Terrific Trees

Theme Details:
Grade: Pre-K
Season: Fall
What's Growing: Casey Trees D.C. tree ID archive; Public Tree viewer from DDOT; Arbor Day Foundation- What Tree is That?

Standards Addressed (from Garden Science Framework):
Taught in alignment with DCPS's Pre-K Tree Curriculum
Curriculum Framework with Standards Connections
Core DC Early Learning Standards:
Pre-K:

- 10a. Uses some words and/or concepts from the text to talk about a story, poem or informational text read aloud
- 14a. Groups objects on the basis of a single characteristic (e.g., color, size or shape)
- 14b. Copies simple patterns
- 15a. Counts to 10 by rote; accurately assigns number names to quantities up to 5 (one-to-one correspondence); recognizes a few numerals and connects each to a quantity
- 19b. Observes and begins to describe how living things grow and change over time
- 35a. Engages in complex large-muscle activities that involve flexibility, control and a full range of motion
- 36a. Uses finger and hand movements to work with small objects and accomplish tasks

Goals/Objectives:

1. Students will know the basic parts of trees: roots, trunk, branches, leaves, fruit, seed.
2. Students will understand that trees grow and change over time.
3. Students will understand that trees provide habitats and food for many animals.

Key Vocab:

- **Habitat**
- **Season**

Terrific Trees

Introductory Activities

Plant Yoga: Move your body as if it were a growing plant to learn about the parts and life cycle of a plant.

"Roots, Trunk, Branches, Leaves": Sing about the parts of a tree to the tune of "Head, Shoulders, Knees, and Toes"

"Autumn Leaves are Falling Down": Sing about falling leaves to the tune of "London Bridge is Falling Down"

Sensory Nature Walk: Use your various senses to explore trees.

Core Activities

Leaf Rubbings: Practice fine motor skills by creating leaf rubbing art.

A Colorful Collection: Explore what colors leaves change by collecting and sorting leaves by color!

My Own Leaf Man: Read *Leaf Man,* then practice fine motor skills by making your own leaf art.

Busy, Busy Trees: Read *The Busy Tree* and learn about animals that use trees as homes.

Sprout It Out!: Learn about the life cycle of trees and plant two kinds of trees.

Tree Detectives: Learn to identify common D.C. trees and sort leaves and seeds based on their shape.

Insect Investigators: Observe insects using magnifying glasses.

Cheerio, Birds!: Create a Cheerio bird feeder.

Ideas: maple syrup taste test

Cooking Activities

Thematic Recipe

Stories

Who Will Plant a Tree? (in WYG Library)

Fall Is Not Easy

The Busy Tree

Leaf Man

If I Were A Tree

The City Tree

It Starts with a Seed

Little Acorn

Terrific Trees

Example Sequence
(Each box as one session)

Week 1	Theme: What are the parts of a tree? Sensory Nature Walk Plant Yoga “Roots, Trunk, Branches, Leaves” Song Story: It Starts with a Seed or Little Acorn
Week 2	Theme: Leaf explorations “Roots, Trunk, Branches, Leaves” Song Leaf Rubbings Lesson
Week 3	Theme: How do trees grow? “Roots, Trunk, Branches, Leaves” Song Sprout It Out Lesson
Week 4	Theme: How do trees change? “Autumn Leaves are Falling Down” Song A Colorful Collection Lesson
Week 5	Theme: What kinds of trees are there? Tree Detectives Lesson
Week 6	Theme: Trees as Habitats “Autumn Leaves are Falling Down” Song Insect Investigators Lesson or Cheerio, Birds! Lesson
Week 7	Theme: Trees as Habitats “Autumn Leaves are Falling Down” Song Busy, Busy Trees! Lesson
Week 8	Theme: Ask an Arborist! Guest arborist or Xavier comes to the class to talk to students

Activities: (See Below)

Plant Yoga

An introduction to plant parts and how plants grow.
5-10 minutes

Standards

- 35a. Engages in complex large-muscle activities that involve flexibility, control and a full range of motion

Objectives

- Students will know the six plant parts: Seed, Roots, Stem, Leaves, Flower, Fruit
- Students will move their body and stretch representing a life cycle of a plant

Key Vocab

Seed, Roots, Stem, Leaf, Flower, Fruit

Pollination - when pollen goes from one flower to another, a fruit can then grow, how a plant reproduces (makes more plants)
Soil - where a seed is planted, where seeds and plants get their nutrients

Activity Steps

1. **Engage:** Ask students, did you know that a tree is a kind of plant? What is the very first thing all plants start out as? It's usually really small and can be planted in the ground. A **Seed**! That's right, so let's make our bodies really small and crunched up- squat down and grab your knees and hug them to yourself- feel all that potential energy inside you– with the right things you can grow!

