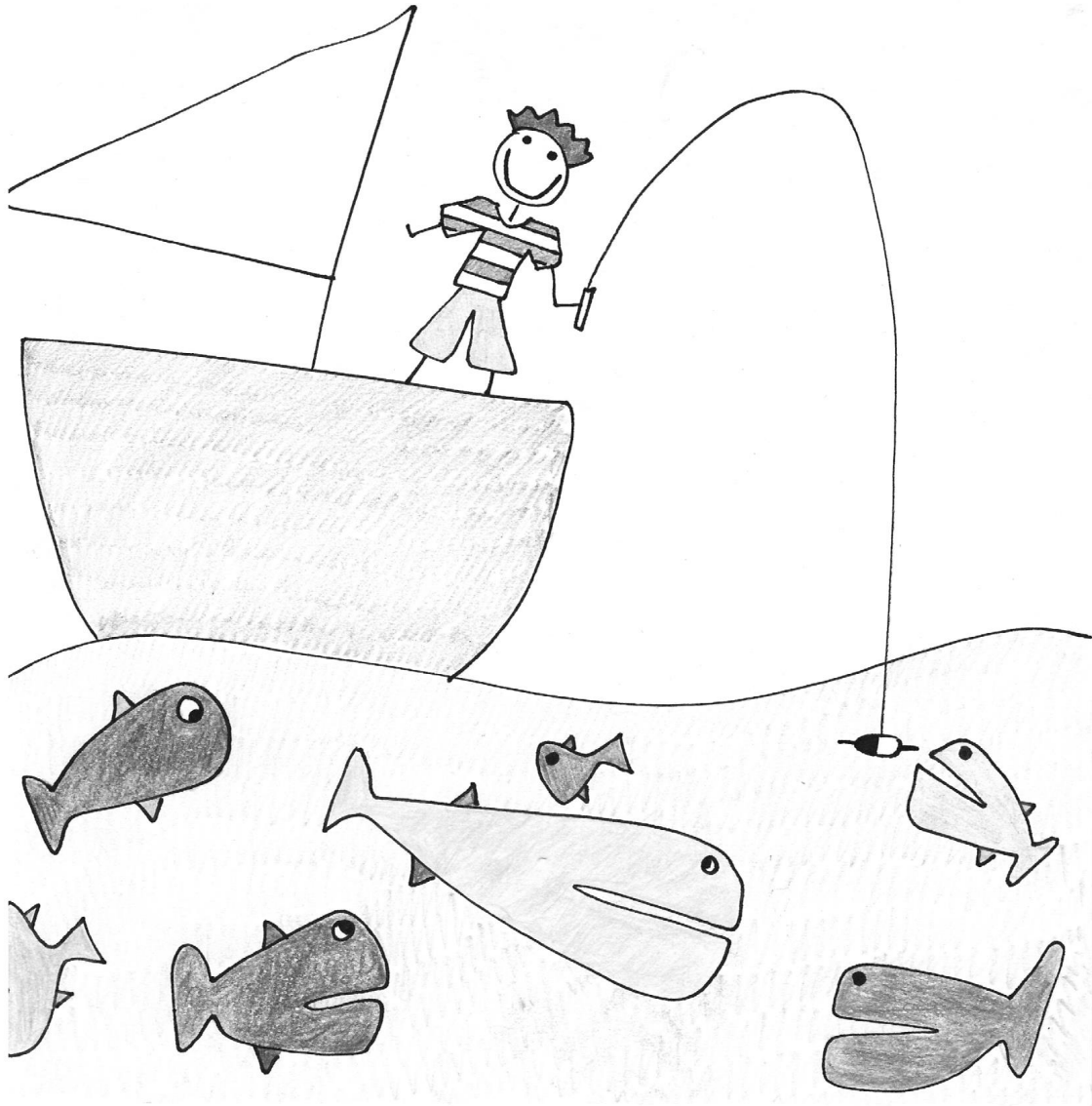
- If students did not have a chance to write and draw about the story of their cheese in garden class, they can do that. If they wrote about the cheese in class, they can narrate the story of a different food: peanut butter, an apple, bread, etc.

