



Edible Schoolyard NYC Garden Curriculum

Pre-Kindergarten

Five Senses Tour (September)*: Students learn to use their five senses as they explore and get to know the garden for the first time.

Seeds (October)*: Students engage in dramatic play to learn how seeds grow and practice seed saving.

Leaves (November)*: Students do fall garden work with leaves, and identify how the garden changes with the changes in seasons.

Roots (December)*: Students examine roots to learn about the root's function.

Worms (January)*: Students observe worms in trays and learn about the worm's job in the garden.

Ladybugs (February)*: Students read a book about ladybugs, then create ladybug crowns and hunt aphids to save the plants in the garden.

Habitat (March)*: Students use imaginary play to demonstrate animal habitat, and identify the essential needs of animals.

Bees (April)*: Students use brushes to mimic bees pollinating in garden to learn about the bee's job in the garden.

Birds (May)*: Students create helpful habitat for birds in our garden.

Humans (June)*: Students do seasonal garden work to show how people use the garden for food as part of their human habitat.



Sensory Garden Tour: Introduction to the Garden

Aim

Students learn to use their five senses as they explore and get to know the garden for the first time.

Summary

Teachers lead the students on a guided tour of the garden with stops to touch, smell, hear and see different things. Students get a crayon and find things to draw that are the color of their crayon. The lesson ends with a tasting.

Standards

CCSS:

ELA, PK, SL4: Describe familiar people, places, things and events and, with prompting and support, provide additional details.

Materials

- Blank paper
- Colored pencils or crayons
- Clipboards
- Tasting

Vocabulary

- senses
- sight
- sound
- touch
- smell
- taste

Procedure: Day One

Opening Circle (5 minutes)

- *Welcome to the garden. This is your garden! Today we are going to explore the garden by using all of our senses*
- *Everyone, show me your eyes. What do we do with our eyes? We see. That's one sense we'll use today.*
- Continue with the rest of the senses.
- *Now it is time to go put these senses to work in the garden.*

Inquiry Activity One (15 minutes)

- Divide into two groups. In each group, ask students to name one creature, animal or insect and then ask them to show you how that creature moves. If it's a butterfly, flap your wings. If it's a cat, walk stealthily. This is how you and your students will move from place to place in the garden for the rest of class.
- Each stop along the way should use a different sense. Smell mint in the herb garden, listen to birds in the fruit orchard, touch a worm in the compost, see the tools in the tool shed.

Inquiry Activity Two (20 minutes)

- *You've done such a good job exploring the garden! Now we're going to be using our sense of sight to notice color. What are some colors you noticed out in the garden?*
- *I'm going to hand each of you a crayon, and your job is to find and draw things in the garden that are that same color. What kinds of green things might we see? What kinds of yellow things?*
- Pass out crayons or colored pencils and blank paper on clipboards. You can lead students around in small groups to look for things to draw, and then return to the large group to sit and work.
- Have students share their drawings. *What color is this drawing? Yellow! What color is this drawing? Green!*

Closing Circle (10 minutes)

- Introduce students to the guidelines for our tasting. *Now we are going to be using our sense of taste*
- Tell students that during the tasting, we wait for everyone to get one before we try it. While we wait, we can use our other senses: smell, touch, and sight. We also only take one piece of the tasting, and we take the first one that we touch.
- Remind students of these rules as you pass around the tasting. Once all students have one, try the tasting all together.
- *What do you notice about the taste? Give me a thumbs-up if it's sweet. Give me a thumbs-up if it's sour.*
- *We'll see you in the garden next month for more exploring!*

Common Core State Standard Extension

CCSS, ELA, PK W2: With prompting and support, use a combination of drawing, dictating, or writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

- Have students draw a picture of something they saw, heard, smelled, felt or tasted in the garden. They can do their best to label their drawings.



Seeds

Aim

Students learn how seeds grow and practice seed saving.

Summary

Students will learn do a dance to show what seeds need to grow and remove seeds from pods or fruits to save them.