2. **Explore:** What does a seed need to start growing? Water! And where are we planted? In the ground! In soil– where we get nutrients that helps us grow! Feel the rain on your back and begin to swell– grow bigger and hold your arms out in front of you. Slurp up the water with sound effects.
    a. Now we can send down our **Roots**. Chant "roots, roots, roots!" while stomping. Our roots go deep into the soil and soak up more water and keep up anchored so we can send up…
    b. a **Stem**. Everyone stretch your stem as high as you can and maybe from side to side if you feel the wind blowing. Our stem moves water and nutrients from the roots up our plant. When our stem gets bigger, it'll be called a **Trunk**!
    c. Then from the side of our stem we grow a **Leaf** and then another leaf. Extend your hands out and rotate your wrists in a circle. Leaves help us catch the sun and make food for our plant (yum yum yum, thank you sun). Stretch your leaves toward the sun.
    d. Next we grow something beautiful and eye-catching– a **Flower**! (Hands on top of their heads, palms touching and fingers spread apart). I'm now going to be a bee or butterfly and bzzzz, come pollinate your flowers which helps you make more plants. I want your yummy nectar but as I'm doing this I get some of your pollen, and some of your pollen on

my hands/feet and that pollen gets dusted to you, and you, and you. (Hands together pretending to tickle their hands going from one of their flowers to the next). And once this pollination happens your flower can turn into a…

e. **Fruit**! Make a big oval above your head with your hands. What is your favorite fruit? Shout it in 3! 3, 2, 1… What does the fruit have inside it that it protects? It's small and something we could plant. A seed!
f. Our fruit falls to the ground and the seeds inside are carried off or replanted in the soil to grow a whole new plant! (Make your body into a seed again– crouching, holding your knees).

3. **Evaluate:** What was your favorite part of the plant to be? What surprised you the most?

4. **Extension (optional)**: After doing plant yoga to show the different parts of the plant, you could do a comparison to animal parts and ask if animals have any of the same parts or if they do any of the same things. You could compare the roots to mouths, leaves to lungs/stomachs, stem to intestines/bloodstream, the flower to reproductive organs, fruit to a womb, seed to a baby. You could take a specific animal and a specific plant and compare the two.

Plant Yoga Illustration

Autumn Leaves Are Falling Down

Sing about falling leaves.
10 minutes

Standards

- 35a. Engages in complex large-muscle activities that involve flexibility, control and a full range of motion

Objectives

- Students will sing about falling leaves.

Key Vocabulary

Autumn: the season of fall

Materials

None

Directions

Gather students and teach them the song “Autumn Leaves Are Falling Down” from Project Tree Learning’s *Trees & Me*. This song is to the tune of “London Bridge is Falling Down.” Lyrics are as follows:

Autumn leaves are falling down,
Falling down, falling down.
Autumn leaves are falling down,
Red, yellow & brown!
Take a rake and pile them up,
Pile them up, pile them up.
Take a rake and pile them up,
Red, yellow & brown!

Sensory Nature Walk

Explore the trees around the area using your various senses.
10 minutes

Standards

- 35a. Engages in complex large-muscle activities that involve flexibility, control and a full range of motion

Objectives

- Students will explore the trees around them, focusing on the use of sight, touch and hearing.

Key Vocabulary

Sense: how people perceive the world around them using sight, smell, touch, taste and hearing

Materials

None

Directions

Ask students if anyone knows what the five senses are. Explain that people use their senses to understand the world around them and then name the five senses. Explain that today, we will focus on three senses: sight, touch and hearing, and we'll use them to learn more about local trees.

Take students outside to an area with trees. Ask them to close their eyes and listen closely. Have them put a finger up for each unique sound they hear. Maybe they will hear birds chirping or leaves rustling in the wind. After about a minute, have students share some of the sounds they heard.

Then, have students explore the tree using their sense of sight. What do they see on and around the tree? Do they see any living creatures? Finally, have students explore using their sense of touch. What does the bark feel like? Is it hard or soft? Rough or smooth? What about the leaves? The roots?

As you walk, see if you can observe signs of the season changing. Notice animals preparing for cooler temperatures, like squirrels collecting nuts, insects searching for place to spend the winter and birds migrating south.

