TREE-MENDOUS TREES

STEM Preschool Teaching Unit

Ages 2.9-5 years

www.massaudubon.org/education

Trees are found just about everywhere, so they are familiar to young children. Trees are kid friendly to explore, interesting to learn about, and easy to appreciate. This unit offers seven different investigations about trees.

1. Introduction to trees
2. What are the parts of a tree?
3. How are trees classified?
4. How does a tree grow? How does a tree make pinecones or acorns?
5. Why do leaves change color in the fall?
6. Who lives in trees?
7. How do trees help us?

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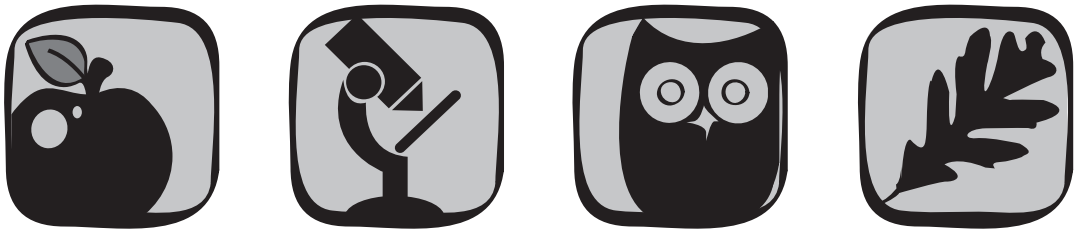
Mass Audubon Philosophy on Early Education



What we strive for

At Mass Audubon we strive to create learning experiences that are enriching, innovative, meaningful, and engaging. Our preschool programs support Massachusetts Science, Technology, and Engineering Standards. Our network of wildlife sanctuaries and nature centers located in urban, suburban, and rural communities around the state enable us to develop, evaluate, and sustain nature-based early childhood education programs in all settings. We are fully committed to creating a positive and supportive learning environment that is inclusive, open to all learners, and sensitive to cultural diversity.

Place-based learning

Place-based learning is an educational philosophy that connects learning to what is local to the learner. As children, we develop an understanding of where we are and what this place is like. It might be the child's backyard, local park, beach, forest, or meadow. By learning and understanding your own city, town, or neighborhood, as you grow you have the power and commitment to become an active part of that community.

Play-based learning

Play-based learning in nature takes advantage of a child's innate curiosity in the world around them and, like all play-based learning utilizes discovery as a motivator in learning by supporting children as they choose activities that engage and match their own interests and ideas. Teachers create learning environments that encourage play and exploration in the natural world and even step aside to let a child engage directly with the wonder of nature to guide curriculum. Nature play encourages and provides opportunities for children to construct their own surroundings, design tools and materials, develop give-and-take of social relationships, and solve problems as individuals and part of a team.

Inquiry-based learning

Inquiry-based learning is focused on teamwork, being learner centered, questioning ourselves and the world around us, providing a more focused time-intensive exploration, promoting lifelong learning, communication, and learning as fun.

Embracing the serendipity of outdoor exploration

Nature exploration is dependent upon the weather and other conditions. A class might observe different wildlife than they expected to see. An outdoor lesson can sometimes provide unexpected but enriching teachable moments on a natural history topic that was not planned. Enjoy and celebrate the learning and discovery that nature will offer your classroom.

Mass Audubon

Protecting the Nature of Massachusetts

Brain Building in Progress

Building Young Brains and a More Prosperous Future For All

The Brain Building in Progress campaign is a public/private partnership of the Massachusetts Department of Early Education and Care, United Way of Massachusetts Bay and Merrimack Valley and a growing community of early education and child care providers, academic researchers, business leaders and individuals. Our work is based upon the latest science and research on early childhood development. Our mission is to raise awareness of the critical importance of fostering the cognitive, social and emotional development of young children by emphasizing its future impact on the economic prosperity of everyone in Massachusetts. We welcome the business, education, and policy-making communities, as well as members of the media to be part of this crucial venture. By giving a strong start to our youngest citizens, we create a stronger, more prosperous future for all.