Standard

CCSS, Communication, Language and Literacy 4a: Demonstrates his/her ability to express ideas using a variety of methods. Uses facial expressions, body language, gestures and sign language to express ideas.

Materials

- Book for reading about seeds (i.e. “Planting a Rainbow” by Lois Ehlert or “The Tiny Seed” by Eric Carle)
- Watering can
- Baskets for compost
- Small containers for saved seeds
- Seeds to save (i.e. beans, sunflower seeds, corn)
- Seed tasting (or other seasonal tasting)

Vocabulary

- seed
- sun
- water

Procedure: Day One

Opening Circle (10 minutes)

- *Welcome to the garden. Today we are going to be learning about the special way that a plant starts its life. First, we’re going to tell a story about how this happens.*
- Read your chosen book relating to seeds. In particular, highlight and ask questions about how the plant starts its life. Have students act out kinetically the things that are happening in the book. *Can you blow back and forth, like the flower in the wind? Can you smile a big smile, like the sun shining down?*

Inquiry Activity One (5 minutes)

- *Now we are going to all do a dance where we pretend to be seeds. Are you ready to be a seed? Everyone, let's crouch down low and curl up like a seed.*
- *Walk around and tap each student on the head. Now I'm planting you into the soil. But you're not ready to grow yet! What do you need in order to grow?*
- *Mime pouring the watering can over each student's head. Now you have water, but you still need something else to grow. What else do you need to grow?*
- *Walk around over each student with arms overhead, like a shining sun. Now you have sun, too! Now you're ready to grow.*
- *Everyone, let's slowly start to stand up. Your stem is growing! Now, put one arm up to be a leaf. Put another arm up to be a leaf. Let's sway back and forth in the wind! You can have students name what kind of plant they are: tree, sunflower, etc.*
- *Repeat this again, if you'd like.*

Inquiry Activity Two (25 minutes)

- *Good job being baby plants, everyone! Now we have some beans with seeds inside. We need to take all the seeds out. What can we do with these seeds next year? We can plant them!*
- *Show students how to remove the bean from the pod, or how to remove another kind of seed from its pod or fruit. Does anyone recognize this seed? Have you seen it before? A bean is a kind of seed.*
- *Have you ever eaten beans? We eat beans, too, but only when they are cooked. These beans are not for us to eat!*
- *Show students where to place the seeds that they are saving, and where to place the compost. Distribute small piles of dried pods around the group so that all students have easy access, and replenish as students work.*
- *At the end, compile all the saved seeds into one container, and show it around the circle. Wow, look at all the seeds we saved! How many baby plants do you think we could grow?*

Closing Circle (10 minutes)

- *We learned a lot about how a plant grows today. Who can tell me how a plant starts its life? What does that seed need to grow?*
- *Seeds grow up into baby plants, but they are also food for us. Today we are going to taste a seed that we can eat!*
- *Remind students of the tasting rules as you pass around the tasting: take the first one you touch, and wait for everyone to have one before we taste. Once all students have one, try the tasting all together.*
- *What do you notice about the taste? Give me a thumbs-up if it's crunchy. Give me a thumbs-up if it's sweet.*

- *Good job, pre-K students! Next time we'll be learning more about our plants as they grow.*
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Common Core Standard-Based Extension:

CCSS English Language Arts and Literacy, Text Types and Purposes: With prompting and support, use a combination of drawing, dictating and writing to narrate a single event and provide a reaction to what happened.

- Students draw and label different stages of the plant life cycle—seed, seedling, mature plant, flower, fruit.





Leaves

Aim

Students do fall garden work with leaves, and identify how the garden changes with the changes in the seasons.

Summary

Students listen to a read-aloud about seasons changing, talk about fall in the garden, and collect leaves to put in compost or to use as mulch.

Standards

CCSS PK English Language Arts and Literacy, Responding to Literature: With prompting and support, make connections between self, text, and the world around them (text, media, social interaction).