Other Extensions

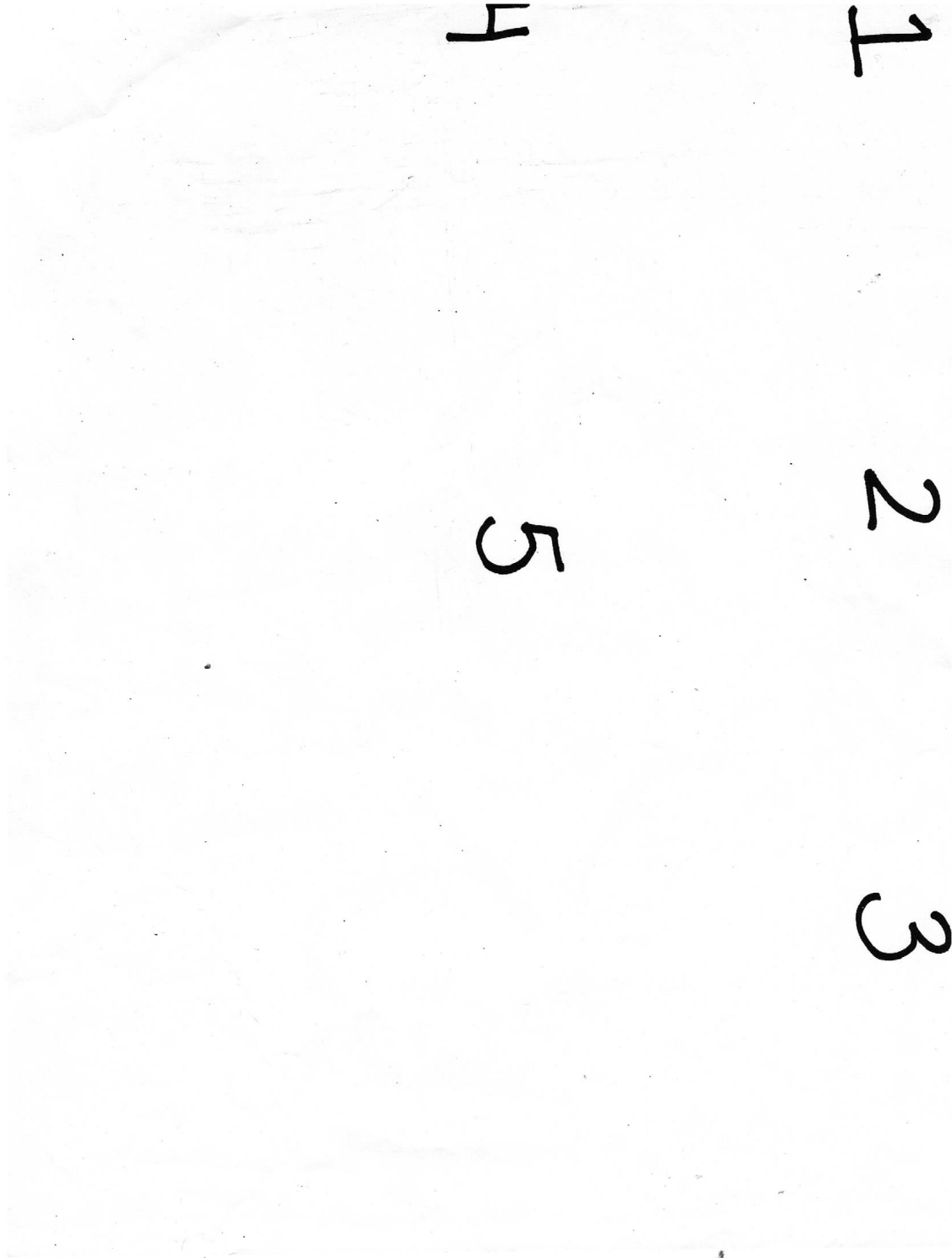
Social Studies: Go on a neighborhood walk to explore different places to buy food. Invite a guest speaker from a restaurant or store to speak and answer questions from the students.