Learn how you can take action for young minds and Massachusetts' future at www. brainbuildinginprogress.org/

The Science Behind Brain Building

When we understand the sequence and process by which brains are built, it's easy to understand why it's a smart investment to start every child out strong. Scientific research shows that early experiences directly shape how the brain develops. According to the Harvard University Center on the Developing Child, Stanford University and other leading researchers:

- In the first few years of life, 700 new neural connections are formed every second.
- Neural connections and the architecture of the developing brain are built through back-and-forth interactions with adults in enriching environments.
- Brain building is disrupted by "toxic stress," a term that describes chronic stressful conditions rooted in causes such as poverty, neglect, or maternal depression. Toxic stress increases the likelihood of developmental delays.
- Several studies have shown that, as early as 18 months, there are notable disparities in vocabulary between children from language-rich, high interaction homes and those who are not. Recent Stanford research showed that by age two, this equals a six month gap in language processing skills and vocabulary. By increasing interaction, using richer language and child-directed talk, parents can help their child to learn more quickly.

Brain Building can happen anywhere, not just in a formal school or early education programs. Anyone can be a Brain Builder by reading with children, asking lots of open-ended questions or engaging them in play. For fun ideas about how you can turn any moment into a brain building moment, download our activity guides.

The Nature of Early Childhood Science In the Outdoor Classroom

Children have wonderful imaginations and an innate desire to explore through direct experience. Like scientists, children are continuously gaining new knowledge about the world around them through observation, inquiry, and experimentation. Often they do this by asking questions, lots of them. These questions, flowing from experience and observation, are at the heart of early childhood science. Early childhood educators can guide this natural curiosity as well as model skills and attitudes for learning. Teachers, you will have questions too, as you explore the natural world together with your students. Share your questions with children–your willingness to "not know" is actually one of the easiest and most powerful ways that you can model what it means to "practice science" in the early years.

When you are exploring the natural world, science is all around you, but where do you start with a group of young learners? Sometimes it's best to start with their curiosity and other times you may begin your explorations with activities and tools that help to focus attention and observation. Integrating science exploration in early education can both develop future scientific understanding as well as promote essential learning attitudes and confidence. It also provides a strong foundation for critical thinking and comfort with the practice of science.

Outside the classroom door, the natural world opens up the child's innate sense of wonder. Here's an example from a classic:

"That's funny," said Pooh (standing by a picket fence). "I dropped it on the other side," said Pooh, "and it came out on this side! I wonder if it would do it again?" And he went back for some more fir cones." It's likely that you recognize this passage from A.A. Milne's *The House at Pooh Corner*. It embodies what is at the heart of practicing science in the early childhood classroom—that learners observe, question, experiment, ask questions, and inquire, through direct experience of the world around them.

Through these four units, you can jump start nature-based science learning and discovery by exploring your school yard or outdoor classroom and focusing on the things that capture children's attention in any setting–birds, soil, trees, and weather. We encourage you to experiment with methods and activities for using the natural world to create a culture of wonder and scientific thinking in your early childhood education setting.

Ten Tips for Taking Preschoolers Outdoors

1. Start with free play. Playing outdoors, exploring textures and colors, running and jumping, designing and building are all learning activities in and of themselves.

2. Continue with short focused trips outside. A ten-minute walk can yield lots of observations. If possible, ask additional adults to come along for outdoor activities.

3. Be safe. Preview the space to be explored whenever possible. Point out dangers such as broken glass or thorny plants. Make sure everyone has appropriate clothing for the weather and think about a plan in case of emergency.

4. Encourage respect for nature. Tell children that they need to respect plants and animals just like they respect one another. Be a good role model by being gentle with leaves and insects. Before you go out, talk about whether it is okay to pick flowers or collect worms.

5. Focus on one question or phenomenon, such as, "Can you find anything green outside?" or "What sounds do you hear?" Make sure students know what they are looking and listening for before they go outside.

6. Look for things to study in unlikely places. Students can find amazing things looking at brick walls rock outcrops, lawns, broken pavement, and weeds.

7. Encourage a sense of wonder. If you don't know the names of plants or birds, don't worry. Just make sure students are observing and using their senses. There are plenty of field guides available if students want to try to identify something.

8. Visit the same spot multiple times over the course of the year. Even in winter, there can be interesting rocks, twigs, birds, and signs of animals to observe.

9. Draw and write. When students record observations, they are more focused and have more to think and talk about when you get back inside.

10. Be flexible. You never know what you might see. If the lesson is about clouds, but a cluster of ladybugs captures children's attention, be ready to change your plans.

TEACHING ABOUT TREES

Trees are abundant in most neighborhoods and school yards. They are also engaging tools for learning and discovery. Trees are places to play and at the same time a home for many species of wildlife. They also are an important natural resource for humans. Trees come in different shapes and sizes and are a wonderful way to study life cycles and parts of a whole.