Materials

- Leaves
- Children's garden gloves
- Large paper bags or buckets
- Book about leaves and fall (i.e. "Red Leaf, Yellow Leaf" by Lois Ehlert, "Time to Sleep" by Denise Fleming, or "When Winter Comes" by Nancy Van Laan)
- Leaf tasting (i.e. kale, lemon sorrel, etc.)

Vocabulary

- leaf
- tree
- fall/autumn

Procedure: Day One

Opening Circle (10 minutes)

- *Welcome to the garden, pre-K students. The garden has changed since the last time that you were here. What season are we in now? What happens during fall? It gets colder, and the leaves fall off the trees. Today we are learning all about leaves, and we are going to start by reading a story to start our day.*
- *As you read, ask students to identify how the world is changing as the seasons are changing. How does the bear know that it's time to go to sleep? What's happening to the trees in this picture?*



Inquiry Activity One (20 minutes)

- *We just learned about how leaves fall off of the trees in the fall. Just like the animals in our story, plants go to sleep for the wintertime, too. This is why they lose their leaves. Today we are going to do an important garden job, and we are going to collect all those fallen leaves to put in the compost.*
- Help students put on garden gloves, to protect their hands when picking up leaves. Bring students to the place in the garden where they will be picking up leaves, and show them how to place the leaves in the bags or buckets. Students can also help by holding the bags open for each other, or pressing the leaves down into the bag or bucket.

Garden Job (10 minutes)

- *Great job collecting leaves! We collected so many! Now we are going to use these leaves for something else.*
- One option is to parade leaves over and empty them into the compost. You can have several students each carry a bag, and sing a song as you parade over. Explain to the students that these leaves are going to be food for worms, and the worms are going to turn it into soil. They may not fully understand this concept, but it's okay for now to just briefly visit the compost.
- Another option is to mulch garden beds using the dried leaves. Move filled buckets and bags around a garden bed, and show students how to place the dried leaves around existing plants in the bed. Remind students to place the leaves low to the ground and not on top of existing plants. Commend students who are doing this well: *I like the way you are putting the leaves low to the ground.*
- Collect students' gloves when you finish the garden job.

Closing Circle (10 minutes)

- *What great work you did with leaves, everyone! Why is it that the leaves are falling off the trees again? Why are the trees going to sleep?*
- *Leaves are also special for another reason. Some leaves we can eat for food! Not all leaves are food, though, so remember to always ask a grown-up before picking something in the garden.*
- Remind students of the guidelines for our tasting. *What do you notice about the leaf, as we taste it?*
- Congratulate students on good work today. *We'll see you next time, when it's really winter!*

Common Core State Standard Extensions

CCSS PK English Language Arts and Literacy, Text Types and Purposes: With prompting and support, use a combination of drawing, dictating or writing to compose informative/explanatory texts in which they name what they are writing about and supply some informationa about the topic.

- Students draw and label a picture of themselves gathering leaves in the garden.





Roots

Aim

Students learn what roots are.

Summary

Students pretend to roots drinking water from the soil, examine different kinds of roots and pull roots out of the garden.

Standards

CCSS New York D4. Communication, Language and Literacy. Viewing. 3:

Demonstrates that he/she understand what they observe.

Materials

- Plants needing to be cleared
- Large trays with several edible roots with leaves intact (i.e. turnip, radish, carrot, rutabaga, etc.)
- Blank paper
- Colored pencils or crayons
- Trowels (optional)
- Root tasting (or other seasonal tasting)

Vocabulary

- leaf
- root
- tool
- trowel

Procedure: Day One

Opening Circle (10 minutes)

- *Welcome back, pre-K students! Last time we were together, we talked about how plants change with the seasons. What happens to the leaves on the trees when the fall comes?*
- *Today we are learning about a different part of the plant, the root. The root of the plant is underground, so we can't always see it! We're going to pretend to be roots today.*
- Have students all stand up and bend over, fingers pointed towards the ground. *All of you are plants, and you are drinking water from the soil*

through your roots. Have them imitate sucking water up into the plant. Then have students stretch their arms up overhead like leaves. *Drinking all that water helps our plants grow big and strong!*

- Repeat this motion a few times. If you want to, you can also teach students a root song: *Roots down, leaves up!*
- Split the class into two groups. One group will do the first inquiry activity, and the other group will do the second inquiry activity. Then, have the groups switch before coming back for Closing Circle.