Leaf Rubbings

Practice fine motor skills by creating leaf rubbing art!
20 minutes

Standards

- 36a. Uses finger and hand movements to work with small objects and accomplish tasks

Objectives

- Students will practice small muscle coordination by using crayons to create leaf rubbings.
- Students will use descriptive words to compare and contrast two leaves.

Key Vocabulary

Veins: the lines on a leaf that carry food and water

Materials

Clipboards, tape, paper, crayons, leaves

Directions

Hold up two leaves from different plants. Ask students what they notice. Are the leaves the same or different? What's the same about them? What's different? Is one bigger? Which one? How many points does each leaf have? Ask various questions to get students to describe each leaf and think about how they are alike and different.

Explain that today we will be exploring leaves. Explain that each student will collect two leaves and then use them to make a work of art. Show students how this will happen by taping your two leaves to a piece of paper. Turn the paper over, attach it to a clipboard and rub a crayon over where the leaves are to create a rubbing.

Tell students where they should look for their leaves. Have each student collect two to three leaves from different plants and come to you when they're ready. Tape their leaves to their paper and attach the paper to a clipboard. Give each student a crayon and have them rub to create their work of art.

Circulate and ask questions to your students to get them to compare and contrast the leaves they selected.

A Colorful Collection

Explore what colors leaves change by collecting and sorting leaves based on color.
25 minutes

Standards

- 14a. Groups objects on the basis of a single characteristic (e.g., color, size or shape)
- 15a. Counts to 10 by rote; accurately assigns number names to quantities up to 5 (one-to-one correspondence); recognizes a few numerals and connects each to a quantity

Objectives

- Students observe what colors leaves can change and determine what colors they do not change.
- Students will group leaves based on color.
- Students will count the number of leaves of each color.

Key Vocabulary

Matching

Materials

Leaves, different colored paper, magnifying glasses (optional)

Directions

Optionally, begin the lesson with the song “Hanging on a Tree,” to the tune of “Ring Around the Rosy” from Project Learning Tree’s *Trees & Me*. Lyrics are as follows: “Hanging on the tree-ee / Winter’s coming – whee-ee! / Autumn, autumn / We all fall down!”

Ask students, do trees look the same all year? What happens to trees’ leaves? Many of them change color! Ask students, what colors can leaves change? Can they turn red? What about blue? Explain that today students will act as scientists and observe what colors leaves change.

Take students outside for a nature walk. Tell students that everyone can pick up 1-2 leaves that they like. Explain that afterwards we will sort them by color. Walk for 5-10 minutes allowing all students to select 1-2 leaves.

Gather students. Display the different colors of paper. Explain that students will now put their leaves on the paper that matches their leaf’s color. Model this with your leaves and then allow another student to model it. Once all students have placed their leaves on the papers ask the following: What color leaves did we find? What color leaves did we not find? How many red leaves did we find? How many brown leaves? Ect.

Extension: Give each student a magnifying glass and have them observe a leaf. Is their leaf more than one color? What colors can they find? Do they see any tears or holes in the leaf? What do they think happened to them?

My Own Leaf Man

Read *Leaf Man* by Lois Elhert then practice fine motor skills by making your own leaf art.
30 minutes

Standards

- 10a. Uses some words and/or concepts from the text to talk about a story, poem or informational text read aloud.
- 36a. Uses finger and hand movements to work with small objects and accomplish tasks

Objectives

- Students will listen to a read aloud.
- Students will practice fine motor skills by making their own leaf art.

Key Vocabulary

N/A

Materials

Leaves, paper, glue sticks, googly eyes (optional)

Directions

Ask students if they do anything in the fall to prepare for winter. Do they change the clothes they wear? How? Explain that plants and animals need to prepare for the cold weather of winter too. Deciduous trees prepare by losing their leaves. When this happens, the leaves change color.

Read aloud *Leaf Man* by Lois Elhert (or show this read aloud video). Pause at each page to get students to see the hidden pictures (ie. chickens, fish, ect made out of leaves). At the end of the story, ask students, what were some of the places that Leaf Man went or things he saw? Why did Leaf Man travel so far? Have you ever made art out of leaves?

Explain that today we will make art out of leaves like the author of the book did. Tell students that they can make a person, an animal or anything else that they can think of. Have several students raise their hands and share what they think they will make.

Take students outside to collect leaves. Tell each student to collect 5-6 leaves for their art. Then, return inside the classroom. Give each student a paper that they can create their art on and a glue stick. Optionally, give students googly eyes to add to their art work.