When a young child learns about trees, he/she is discovering the entire world of plants, animals, and the seasonal cycles of the natural world.

Investigation Objectives and Alignment to Massachusetts Department of Education Pre-K Science, Technology and Engineering Standards 2013

for 2015-2016 implementation

Investigation	Children will be able to:	PRE-K Learning Standards
#1 **Introduction to trees**	• Name characteristics of what makes a tree. • Compare the life cycle of a tree to another common plant, • Describe ways that trees are living things because they need food, water, shelter, and air to grow and reproduce.	**PreK-LS2-2(MA).** Using evidence from the local environment explain how familiar plants and animals meet their needs where they live.
#2 **What are the parts of a tree?**	• Demonstrate (role-play) the parts of a tree. • Design a new tree, using all of its parts.	**PreK-LS1-1(MA).** Compare, using descriptions and drawings, the external body parts of animals (including humans) and plants and explain functions of some of the observable body parts.
#3 **How are trees classified? Why do some trees have leaves in the winter and some do not?**	• Separate pictures of trees into categories	**PreK-PS4-2(MA).** Connect daily experience and investigations to demonstrate the relationships between the size and shape of shadows, the objects creating the shadow, and the light source.
#4 **How does a tree grow? How does a tree make pinecones or acorns?**	• Describe the life cycle of a tree.	**PreK-LS1-2(MA).** Recognize that all plants and animals grow and change over time. **PreK-LS3-1(MA).** Use observations to explain that young plants and animals are like but not exactly like their parents.
#5 **Why do leaves change color in the fall?**	• Describe the life cycle of the tre.e	**PreK-ESS2-5(MA).** Describe how local weather changes from day to day and over the seasons and recognize patterns in those changes. **PreK-ESS2-6(MA)**. Understand the impact of weather on living things. **PreK-LS1-2(MA)**. Recognize that all plants and animals grow and change over time. **PreK-PS2-2(MA)**. Through experience, develop awareness of factors that influence whether things stand or fall.

#6: **Who lives in trees?**	• Look for evidence of living things in a nearby tree.	**PreK-ESS2-1(MA).** Raise questions and engage in discussions about how different types of local environments (including water) provide homes for different kinds of living things. **PreK-LS2-3(MA).** Give examples from the local environment of how animals and plants are dependent on one another to meet their basic needs.
#7: **How do trees help us?**	• Name two foods we get from trees • Name two ways they are important.	**PreK-PS1-3(MA).** Differentiate between the properties of an object and those of the material with which it is made.

Suggested outdoor exploration materials

- Images of trees
- String or yarn
- Coffee filters
- Hand lenses
- Popsicle sticks
- Clipboards (can attach pencils with string or velcro)
- Trowels (small shovels)
- Penlight or other small flashlight
- Small plastic containers to hold living things
- White plastic plates to observe samples
- Ziploc bags, various sizes
- Plastic terrariums
- Spray bottles
- Measuring tapes or string
- Disposable or digital camera
- Crayons and markers (fine and thick point)
- Paints
- Clay or playdough
- Collage materials
- Bendable wire or pipe cleaners

Keep it easy!

- Assemble outdoor kits in backpacks to pick up and go as you walk outdoors!
- Families will gladly save and send in recyclable containers that are both reusable and disposable. Just ask!

TREE-MENDOUS TREES
Basic Concepts and Fun Facts

What is a tree?

- Trees are not a well-defined biological group like birds or insects. A tree is definitely a plant, but the definition of a tree can be very broad.
- A commonly accepted definition of a tree is: A tree is a long-lived perennial plant with a single woody stem (trunk) and secondary branches that reaches a height of at least 12 to15 feet.
- Trees are made of wood and have branches, leaves, roots, flowers or cones, and seeds.
- Roots grow deep into the ground. They anchor the tree in the soil, and absorb water, minerals, and nutrients.
- Wood is made of cells with strong cell walls that provide the structural support of the tree. The same cells are also the vascular system that transports water and sap up and down from the roots to the leaves.
- Trees grow by adding a new layer of wood every year. In a slice of a tree, these layers are called growth rings.
- Branches grow out from the trunk and support the leaves. Leaves are arranged for maximum sunlight exposure.
- Trees are covered in bark that protects the wood underneath. The bark expands and cracks as the tree grows.
- Trees reproduce by making seeds. The seed can be single or contained within a cone or fruit. Some examples of tree seeds are acorns, maple helicopters, pine nuts, walnuts, apples, and peaches.
- Like all photosynthesizing plants, trees take in carbon dioxide (CO_2 – what humans breathe out and release oxygen (O_2 – what humans breathe in).