Inquiry Activity One (15 minutes)

- *Do you think all roots look the same? We're going to do an investigation to find out!*
- Put out trays with several edible roots in them. Give students time to explore the roots in the tray. Ask prompting questions. *Are these roots all the same color? Are they the same size? What shape are these roots?*
- Ask each student to choose one edible root to hold on to.
- Hold up a root to model. *We're going to imagine what it would look like if these roots were in the ground. Hold the root in your hand so you can't see it. Imagine that your hand is the ground, and the root is hiding underneath!* Model this for them.
- *What part of the plant can you still see above ground? We can still see the leaves. We are going to imagine that we are pulling this out of the ground. Hold the leaves, and pretend to pull the plant out. Open your hand so you can see the root as you pull it up!* Model this for them.
- Pass out blank paper on clipboards and colored pencils or crayons so that students can draw their edible root. Prompt them to include colors and shapes in their drawings.

Inquiry Activity Two (15 minutes)

- *We're going to go out in the garden and practice pulling out some real roots!*
- One option is to parade leaves over and empty them into the compost. You can have several students each carry a bag, and sing a song as you parade over. Explain to the students that these leaves are going to be food for worms, and the worms are going to turn it into soil. They may not fully understand this concept, but it's okay for now to just briefly visit the compost.
- Another option is to mulch garden beds using the dried leaves. Move filled buckets and bags around a garden bed, and show students how to place the dried leaves around existing plants in the bed. Remind students to place the leaves low to the ground and not on top of existing plants.
- Collect students' gloves when you finish the garden job.

Closing Circle (10 minutes)

- *What great work you did with roots, everyone! Who remembers what roots do for a plant?*

- *Roots are also special for another reason. Some roots we can eat for food! Not all roots are food, though, so remember to always ask a grown-up before picking something in the garden.*
- *Remind students of the guidelines for our tasting. What do you notice about the leaf, as we taste it?*
- *Congratulate students on good work today. We'll see you next time, when it's really winter!*

Common Core State Standard Extensions

CCSS. ELA. Writing 2: With prompting and support, use a combination of drawing, dictating, or writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

- Have students draw pictures of roots or of themselves pulling roots from the garden.





Worms!

Aim

Students will understand that worms play an important role in the garden.

Summary

Students will observe worms in trays and do an art project.

Standards

Foundations of CCSS: Uses senses to gather, explore, and interpret information.

Foundations of CCSS: Observes and describes characteristics of living things.

Materials

- Soil
- Active worm bin
- Trays for observation
- Paper
- Cooked spaghetti
- Paint
- Crayons or colored pencils
- Seasonal tasting

Vocabulary

- soil
- worm

Procedure: Day One

Opening Circle (5 minutes)

- Students enter garden and find seats in a circle.
- *Hello, friends! Welcome to garden class. Today, we are going to explore this.* Hold up a handful of soil. *Who knows what this is?*
- *Right! It's soil! "Soil" is the word for living dirt. There's a lot of different things that live inside of this soil.*
- *What kinds of creatures live in the soil?* Solicit student ideas, redirecting if needed.

- *Today, we are going to meet a very special creature that lives in the soil, a worm. What do we know about worms? How do they move? What do they eat? Worms are big helpers in our garden. They make our garden soil healthy!*

Inquiry Activity One (15 minutes)

- Put students into small groups to observe worm trays. Ask students to quietly watch the animals for a few minutes. After some time, ask students what they see.
- *Who can tell me how they move? What kinds of food do they eat? When do you think they sleep? What do they need to live? Do they need water?*
- Have students observe for a few minutes, then share back with the entire group what they saw.