After about 10 minutes or when students are finished, have students present their work to the class.

Busy, Busy Trees!

Read *The Busy Tree* by Jennifer Ward and learn about animals that use trees as homes.
30 minutes

Standards

- 10a. Uses some words and/or concepts from the text to talk about a story, poem or informational text read aloud.
- 36a. Uses finger and hand movements to work with small objects and accomplish tasks

Objectives

- Students will listen to and understand a read aloud.
- Students will understand that a tree is a habitat for many creatures.
- Students will use fine motor skills to draw an animal that lives on/in/around trees.

Key Vocabulary

Habitat: a place where things live

Materials

Busy Tree Supplemental Materials, scissors, tape

Directions

Take students outside for a nature walk to visit a tree. Ask students the following: What animals might you find near or on a tree? What sounds might you hear?

Show students the cover of *The Busy Tree* by Jennifer Ward. Ask students what they see. Explain that this story is called *The Busy Tree*. Ask students why they think it might be called that. Explain that this story is all about a tree and what animals rely on it. Tell students to give a quiet thumbs up each time they see or hear about an animal as you read. Read aloud *The Busy Tree* by Jennifer Ward (or listen to the read aloud video).

Explain that a tree can be a habitat for many animals. Have students repeat the word *habitat*. Explain that a habitat is a place where things live. The ocean is a habitat for dolphins and whales. D.C. is our habitat! What animals did we see lived in the busy tree habitat?

Create a class busy tree by drawing a large tree on poster paper. Allow students to choose an animal to color from the coloring quarter sheets in the Busy Tree Supplemental Materials. When students are finished coloring, cut out the animal and tape it to the tree.

Sprout It Out!

Explore the life cycle of a tree and plant your own trees.
30 minutes

Standards

- 19b. Observes and begins to describe how living things grow and change over time

Objectives

- Students will know that trees come from seeds.
- Students will use descriptive words to compare and contrast two kinds of seeds.

Key Vocabulary

Pit: a large seed that is found in fruits like avocados, peaches and cherries. It is a single seed in the center of one fruit.
Seed

Materials

1 jar, 1 avocado, 1 apple, toothpicks, knife, cutting board, paper plates, Ziploc bags, paper towels

Directions

Begin by reviewing the life cycle of a plant with Plant Yoga. Afterwards, hold up an avocado and an apple. Ask students, what are these things? Have you ever eaten one? What do these things have in common? Where do they come from? What's inside of them? They are both fruit that come from trees and they have seeds inside of them! Explain that we are going to look at the seeds and then plant them. Ask students to make a prediction: do they think the seeds will all look the same?

Use a knife to open up the apple and extract a few seeds, putting them on a paper plate. Pass the plate around for students to see, asking them what they notice, while you cut the avocado. Be careful not to cut the pit. Once you've extracted the pit, wash it and pass it around. Ask students questions about the seeds to get them to describe them. What colors are the seeds? Are they big or little? How many seeds were in the apple? What about the avocado? Was your prediction about them being the same or different correct?

Explain that all these seeds have the potential to grow into a tree. Ask students what these seeds need in order to grow (sunlight, water). Explain that if the seeds get these things, they will (hopefully) sprout and grow into a tree.

For the apple seeds, use the Ziploc method to germinate the seeds. Dampen a paper towel and place 5-10 seeds about an inch apart onto the paper towel. Fold the paper towel and place it in a Ziploc bag. Most seeds will need 60 to 90 days to germinate.

For the avocado seeds, follow these instructions from SustainedFarms.com.

Extension: Read or listen to ***Who Will Plant a Tree?*** by Jerry Pallotta.

Tree Detectives

Students will learn to identify common D.C. trees and will sort leaves and seeds based on their shape.
30 minutes

Standards

- 14a. Groups objects on the basis of a single characteristic (e.g., color, size or shape)

Objectives

- Students will know the leaf shapes and seed shapes of two or more of the following common DC trees: maple, ginkgo, white oak, sweet gum, pine, cherry

Key Vocabulary

Samara: the winged seeds produced by maple trees (and some other plants); often called “helicopters” for the way they spin as they fall

Materials

Tree Detectives supplemental materials (laminated) or laminated leaves, tape or magnets

Directions

Before the lesson, choose two to three of the trees from the supplemental materials to use with students. We recommend choosing two that are commonly found in the schoolyard or students’ neighborhood.

Ask students, are all trees the same? What makes them different? Do they all have the same leaves? What about seeds? If needed, show students leaves or seeds from different trees so they can visualize that they are not exactly the same.