Types of Trees

- There are 2 basic types of trees – evergreen and deciduous.
    - Evergreens keep their leaves and stay green all year. Most evergreen trees have needles and produce seeds in cones. There are also evergreen trees with leaves and those leaves are usually stiff and waxy.
    - Evergreen species – pines, fir,s spruces, rhododendrons (an example of an evergreen with leaves).
    - Deciduous trees shed their leaves at the end of the growing season. Most deciduous trees have leaves that turn color and fall off in autumn. There are a few deciduous trees that have needles.
    - Deciduous species – maples, oaks, ashes, birches, larch (an example of a deciduous tree with needles).

Benefits of trees

- Trees absorb carbon dioxide. They also absorb other gases and pollutants and remove them from the atmosphere.
- Because of their large size and longevity, trees store large amounts of carbon.
- Trees release oxygen into the atmosphere that humans and wildlife need to breathe.
- Trees moderate temperature by providing shade and releasing water vapor.
- Trees anchor the soil and help to prevent erosion.
- Trees provide habitat for many different kinds of wildlife.
- Dead leaves from trees provide habitat for important decomposing and recycling organisms in soil ecosystems.
- Old-growth forests are among the most diverse ecosystems in the world.
- Trees provide wood, paper, food, and medicine. Every day we use or eat many items that come from trees.
- Trees have a calming effect on most people.

Fun Tree Facts

- About one-third of the world is covered by forests. The United States has 8 percent of the world's forests (750 million acres).
- The tallest living tree (And the tallest tree ever recorded) is a 379-foot tall Coast Redwood in Northern California.
- The largest living single tree is a giant sequoia in California with an estimated weight of 3.6 million pounds. This is more than 10 times the weight of the largest blue whale.
- Trees are among the longest lived and largest organisms in the world.
- The oldest living single tree is a bristlecone pine in California that is 4,800 years old.
- There is a grove of quaking aspen in Utah that is both larger (12 million pounds) and older (the root system is 80,000 years old) than the 2 trees listed above, but this is a colony of many stems and not a single tree.

Sources:

http://www.epa.gov/agriculture/forestry.html#Facts%20and%20Figures

Sibley, David. *The Sibley Guide to Trees.* New York: Alfred A. Knopf. 2009. Print.

THEME: TREE-MENDOUS TREES

(#1-7 indicates the investigation to go to for detailed instructions)

ART	COOKING	DISCOVERY/SCIENCE	DRAMATIC PLAY
• Leaf rubbings • Bark rubbings • Leaf prints • Fingerprint trees (#1) • Draw and trace leaves using different media • Trace a tree (using hand) (#1) • Make a leaf melty • Fingerpainted tree • Make a tree (#1)	• "Design a Tree" snack (# 1) • Maple sugaring – syrup for pancakes! • Make applesauce • Make fruit salad using fruit from trees (apples, peaches, pears, cherries,etc)	• Tree branches, twigs • Acorns, pods, etc. • Tree rings • Bark samples • Assorted pine needles • Pinecone weather station (#7) • Assorted leaves • Make a seed parachute! (#4)	• Roleplay how a tree gets ready for winter (#1) • Using small branches and twigs, children pretend they are trees, through all seasons
ENGINEERING/DESIGN	**LITERACY**	**MATHEMATICS**	**MUSIC/MOVEMENT**
• Use tree cookies/natural materials to design and build • Use Lincoln Logs or pretzels to demonstrate building with wood (#7) • Grow a bonsai tree from a kit– • Paint bark, put together to design a new tree (#1) • Build a tree using a big stump for the base (#1)	• See attached annotated bibliography for multiple selections • Use your local library as a resource.	• (#7) • Sort and classify leaves (#2) • Count rings in a tree cookie • Identify basic shapes of trees as circles, triangles, and ovals (#2) • Pinecone Toss Game (#4) • Data collection of leaves (#5)	• Sway and move like a tree • Tree Song (#3) • Pretend to be a tree getting ready for winter (# 2) • See resource section for more song suggestions • Leaf raking and jumping (#5) • Tree aerobics (how trees are branched) • Yoga poses like trees (body regulation/awareness) • Stump jump in nature playgrounds to develop motor skills
OUTDOORS	**SENSORY**	**GAMES/ MANIPULATIVES**	**COMMUNITY CONNECTIONS**
• Bark protects (#1) • Adopt a tree • Lie on the grass looking up into trees • Outdoor Mystery Box (#1) • Outdoor Memory Game (#1) • Classifying Trees (#3)	• Children use straws and water to demonstrate root systems of a tree • Children use branches to make trees, adding all parts from roots to crown	• Leaf matching games (#1) • Tree Bingo (#1) • Tree and Leaf Memory games • Seasonal life cycle of tree cards (#5)	• Families visit local parks, green spaces, etc. to support children's learning. • Invite local arborists/landscapers to talk to the children. • Have a parent/family clean-up day at your school to keep trees healthy by pruning and mulching. • Adopt a tree in your neighborhood.