Inquiry Activity Two (15 minutes)

- As individuals or in groups, have students create an “underground world” with paint and coloring materials.
- First, have students draw what they think might live under the soil: bugs, rocks, worms, etc. Have them use crayons or colored pencils to do this.
- Next, have students dip their pieces of cooked spaghetti in brown paint. The spaghetti acts like a worm and substitutes for a paintbrush. Students are encouraged to think of the spaghetti as a worm and make it move like a worm on the paper.
- Circulate to help students.

Closing Circle (10 minutes)

- *What did we learn about soil today? Can everyone show me how a worm moves? How a little bug with legs moves? Amazing!*
- *Let us thank the little worms for what they do for our soil. Thank you, worms!*
- Share a seasonal tasting.

Other Extensions

ELA: Make a list of all the things that students saw in the worm bins, i.e. “soil,” “banana.” Have students figure out what letters those words start with.



Ladybugs

Aim

Students will understand characteristics of ladybugs and will understand that ladybugs help the garden.

Summary

Students will read a story about ladybugs, make ladybug hats, and go on an aphid scavenger hunt.

Standards

Foundations of CCSS: Science: Observes and discusses similarities, differences, and categories of plants and animals.

Materials

- A book about ladybugs, such as The Grouchy Ladybug by Eric Carle or Am I Really Different? by Evelien van Dort
- Paper cut into long strips for crowns
- Red and black crayons or markers
- Pipe cleaners
- Staplers
- Aphid visuals
- Seasonal tasting

Vocabulary

- ladybug
- aphid

Procedure: Day One

Opening Circle (10 minutes)

- *Last time we were together we learned about an underground friend---the worm! But today we are going to learn about a friend that flies high in the air. It is red, it has polka dots, and it eats a bug that eats our plants. Does anyone have a guess? Yes! The ladybug. We are going to hear a story about the ladybug.*
- Read a ladybug story.

- *Ladybugs are a friend of the garden because they eat a green bug called an aphid. Aphids are bugs that we don't want in our garden because they eat our plants.*
- *Today you are going to make a ladybug hat and then fly around looking for aphids to eat in the classroom.*

Inquiry Activity One (15 minutes)

- Set up bands of construction paper and crayons or markers. Look at the pictures of ladybugs from the books, and count how many dots they have. Students can choose a number of dots to put on their ladybug hats. Have students choose pipe cleaners for their antennae.
- Assist students in stapling their hats together and in stapling the pipe cleaners on the hats.
- Write students' names on the inside of the hats.

Inquiry Activity Two (10 minutes)

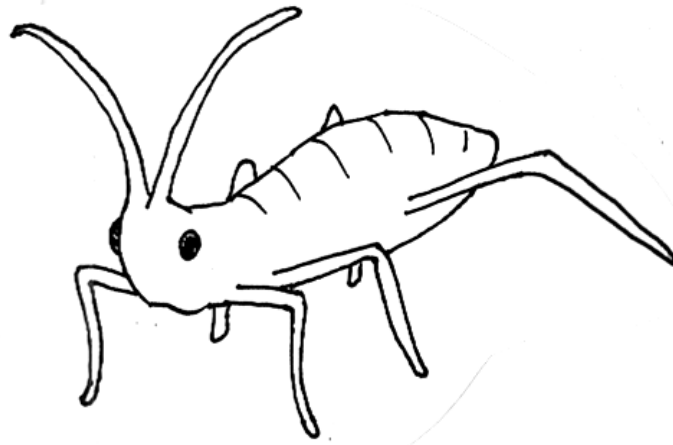
- Once students have completed their hats, have them sit all together until they are all ready.
- Have picture of aphids scattered around the room. Practice flying in place. *You are all ladybugs now! It's your job to find the aphids to eat. Show the aphid visual to the students. Aphids are a very hungry bug that like to eat the plants in our garden. It's your job to save the garden! You are very hungry. You will fly to pick up the aphids, bring them back to the group, and then we will eat them!*
- Have students each find an aphid picture, then come back to the whole group to pretend to eat the aphid. *Thank you, ladybugs, for saving our garden from the aphids!*

Closing Circle (10 minutes)

- *Let's celebrate by eating some food for people from our garden!*
- Share a seasonal tasting.