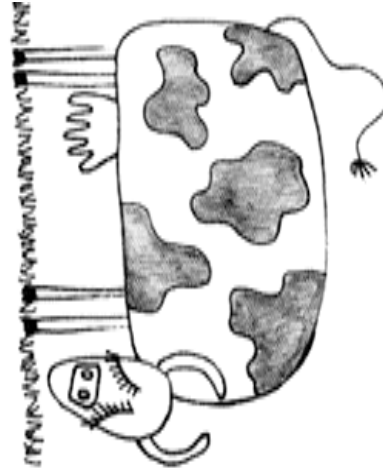




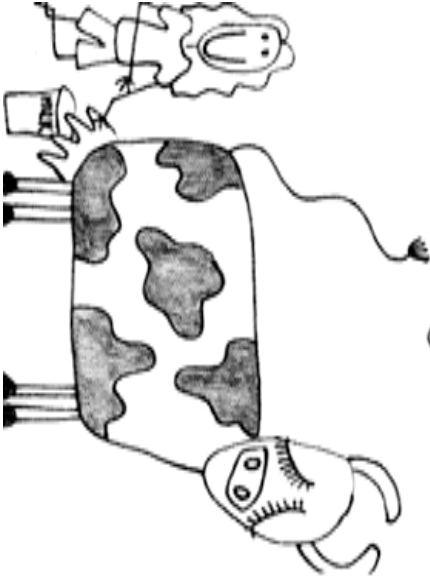




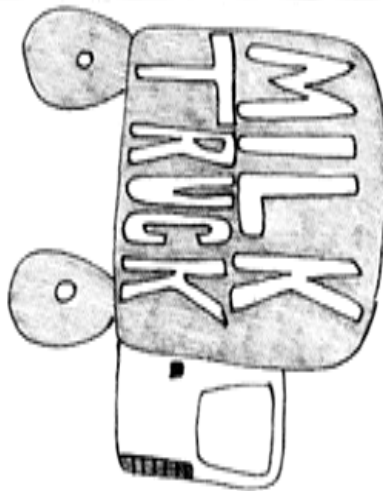
Cow eating grass.



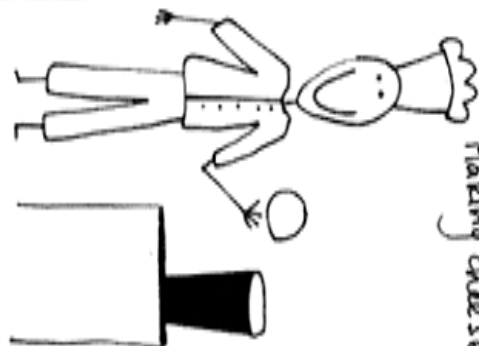
Milking a cow.



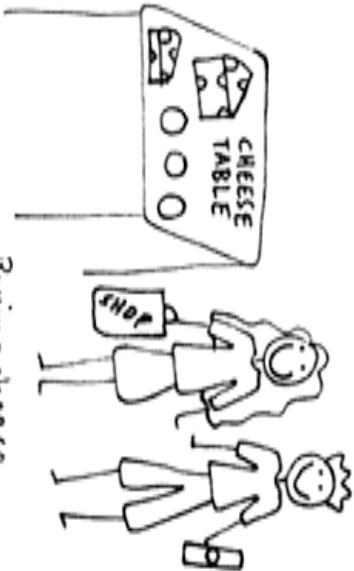
Dairy truck.



Making cheese.