THEME: TREE-MENDOUS TREES

See full lessons following this form for activities and details

Big Ideas	**Investigation #1** What do you know or want to know about trees? Are trees living or nonliving?	**Investigation #2** What are the parts of a tree?	**Investigation #3** How are trees classified? Why do some trees have leaves in the winter and some do not?	**Investigation #4** How does a tree grow? How does a tree grow pinecones or acorns?
LARGE GROUP LEARNING	• KWL Chart to determine prior knowledge • Discussion questions	• Parts of a tree discovery • Building a Tree • Role-play being a tree in different seasons	• Ways to classify trees • Deciduous vs Evergreen	• Observe an oak sapling • Where are the pinecone seeds?
SMALL GROUP LEARNING	• Tree Bingo • Drawing trees (mixed media) • Matching Games • Field Guides	• Bark samples • Re-assemble a tree • Create trees in sand • Trace-a-Tree • Finger-painted Tree • Make a tree	• Classifying Game • Leaf Sorting Game • Shape Sorting Game	• Pinecone Toss Game
OUTDOOR LEARNING	• Tree walks • Observing trees • Outdoor sketching	• Mystery Box • Tree Memory Game	• Collection walk • Walk to broadly identify kinds of trees, by size, shape, leaves, bark, etc.	• Seed Parachutes to discover how far seeds travel • Measure how far from the tree the seeds landed

INVESTIGATION SUMMARIES - continued

BIG IDEAS	**Investigation #5** Why do leaves change color in the fall?	**Investigation #6** Who lives in trees?	**Investigation #7** How do trees help us?
LARGE GROUP LEARNING	• Discussion of the process of changing colors (see full lesson for two age-dependent versions) • Display many sizes and colors of leaves • Discuss how weather plays a role in changing leaf color and relate to how children adapt to each season	• Discussion questions to gather knowledge • Characteristics required of animals that live in trees	• Children list possibilities (food, shelter, paper and wood items, oxygen, etc) • Pinecone Weather Station
SMALL GROUP LEARNING	• Data collection to determine timeframe for soft to crunchy leaves • Leaf sorting • Leaf art • Leaf rubbings • Leaf melty	• Individually or in pairs, children explore nests, pieces of bark, twigs for possible animal homes • •	• Torn Paper Tree • Design (small group working in pairs) and build houses from Lincoln Logs or any type of building blocks. Share ideas with friends.
OUTDOOR LEARNING	• - Fall leaf collecting • - Leaf raking and jumping	• Search for animal homes in trees during an outdoor walk • Take photos for classroom display	• Adopt a Tree

INVESTIGATION #1

Introduction to trees

What do you know or want to know about trees?
Are trees living or nonliving?
What do you like best about trees?
What do you think is beautiful about trees?
Why do people like to have trees in their yards and parks?

LARGE GROUP LEARNING ACTIVITIES

Teacher scribes on a KWL chart as students orally describe their own background experiences, knowledge or observation of trees, vocabulary, characteristics, etc. For example:

What do we KNOW?	What do we WANT to know?	What did we LEARN?
Trees are green.	How old are trees?	Some trees do not lose their leaves.
Birds live in trees.	Are trees alive? Do they grow?	Some food comes from trees.
I have trees in my yard and in the park.	Why do they fall over?	Trees are home for many creatures.

Trees are an important part of our world. They provide wood for building and pulp for making paper. They provide habitats for all sorts of insects, birds, and other animals. Many types of fruits and nuts come from trees – including apples, oranges, walnuts, pears, and peaches. Even the sap of trees is useful as food for insects and for making maple syrup!