Other Extensions

Math: Have students read through a different ladybug book and count the number of ladybugs that they see, either on each page or in total.





Habitat

Aim

Students will be able to identify the essential needs of animals.

Summary

Students learn a song, go on a garden walk, and engage in a play activity to understand what animals need to survive and how the garden can provide those things.

Standards

Foundations of CCSS: Science: Explains why plants and animals need water and food.

Foundations of CCSS: Science: Observes and discusses similarities, differences, and categories of plants and animals.

Materials

- Natural materials for play building, such as shells, branches, bells, seed pods, cotton, rocks, gems, moss, and twine
- Seasonal tasting

Vocabulary

- habitat

Procedure: Day One

Opening Circle (10 minutes)

- *Welcome to the garden. Today, we're learning all about the animals that live in our garden. What are some animals that live in our garden or visit our garden?* Take student answers.
- *We're going to learn a song about what animals need to survive. The first part of the song goes like this (to the tune of "Lollipop, Lollipop"):*
Habitat, habitat, have to have a habitat
Habitat, habitat, have to have a habitat
- *Now, we're going to say what we think animals need to survive. Who wants to guess what animals need to live?* Take student ideas, and introduce the next lines of the song The next three lines of the song are spoken, with hand gestures:

*Food to eat
Water to drink
A place to sleep*

- The song then goes back to the beginning, to the first lines. Sing the song a few times together.
- *Animals need food, water, and a place to call their home. This is true for all animals.*

Inquiry Activity One (10 minutes)

- *Our garden provides food, water, and a home for many different animals. We're going to go on a walk to see animals, and to see their food, their water, and their homes in the garden. Who wants to guess what kinds of animals we might see on our walk?*
- Take students on a walk through the garden to look for animals. They can also look for things or places that could provide food, water, and shelter for animals. *What kind of animal do you think would eat this acorn? What kind of animal do you think would live in this tree?*

Inquiry Activity Two (15 minutes)

- Return back to the large group.
- *Now that you have an idea about what animals need to live, we are going to build imaginary houses for our garden animals.*
- Demonstrate, using the play materials, how to build an imaginary house. *I'm going to pretend that I'm making a house for a butterfly. I'm going to use this blue stone to be the water for my butterfly.*
- Divide students into groups of 2 or 3. Before they start, ask the students what garden animals they would like to build a house for. *Who is going to build a house for a worm? Who is going to build a house for a bumblebee?*
- Hand out buckets of materials and direct students to the location to build their houses. *You may use these materials to make your homes for the animals. Remember to include places for water, food, and sleeping!*
- Circulate to assist students in solving any building and group problems, with an emphasis on asking about their choices and the purpose of their choices.
- Tell students when it is time to clean up, and have them put their play materials back.

Closing Circle (10 minutes)

- Ask students to share back about their work. *You made great imaginary homes for our garden animals. They had lots of places to sleep, and they had plenty of food and water.*
- If time allows, sing the Habitat Song one more time.
- Share a seasonal tasting.

Other Extensions

ELA: Read a story out loud together about a garden animal such as a butterfly, bee, bird, or worm. Some options include Monarch and Milkweed by Helen Frost and Leonid Gore and Time to Sleep by Denise Fleming. Have students listen carefully for what that animal eats and where that animal sleeps.





Bees

Aim

Students will learn how bees make honey.

Summary

Students will use imaginary play to understand how our garden helps bees to make honey.

Standards

Foundations of CCSS: Science: Explains why plants and animals need water and food.

Foundations of CCSS: Science: Observes and discusses similarities, differences, and categories of plants and animals.