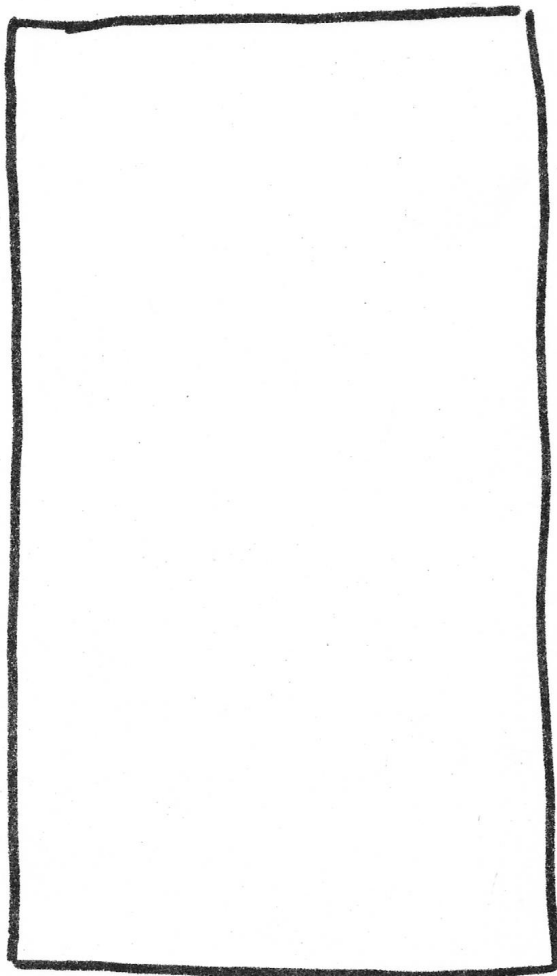


Buying cheese.



Before I ate my cheese...

NAME:





The Curious Garden

Aim

Students will learn about how people have grown gardens in cities in creative ways.

Summary

Students read a book as a source of inspiration, then draw and write about their own visions of places to grow gardens in the city.

Standards

CCSS: ELA, Grade 1, SL1: Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.

Materials

- The Curious Garden by Peter Brown
- Garden visuals
- Blank paper
- Crayons or colored pencils
- Seed catalogs for students to get ideas for their garden design (optional)
- Seasonal tasting

Vocabulary

- curious
- garden bed

Procedure: Day One

Opening Circle (5 minutes)

- *Who knows what season will be beginning this month?* Using student answers if possible, tell them it is spring (or soon will be). *Spring is the time when we will begin planting many things in the garden.*
- *What does the garden look like now?* Using their answers, if possible, point out: *It's a little bit bare, isn't it?*
- *Before we can plant the garden, we need to design the beds. Who can tell me what garden beds are?* Provide answer. *Gardeners use their imaginations to help them decide what they should grow in their gardens and to visualize what their beds will look like. You use your imaginations*

when you listen to stories. Who can tell me how you use your imagination when you listen to stories? Students share out answers.

Inquiry Activity One (15 minutes)

- Today we are going to hear a story, The Curious Garden. The Curious Garden is a story about a curious boy named Liam who lives in a city just like you. Define curious.
- In fact, the author, Peter Brown, wrote this book after he visited a real place in New York City, called the High Line. The High Line was a train track that was built almost 100 years ago. But the trains stopped using the tracks, and people forgot about them. About ten years ago, people in New York who lived near the High Line decided to fix it up and make it beautiful again.
- So in this story, The Curious Garden, Liam finds a special garden, a curious garden, which is also growing on train tracks that have been forgotten by the people in his city. How might a garden be curious? As you listen to the story, notice all the silly, crazy places in the city where the garden starts growing.
- Read The Curious Garden.
- Where were some crazy places where the garden started growing?
- Show photographs of urban gardens growing in unique places. (You can find photographs online that you think will be interesting for your students. Search for images of plants growing in shoes, bathtubs, truck beds, abandoned cars, or on rooftops.) Raise your hand if you can find the curious garden in each of the pictures.