Explain that today students will learn about two different trees and how to tell them apart by looking at their leaves and their seeds. Show students the reference photos from the supplemental materials of the two trees that you have chosen. Explain that each paper has a leaf and seed from a different tree. Ask students what they notice. Have they ever seen leaves or seeds like this? Explain that both of these trees are common in D.C. and they may see them in their neighborhoods.

Use tape or magnets to hang up the two reference photos. Have students repeat after you as you name each of the trees. Associate a movement with each tree. For example, you might have students act like squirrels for the oak leaf since squirrels love acorns, or you might have students spin like a samara for the maple. Then, give each student one of the small leaves (or laminated leaves). Tell students to look at the reference photos and do their movement if they have a certain leaf. Do the same with the other leaf. Explain that students will now play a matching game where they have to decide which leaf they have. Explain that all students will walk around the classroom trading leaves with their classmates. Be sure to model this. When the teacher says “freeze,” all students will freeze and stop trading. The teacher will then tell all students with a maple leaf to do their movement, then all with an oak, ect. Play for a few rounds.

Depending on time, repeat this activity with the seeds of the trees.

Extension: Take students outside to explore the trees around the school. Can they find any of the trees that we identified? Encourage students to find leaves from the trees around the school. Compare and contrast them with the leaves of the that you studied. Are there any similarities? What about differences?

Alternatively, try to identify the trees in the schoolyard. We suggest using the app “PlantNet” to take pictures of the leaves to identify the trees.

Insect Investigators

Students will use magnifying glasses to observe insects on and around trees.
30 minutes

Standards

- 35a. Engages in complex large-muscle activities that involve flexibility, control and a full range of motion
- 36a. Uses finger and hand movements to work with small objects and accomplish tasks

Objectives

- Students will know how to use a magnifying glass.
- Students will practice observational skills.

Key Vocabulary

Insect: a small animal that has six legs and generally one or two pairs of wings
Habitat: a place where things live
Magnifying glass: a tool used to magnify objects or make them seem bigger

Materials

Magnifying glasses

Directions

Take students outside for a nature walk to visit a tree. Ask students the following: What animals might you find near or on a tree? One kind of animal that loves to live on and around trees are insects! Explain to students that “insect” is another name for “bug.” Tell students that today we are going to look for insects and signs that insects may have been here. Ask students, what kind of clues might we find that would tell us that an insect has been there? Explain that we might find leaves with bites taken out or holes in the bark of a tree.

Hold up a magnifying glass and ask students if anyone knows what it is. Explain that magnifying glasses help us see things that are very small, which can help us observe, or look closely, at things like insects. Model how to use the magnifying glass and explain that we will use them to observe insects and find insect clues. Give each student a magnifying glass. Encourage them to look on the tree bark, under leaves and on the soil below the tree for insects and evidence of insects.

After a few minutes, call students back together. Have students raise their hands to share if they found an insect. Ask them if they noticed any signs of insects. Ask, “How is a tree a home for insects?”

Cheerio, Birds!

Students will use fine motor skills to create Cheerio bird feeders.
30 minutes

Standards

- 36a. Uses finger and hand movements to work with small objects and accomplish tasks

Objectives

- Students will use fine motor skills to create Cheerio bird feeders.

Key Vocabulary

Habitat: a place where things live

Materials

Pipe cleaners, cheerios, bowls, string/twine/yarn, Ziploc baggies to take bird feeders home (optional)

Directions

Ask students the following: What animals might you find near or on a tree? What sounds might you hear? Explain that one animal that often lives in trees is birds! Ask students, what do birds like to eat? Explain that birds mostly eat seeds, berries and insects, which is why it makes sense that they live in trees! People often feed birds by leaving out birdseed. Explain that we're going to make a bird feeder to feed birds, but instead of birdseed, we'll use Cheerios.

Make a small loop at the end of each students' pipe cleaner and place a bowl of cheerios at the center of each students' table cluster. Then, hand them out to students. Students may then begin threading Cheerios onto their pipe cleaner. Have students raise their hands when they are done and help them twist the two ends of the pipe cleaner together. Tie a piece of string/yarn/twine in a loop on the pipe cleaner so that the bird feeder can hang from a tree branch.

Extension: Before or after making the bird feeders, talk about common DC birds, using the supplemental materials. Show students images of each of the birds and talk about them using the notes in the slides.

External Resources:

[Who Lives in a Tree? Fish and Wildlife Agencies Growing Up WILD]