Materials

- Paintbrushes
- Flowers, either in pots indoors or out in the garden
- Bucket
- Yellow and black construction paper
- Markers
- Scissors
- Glue sticks
- Honey, or other seasonal tasting

Vocabulary

- nectar
- pollinate

Procedure: Day One

Opening Circle (10 minutes)

- *Hello friends! Welcome to garden class! What animals have we been talking about? We are going to talk about an insect today that has wings and flies from flower to flower collecting nectar. It is black and yellow. Can you guess what the insect is?*
- Sing Busy Bee song, having students repeat each line (to the tune of “If You’re Happy and You Know It”):

*Good morning busy bees, how are you?
Oh, good morning, busy bees, how are you?
Oh we're busy bees today,
And that means it's time to bzzzzz
So let's all stand up and bzzzzz
What do you say?*

- *Did you know that bees visit flowers to collect nectar? Can we say "nectar"? Busy bees do dances to tell each other where the best nectar is. Everyone, stand up and I'll show you how bees talk to each other. Can we all do the bee dance and sing our busy bee song?*
- *Who knows where bees live? We are going to pretend to be bees today, and this is our hive!*

Inquiry Activity One (10 minutes)

- *You know that bees visit flowers and they collect nectar to make honey in their hives, so we are going to get to practice being bees.*
- *Busy bees, we are going to collect nectar from the flowers and move the pollen to help the plants grow more food! You can each use a brush to move pollen from flower to flower like this. Demonstrate how to gently touch a flower with paintbrush. When you visit each flower you can pretend to put some nectar into a bag like this, and then bring it back to our hive!*
- Students will each get a paintbrush to hand pollinate in the garden. They will simulate bees collecting nectar by having a little bag that they will put imaginary nectar in.
- Split students up into 2 groups to keep an eye on them, and usher the bees into the garden to pollinate.
- When students have sufficiently pollinated, return to the large group "hive," and deposit bags into a bucket in the middle of the circle.
- *Busy bees, it's time to turn the nectar that we collected from the flower into honey. Everyone circles around a container in the middle where their baggies of "nectar" are and puts their hands out and pretends to "stir" the nectar.*

Inquiry Activity Two (15 minutes)

- *Now we are going to make bee puppets!*
- Depending on your group, you can pre-cut the yellow and black paper, or you can draw a outlines for students to cut out of a bee shape and stripes. Students can also simply use black markers on yellow paper.

Closing Circle (10 minutes)

- *Do you think we should taste our honey?*
- Students taste honey on popsicle sticks.
- *Who can tell me where bees live? What do bees collect from flowers? What do bees make in their hive? What did you like about being a bee today?*

Other Extensions

Science: Have students draw pictures of the different kinds of animals, insects, and bugs they know about in the garden. Have students describe the differences between these animals.





Birds

Aim

Students will identify features of birds.

Summary

Students play a game to learn about birds and create helpful habitat for birds in the garden.

Standards

Foundations of CCSS: Science: Explains why plants and animals need water and food.

Foundations of CCSS: Science: Observes and discusses similarities, differences, and categories of plants and animals.

Materials

- Large feathers, one per student
- Materials for creating birdfeeders
- Bird seed or cereal
- Seed or dried fruit tasting, or other seasonal tasting

Vocabulary

- bird
- seed
- insect
- feather

Procedure: Day One

Opening Circle (10 minutes)

- *Welcome back to garden class! Today we're learning about an animal friend in our garden. It's an animal friend we haven't talked about much yet. It has wings, but it isn't a bug. Can you guess what it is? A bird!*
- *How can I tell an animal is a bird? What parts does it have? Yes, it does have wings, but so does a bee or a butterfly. Yes, it has a beak, but so do some other animals – a turtle has something like a beak, with no teeth. It does fly, but so do bats. There's something special that only a bird has -- feathers!*

- *Why does a bird have feathers? There are lots of reasons. We're going to pretend to be birds to learn how they use feathers.* Let students know that we're going to stay in our seats to do this!
- Pass out large feathers. Have students flap the feather. *Can you feel the way it pushes the wind? This is how a bird flies!*
- Have students wrap their arms around themselves, holding the feather in their hand. *Feathers keep a bird warm.*
- Have students hold the feather over their head, with the flat of the feather like an umbrella. *Feathers help keep a bird dry when it rains. The water runs right off it!*
- Have student put their feathers in front of their faces. *A feather helps a bird to hide. It helps them to blend in with what's around them. What color is this feather? What other things in nature are brown?*
- *Okay, everyone. Let's use our feathers to help us fly! To keep us warm! To keep us dry! To hide!* Do the hand motions for each with their feathers. Repeat a couple of times, mixing up the order. You can even play a game of "Birdie Says."
- Collect feathers back at the end.