Inquiry Activity Two (15 minutes)

- Now, it's your turn. You are going to use your imagination and remember some of these crazy garden spaces, and you're going to draw your own curious garden. You can even label or write a sentence about your curious garden.
- You need to think about where your garden will grow. Will it be inside or outside? You also need to think about what you want to grow in your garden. What foods would you like to grow? What colors would you like to see? Pass out blank paper, coloring materials, books with pictures of different plants, and seed catalogs so students can get ideas for their own gardens.

Closing Circle (10 minutes)

- Have students share their garden designs.
- Do you know any other stories that would be good to use for designing a garden? They don't even need to be about gardens or food. Give an example. Take answers.
- Where else can we get ideas about what to plant in the garden, besides from stories?
- Share a seasonal tasting.



Procedure: Day Two

Opening Circle (10 minutes)

- *Welcome back, 1st graders. What did we talk about yesterday? What are some of the interesting places where we thought about growing gardens?*
- *Why do we like to have gardens in our neighborhoods, in our cities? Why do you like the garden?* Have students discuss in partners or as a whole group.
- *Let's do some work today to grow our own garden!*

Garden Job (30 minutes)

- Lead students in a seasonal garden job. Reference the lesson plans for seed starting and planting seeds for ideas.

Closing Circle (5 minutes)

- Have students share their experiences from gardening today.
- *Thank you all for your good work today to grow gardens in our community!*

Common Core State Standard Extensions

ELA, Grade 1, W2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

- Assign students different regions, countries, or areas to study. Have them conduct research about issues of land and soil conservation. Be sure that students also find information about how people in that place are working to conserve soil. Have students write a report or prepare a presentation on that topic.

Other Extensions

Science: Have students create a how-to manual for how to take care of their curious garden. Have students include information on what plants need to survive.



Signs of Spring

Aim

Students will identify signs of spring. Students will understand the significance of spring for the garden.

Summary

Students go on a scavenger hunt to find signs of spring in the garden.

Standards

CCSS: Math, Grade 1, OA.5: Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

NYS: Science, PS 1.1a: Observe and describe weather conditions that occur during each season.

Materials

- Clipboards
- Pencils
- Signs of Spring worksheets
- Spring-themed book (optional)
- Seasonal tasting

Vocabulary

- crocus
- daffodil
- bulb
- bud
- spring
- seasons

Procedure: Day One

Opening Circle (5 minutes)

- Ask students: *What season is it? Who can tell me what happens with the weather in spring? Right, it becomes warmer. What are some signs of spring besides warmer weather?*

- *So, spring is a really important time in the garden. We start planning lots of things outdoors in the spring. Why do you think we plant more things outdoors in spring than we did in the winter?*
- *So, if you guys use your senses carefully, you will notice lots of changes in the garden since the last time you were out here. We'd like you to use your senses and be detectives who uncover signs of spring. Remember to use your sense of sight, your sense of smell, and your sense of hearing, and your sense of touch as you walk through the garden doing your detective work. See how many signs of spring you can notice.*

Inquiry Activity One (15 minutes)

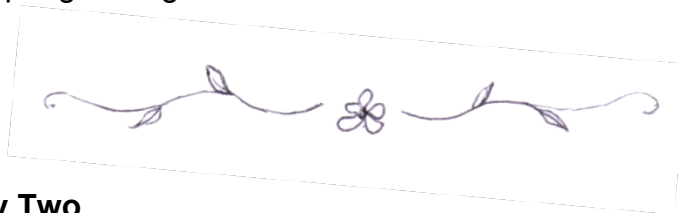
- Split class into two groups and take them on a guided tour of spring through the garden. In particular, point out places where things have been newly planted—some beds might still appear to be bare, some might have tiny green shoots. Help students see what new spring plants look like.

Inquiry Activity Two (15 minutes)

- Hand kids clipboards with Signs of Spring tally sheets and pencils. Go over the signs of spring they will be looking out for. Point out that they can use their sense of hearing and their sense of smell as well. Have them put a tally mark for every time they find a sign of spring. Show them where to put the tally marks—for the flowers, for the birds, etc.
- If there is time left over, do a spring-themed read aloud.