Trees help to keep our air clean and our ecosystems healthy. We breathe in oxygen and breathe out carbon dioxide. Trees breathe in carbon dioxide and breathe out oxygen. We're perfect partners!

Trees do lots for us, our environment, and other plants. But we don't just love trees for practical reasons. Trees can also be very beautiful – tall enough that they seem to touch the sky and so big around you can't even hug them.

The way a tree grows through different seasons can be seen by growth rings in the wood, they can even be used to determine the age of a tree.

Read: Recommended *A Tree is Nice* or *A Grand Old Tree* (see bibliography)

SMALL GROUP LEARNING ACTIVITIES

Tree Bingo Game – to help children understand shapes, sizes, and kinds of trees
Can be made (see sample in resources section)

- Children receive laminated Bingo cards with pictures of trees found in your community – three across and three down.
- Smaller cards (to fit squares on Bingo card) with same photos are cut and laminated
- Students take turns to match small card to those on Bingo card.
- Goal is to get three photos vertically, horizontally, or diagonally or simply to match them all.
- Consider the development of the children playing as they may simply want to match their card with the template. The goal is to become familiar with various types of trees. Children often get caught up with size and color, so you may need to do them in black and white and focus on the *shap*e of the tree.

Drawing activity where children use any media to draw/design/sketch their own tree.

Matching games – use laminated photos of many trees.

Field guides – have simple guides available for children (see bibliography for suggestions).

OUTDOOR LEARNING ACTIVITIES

Tree walks

- Students track how many trees and varieties of trees they see. They do not need to identify them by name. They often will come up with their own name for a tree, such as shaggy" tree or "gray bark" tree.
- Can they count them? Broadly classify them?
- How many different colors do they notice? Sizes and types of leaves?
- Note types of barks, thickness of trunk, and branches, height, etc.

Observe trees. Lie on your back under one or more trees. Talk about how trees are different from each other. Lie and listen for sounds. Watch for birds and wind blowing in the needles/leaves.

Sitting outside, children use any media to **draw/design/sketch their own tree**.

Bark rubbings work well to distinguish between thickness and texture of bark.

INVESTIGATION #2

What are the parts of a tree?

LARGE GROUP LEARNING ACTIVITIES

Parts of a Tree:

- **Seed:** Like many plants, a tree begins from a seed. Inside each tree seed is a tree waiting to be born! A seed must have food, water, and sunlight to grow. Once the seed sprouts, it grows into a seedling that grows into a sapling, and eventually saplings grow into trees that produce their own seeds.
- **Roots:** The roots are the part of the tree that grows underground. Trees have a lot of roots – the size of the root system is usually as big as the part of the tree above the ground. This is necessary because the roots help support the tree. It takes a lot of roots to hold up a100-foot tree! Besides keeping the tree from tipping over, the main job of the roots is to collect water and nutrients from the soil and to store them for times when there isn't as much available.
- **Crown:** The crown is made up of the leaves and branches at the top of a tree. The crown shades the roots, collects energy from the sun (photosynthesis) and allows the tree to remove extra water to keep it cool (transpiration -- similar to sweating in animals). The crowns of trees come in many shapes and sizes!
- **Leaves:** Leaves are the part of the crown of a tree. They are the part of the tree that converts energy into food (sugar). Leaves are the food factories of a tree. They contain a very special substance called chlorophyll – it is chlorophyll that gives leaves their green color. Chlorophyll is an extremely important biomolecule, used in photosynthesis – leaves use the sun's energy to convert carbon dioxide from the atmosphere and water from the soil into sugar and oxygen. The sugar, which is the tree's food, is either used or stored in the branches, trunk, and roots. The oxygen is released back into the atmosphere.
- **Branches:** The branches provide the support to distribute the leaves efficiently for the type of tree and the environment. They also serve as conduits for water and nutrients and as storage for extra sugar.
- **Trunk:** The trunk of the tree provides its shape and support and holds up the crown. The trunk transports water and nutrients from the soil and sugar from the leaves.
- **Bark:** The outside layer of the trunk, branches, and twigs of trees. The bark serves as a protective layer for the more delicate inside wood of the tree. Trees actually have inner bark and outer bark – the inner layer of bark is made up of living cells and the outer layer is made of dead cells, sort of like our fingernails.

Building a Tree (indoors): As you talk about each part, the children will get a chance to help "build" the tree. Using a flannel board or poster board drawing of a tree, the children place the various materials on the correct part of the tree. Children can also do a "live" demonstration of building a tree using each other as models.