Inquiry Activity One (15 minutes)

- *Why do you think birds might like to come to our garden? What do birds like to eat? Birds eat nuts, seeds, fruits, nectar, worms, and bugs!* Remind students of the word "insect" if they have already learned it. *Not all birds eat the same things. Where in the garden do you think birds like to hang out?* Remind students what a seed is.
- Go on a short walk around the garden, looking for birds, bird foods, and bird habitat. Point out that birds can help our garden by eating the bugs that eat our plants.

Inquiry Activity Two (15 minutes)

- *We can help to invite birds to our garden by giving them a little extra food!*
- Make bird feeders. One way is to have students paint shortening on a pinecone, sweet gum ball, or paper towel tube. Roll feeders in seed to attach. Don't use any nuts! Use a string tied onto the feeder so it can hang in a tree or on a fence.
- Another alternative is to have students put O-shaped cereal (like Cheerios) onto a pipe cleaner. They can then shape the pipe cleaner into whatever shape they would like.
- If time allows, go hang up bird feeders in trees or on a fence.

Closing Circle (5 minutes)

- *Thank you, gardeners, for helping to feed our birds! We like to eat some of the same things that birds like to eat. Who here likes to eat seeds? Who here likes to eat fruit?*
- Share a seasonal tasting.

Other Extensions

Math: Have students practice counting the cereal pieces that they put onto their bird feeders.





Human Habitat

Aim

Students will be able to identify how humans are like other animals.

Summary

Students will plant and harvest food from the garden.

Standards

Foundations of CCSS: Science: Explains why plants and animals need water and food.

Foundations of CCSS: Science: Observes and discusses similarities, differences, and categories of plants and animals.

Materials

- Bucket or sink
- Baskets
- Seeds or starts for planting
- Trowels
- Watering cans or cups
- Seasonal tasting

Vocabulary

- harvest

Procedure: Day One

Opening Circle (5 minutes)

- *Hello, friends! Welcome to garden class! What animals have we been talking about? Did you know that people are living animals? What do we need to stay alive? Solicit that we need food, water, and shelter, or other ideas that students have. Just like animals need food, water, and shelter, we need those things, too.*
- *Today we are going to do one of the most important things humans do to stay alive. We are going to grow our garden!*
- *One thing that we do that other animals don't do is grow our own food. How can we grow food?*

- *Since we are animals that need food to survive, we are going to eat some garden food and plant seeds today. The seeds that we plant will turn into food for us.*
- Divide students into two groups. One group will do Activity 1, while the other group does Activity 2. Then, have the groups switch.

Inquiry Activity One (15 minutes)

- Choose something for students to harvest that is easy to pick and requires little preparation. Good options for pre-k students include snap peas, strawberries, pea leaves, lemon sorrel, or other leafy vegetables.
- *Before we start, I will demonstrate how to harvest, that means to pick.* Show how to pick. Allow each student in group to pick one and put it into the basket. Wash the tasting and taste with your group.
- *How does it taste to you? Is it sweet, sour, soft, crunchy?*
- *Let's thank the garden for growing this food for us!*

Inquiry Activity Two (15 minutes)

- Bring students to beds with pre-dug trenches. One at a time, students plant seeds that are either very large or can be sprinkled into the trench. Alternately, students can plant larger starts and place the plants into the trench.
- Once all students have planted their seeds, they can cover the seeds or the roots of the starts with soil and then water them in.

Closing Circle (10 minutes)

- Bring students back to the large group.
- *Thank you, gardeners, for growing food for us!*
- *Who can tell me what it was like to plant the seed in the ground?* Have students share sensory experiences.

Other Extensions

Math: Give students trays of items harvested from the garden, such as leaves or flowers. Have students practice counting their harvest.