Closing Circle (10 minutes)

- Recap the signs of spring that student saw. Have them share their tallies and any other signs they might have noticed.
- Share a spring tasting.



Procedure: Day Two

Opening Circle (10 minutes)

- Remind students that they spent the previous day observing and recording signs of spring in the garden.
- Ask for a review of the signs they observed.
- Tell the students that these signs mean that it's time to do spring garden work. Explain the garden job they'll be doing.
- Tell students to keep their sense alert as they garden for more signs of spring. Suggest that their sense of touch might have more to do today since they will be working with their hands.

Garden Job (30 minutes)

- Lead students in a spring garden job.

Closing Circle (5 minutes)

- Ask the students if they observed any further signs of spring.
- Ask for a few predictions of how the garden might look in May.

Common Core State Standard Extensions

ELA, Grade 1, W1: Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

- Have students write and draw about the signs of spring they observed in the garden.

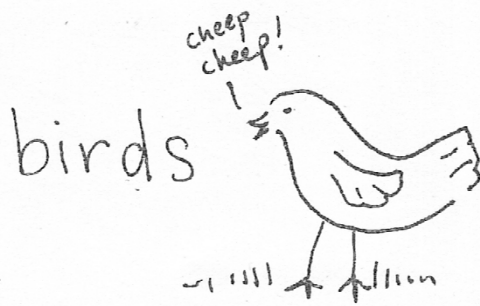
Other Extensions

Math: Use the students' tally sheets to create word problems involving spring. How many flowers did you see? How many bugs did you see? How many flowers and bugs together did you see?

Signs of Spring

NAME: _____

How many can you find? Count here..





Leaf Study

Aim

Students will understand that leaves make food for plants.

Summary

Students rotate through stations to observe different leaves on plants, practicing their writing and counting skills.

Standards

CCSS: ELA, Grade 1, SL5: Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.

NYS: Science, LE 3.1b: Leaves help plants utilize sunlight to make food for the plants.

NYS: Science, LE 3.1: Describe how the structures of plants and animals complement the environment of the plant or animal.

Materials

- Dry erase board and markers
- Clipboards
- Pencils
- Great Leaf Investigation worksheets
- Boards to designate stations
- Four different plants
- Leaves for tasting, or other seasonal tasting

Vocabulary

- leaf
- photosynthesis

Procedure: Day One

Opening Circle (10 minutes)

- *Does anyone remember what our trees looked like in the winter? What's different now? There are leaves!*
- *Let's think about why plants have leaves. First, let's think about what plants need in order to grow. Solicit student answers.*

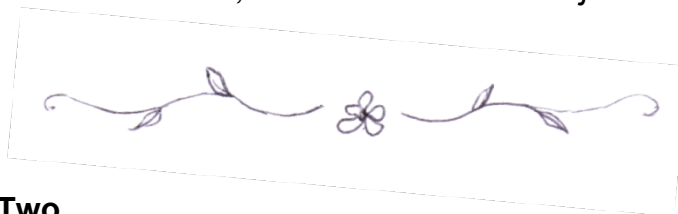
- *We're going to talk about sun and leaves today and think about why leaves look the way they do.*
- *Put your hands in the air. These are your leaves, now take a big breath in, and out. That is something that leaves do for a plant! They breathe!*
- *Can a plant go to the grocery store? Can it eat a sandwich when it's hungry? No! So, leaves have another very important job. Leaves also turn the energy from the sun into food for the plant. It's called "photosynthesis." Write "photosynthesis" on the board, and have students repeat the word.*
- *We are going to do a photosynthesis dance! Have students mime with you soaking up the sun and turning it into food.*
- *How do people get energy? Do we ever eat leaves? So, we get our energy from leaves, too!*
- *Today, we are going to examine four different kinds of plants and see what ways their leaves are the same and what ways they are different.*

Inquiry Activity One (25 minutes)

- *We are going to examine the different leaves on different plants today. You are going to be scientists who observe the plants, artists who draw the plants, and mathematicians who count the leaves.*
- Model this with a potted plant in opening circle. Pass out clipboards and worksheets. Have them notice which station they should start at.
- Send kids out in small groups to find the different stations and draw their leaves. Have students rotate between stations until they complete all four, or until time runs out.