- Start by planting the seed. It will produce roots and grows into a sapling.
- The roots are under the ground and bring water and food to all parts of a tree. (Bring it around the circle for everyone to touch – feel the hairs on your palm, do they tickle?). What do you notice about the roots? Point out the tiny little hairs. Roots act like little straws. They work all yearlong and store food for the winter. Pretend

you are a root, just like a straw sipping up all the water and food to help you grow. The roots also help the tree to stay strong in the ground. They grow long and wide. Spreading out under the earth. If a big wind blows the tree, usually it won't fall down because the roots keep it strong in the ground. Have the children place their feet strong and wide. A few students are chosen to place the roots (big straws and little straws).

- The trunk stands tall and has something like a hose inside that carries food from the roots to the trunk and the branches/leaves. And another hose that takes the food from the leaves to the rest of the tree. A few students are chosen to place the tubes.
- Do you remember what the bark is for? (to protect the tree from cold, hot, insects, disease). A few students are chosen to place the bark on top of the tubes.
- The crown of the tree includes the branches, limbs, flowers, fruit and the leaves. It's like a crown that a queen/king might put on top of his/her head.
- The branches are connected to the trunk. The branches help carry the food/water from the roots to the leaves and from the leaves to the roots. A few students place the branches and leaves. Point out the veins and stems of the leaves and compare to their veins.

Pretend to be a tree getting ready for winter:

- Just like the parts of your body are connected to another part so are the parts of a tree. Imagine that your hands are leaves and your arms are branches. Which part of you is the trunk? How about the roots?
- Starting from the roots to the crown, verbalize each part of the tree. Children stand up and pretend they are trees acting out as you describe the parts.
- Wiggle your toes. These are your roots. Suck up the water, and nutrients from the soil up to your trunk, branches, and leaves. A big wind comes, hang on and spread your roots (legs) wide to make you strong against the wind. Feel the food from the roots travel through the trunk (tubes) to your branches and leaves. Your leaves are producing food from the sun. Feel the food from the leaves travel through your branches down to your trunk and roots. Now fall comes; your leaves fall off; shake them off. The earth near your roots freezes, you have little or no food. You start to sleep. If you need a little food you remember to store some in your roots. Take a little food from your roots, sip it through your straw. Now sleep again. Your bark protects you from the cold. Give yourself a warm hug – feel your bark.
- Add a story from Project Learning Tree (see resources) where children pretend to be a tree during a storm, or a quiet period, or a tree with an animal crawling up its bark.

SMALL GROUP LEARNING ACTIVITIES

Place samples of bark from many different trees on the table. Children match them to other sample textures. For example, match a rough bark to a rock, a smooth bark to a piece of cloth, a bumpy bark to a textured block from the design/engineering play center, etc. Children practice vocabulary while matching the bark.

Make parts of a tree available on laminated cards, a felt board, etc. for children to assemble as they say the names of the parts.

Use a branch to form parts of the tree in a sand area outdoors or sand/salt placed in a deep baking pan indoors.

Trace a Tree: From http://littlegiraffes.com/teaching-ideas/307/happy-fall-activities-ideas-for-autumn/

- You'll need: construction paper, tissue pieces of various colors, glue, and scissors.
- Trace a child's arm and hand to make a fall tree. Child glues torn colored tissue pieces on for the leaves.

Use your fingers to create this easy apple or cherry tree,

- Stamp the side of your hand in brown paint and stamp it on the paper as the trunk.
- Stamp your index finger in green paint and stamp it many times on the paper for the leaves (redipping in the paint as necessary).
- Stamp your pinkie finger in red paint and stamp it lightly on the paper for the apples (light stamps make rounder prints).

Build (and eat) a Pretzel and Grape tree snack!

Make a tree:

- Supplies: Cardboard tubes from paper towels, green and brown paint, cotton balls, brown yarn, scissors, glue, hole punch.
- Children paint the "trunk" (tube).
- Using scissors go around one end of the tube, cutting into it at different lengths. These will drape or fold out to form branches.
- Children glue cotton balls to the branches and dab with green paint.
- Punch holes around base of tree. Have children insert different lengths of yarn and help knot them (roots).

OUTDOOR LEARNING ACTIVITIES

Mystery Box: (inside is a piece of bark)
I have a mystery box. Inside this box is something that reminds me of the forest. You are going to put your hand in the box, feel, drop the item and pull your hand out. When you are feeling the item, think about what it might be *but* don't say anything. How does it feel? Round, flat? Rough, soft? Keep it in your head. When everyone has a turn to touch it, then you can raise your hand and tell us what you think it might be.