Closing Circle (10 minutes)

- Have students share their observations from each station.
- Have students share their ideas about why different plants have different leaves. *Why do you think some plants have big leaves and some have small leaves? Why do some have pointy leaves?* You don't need to correct their ideas, but highlight their observations that point to the fact that different plants grow in different places. *Maybe this plant lives in a place where it has to protect itself from bugs, and that's why it's pointy. And maybe this one doesn't have to protect itself from bugs, so it's not pointy.*
- *Remind me again, why do plants have leaves?* Remind students that plants use leaves to absorb sun and to breathe air. *Even though our plants have different leaves, all leaves do the same job!*



Procedure: Day Two

Opening Circle (10 minutes)

- *Who can remind me what leaves do for a plant?*

- *Today we are going to do some planting. These plants are going to take in the sun to get their energy and to grow. Then, once they are big enough, we can eat them, and they will give us energy, too!*
- *While you plant, keep your senses alert to what is going on in the garden. What do you see, hear, smell, feel? When you come back for closing circle, we'll give you something to taste as well.*

Inquiry Activity (30 minutes)

- Lead students in a planting job. Reference the lesson plans for planting seeds or transplanting.
- Otherwise, lead students in another seasonal garden job.

Closing Circle (5 minutes)

- *Take a look at the beds you planted. They look great! What do you think the plants will look like when we come back to the garden next month?*
- *Yes, they will be bigger. Plants need the same thing you do to get bigger. What do your bodies need to get bigger? How do plants get food?*
- Share sensory observations from the garden
- Share a leaf tasting.

Common Core State Standard Extensions

ELA, Grade 1, W2: Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and supply a sense of closure:

- Have students write and illustrate a book about different kinds of leaves. They can describe ways that leaves can be different and explain what leaves do for plants.

Other Extensions

Math: Have students pick three kinds of leaves in the garden to count and make graphs representing the amounts.

The GREAT LEAF INVESTIGATION

Blue Station

What colors do you see on this leaf? _____

Green Station

Rub a leaf, then smell your fingers. What do they smell like? _____

Orange Station

How many leaves can you count? _____

Yellow Station

Gently touch a leaf. What does it feel like? _____

The GREAT LEAF INVESTIGATION

Green Station

Rub a leaf, then smell your fingers. What do they smell like? _____

Orange Station

How many leaves can you count? _____

Yellow Station

Gently touch a leaf. What does it feel like? _____

Blue Station

What colors do you see on this leaf? _____

The GREAT LEAF INVESTIGATION

Orange Station

How many leaves can you count? _____

Yellow Station

Gently touch a leaf. What does it feel like? _____

Blue Station

What colors do you see on this leaf? _____

Green Station

Rub a leaf, then smell your fingers. What do they smell like? _____

The GREAT LEAF INVESTIGATION

Yellow Station

Gently touch a leaf. What does it feel like? _____

Blue Station

What colors do you see on this leaf? _____

Green Station

Rub a leaf, then smell your fingers. What do they smell like? _____

Orange Station

How many leaves can you count? _____



Habitat Hunt

Aim

Students will begin to understand that the garden is a home for many living things and that we humans are a part of this community.

Summary

Students will explore the garden on a scavenger hunt looking for the basic necessities of life for all plants and animals.

Standards

CCSS: ELA, Grade 1, SL4: Describe people, places, things and events with relevant details, expressing ideas and feelings clearly.

NYS: Science, LE 1.1: Describe the characters of and variations between living and nonliving things.

NYS: Science, LE 1.1a: Animals need air, water and food in order to live and thrive.

NYS: Science, 1.1b: Plants require air, water, nutrients and light in order to live and thrive.

Materials

- Dry erase board & markers
- Clipboards
- Paper
- Pencils
- Habitat Hunt worksheet
- Seasonal tasting

Vocabulary

- habitat

Procedure: Day One

Opening Circle (10 minutes)

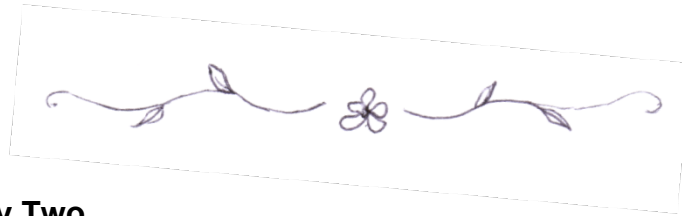
- *Can anyone tell me what a "habitat" is?* Write the word and its definition on the board (a place where an animal or plant lives and grows).
- *So, a habitat has to be a place where a plant or animal can live and grow. Who can tell me one thing that all living things need to survive?*
- Help students generate a list of the four things we all need (food, water, a place to live, air) by asking leading questions, writing answers on the board).
- *What sorts of living things have you noticed in the garden? Tell me some of the plants and animals for whom our garden is a habitat.* Create a list on the board under the headings plants, insects, and animals, and make sure your list includes examples from all three categories.
- *Today, we are going to split into two groups and go on a habitat hunt. We are going to find living things in our garden and examine how their needs are being met.*

Inquiry Activity One (30 minutes)

- Tell the class they are going to branch out on their own or in pairs or small groups and go on a habitat hunt.
- Pass out Habitat Hunt worksheets. Tell students that they may not find all of these creatures in the garden, but that they should find as many of them as they can. When they find one, they should write down as many details that they can about that animal's habitat: where they saw it, what it was doing, etc. Go over a few examples. Remind students to leave creatures as they see them in the garden, to not touch them, and to give them space.
- Send students out into the garden. Circulate to help students find creatures from the habitat hunt.

Closing Circle (5 minutes)

- *Who can remind me of what a habitat is? Who can tell me some of the animals that make our garden their habitat? Who can tell me what the garden provides these animals? Where do they get their shelter? Their food?*
- Have students share out about the creatures they saw in the garden, what they were doing, and where they saw them.
- *Just like a neighborhood, our garden is a community of living things. Is it a good thing that our garden is a habitat for all these living things? Why or why not?*
- *Who else is a member of this living garden community? Who have we forgotten? Us! We don't live in the garden, but we spend time here taking care of it. How can we make sure our garden continues to be a good home for living things?*



Procedure: Day Two

Opening Circle (10 minutes)

- *So yesterday, we looked at how our garden is a habitat for many living things. Who remembers what a habitat is? Who remembers some of the living things that make the garden their habitat? Who remembers some of the things that our garden provides to the plants and animals who make it their habitat?*
- *Today, we are going to take care of our garden so that it can be a good habitat for all of these plants and animals.*

Garden Job (30 minutes)

- Lead students in a seasonal garden job. Make connections to habitat, if possible.

Closing Circle (10 minutes)

- Have students share about their garden work, making connections to habitat, if possible.
- Share a seasonal tasting.
- *Thank you for helping to take care of our garden today, and all the living things within in!*

Common Core State Standard Extensions

ELA, Grade 1, W2: Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

- Have students pick one of the animals they found on their habitat hunt and describe why the garden is a good habitat for that animal. How does the garden provide food, shelter, water and air for the animal?

Other Extensions

Math: Miss Vera found 10 roly-polies and 5 earthworms in the compost bin. How many animals did she find? Miss Mirem harvested 2 kinds of roots—radishes and carrots. She harvested 7 carrots and 9 radishes. How many roots did she harvest?