I remind each child to "keep it in your head, tell me later" when it is his/her turn. When everyone has had a turn to guess…pull it out. It's bark! On what part of the tree do we see the bark? It's on the biggest part of the tree, the trunk. Here is another piece of bark (birch). How does this piece of bark feel? I will pass it around. Or you could pass around an acorn, twig, etc.

How do you think the bark protects the tree? It protects it from the very hot or very cold weather, insects, and disease. Some insects are able to get inside the bark and may destroy the tree. But the bark can help stop most insects.

Walk to find different kinds of bark. Feel it; describe it. Does it feel like the bark in the mystery box?

Tree memory game: Invite students to get to know trees by touch and smell, using all of their senses other than sight. Taking turns with each student, place a blindfold or ask them to close their eyes as you gently and safely guide them to a tree. A large paper grocery bag also works well because it lets the light in but doesn't allow children to see the object. Try to use a spot where there is a grove of trees standing together. Ask the children to reach out and touch the tree that you've led them to, getting a feel for the size of its trunk and texture of its bark and any other nonvisual cues they can discover. Then gently lead them away, turn them around once or twice. Finally, remove the blindfold or ask them to open their eyes and challenge them to locate "their" tree, either by touch or by sight if they can!

The Bark as protection

- Start with a large log as the base.
- Using chicken wire, tie pieces of bark on, as you talk about the layers of protection for the tree.
- Add birds, twigs, leaves, etc. as you move forward with the unit.

INVESTIGATION #3

How are trees classified or grouped? Why do some trees have leaves in the winter and some not?

LARGE GROUP LEARNING ACTIVITIES

There are many ways to group or classify trees.
We can group them by size.

- Big and tall
- Small and short

We can group them by age – young or old
We can group them by the kind of leaves they have.

- Broad leaves (maple, oak, elm, etc.) have large surfaces to gather a lot of sunlight. Because of the large surface they also lose a lot of water by evaporation.
- Needles – They are long and thin. This shape slows down the evaporation of water so the tree doesn't lose as much water. Because of this adaptation, trees with needles often don't need as much water and can grow in areas that other trees can't.
- You can also group trees by how they lose their leaves.
- Many trees lose their leaves when the weather gets cool. On these trees, the leaves fall to the ground all at once and grow back again when the weather gets warmer. Many trees with broad leaves do this. We call them deciduous trees. Do you see any of these trees outside our window?

Other trees have leaves or needles that fall off a little at a time. These types of trees are always growing new leaves. As the old ones fall off, they are replaced with new leaves. We call these trees evergreens. A healthy evergreen tree is never completely without leaves.

SMALL GROUP LEARNING ACTIVITIES

Set up a station with groups of cards representing deciduous and evergreen trees (laminated if possible). Children will divide or separate them into two columns marked *deciduous* and *evergreen* (with sample photos or drawings to help).

Using the same strategy, students will separate groups of leaves and needles into the same two categories.

Children use basic shapes of a circle, oval, or triangle to categorize basic shapes of trees. Children will sort tree cards by shape.

OUTDOOR LEARNING ACTIVITIES

Leaf collection walk: Take a walk to collect as many kinds of leaves and needles as possible for the discover center.

On an outdoor walk, give each child a shape card (circle, oval, triangle, etc) to locate leaves that match the shape.

Laminate various leaves in clear contact paper. Stop at different trees for children to examine their leaf with the ones on that tree.

On an outdoor walk, children use a clipboard and tally marks (simple lines, or Xs) to identify types of trees they find.

INVESTIGATION #4

How does a tree grow?
How does a tree make pinecones or acorns?

LARGE GROUP LEARNING ACTIVITIES

Observe an Oak Sapling:
I have something behind my back that will grow very big some day. Bigger than this Nature Center or school, bigger than your house. What do you think it is? This is something that is getting ready to sleep for the winter. Show them. What do you think this might be? Take several responses. It is an oak sapling, It is a small tree. If I return it to the ground it will grow into a big tree. There are many different parts to trees. What parts do you see?

Where are the pinecone seeds?
Trees that grow cones are in a group called conifers. The cones of the conifers are very important because they are the place where the tree makes and shelters its seeds. Cones are made up of many scales. Scales are a kind of shelter for the seed. When it's time, the scales of the cone open and the seeds fall to the ground.

Read: *The Oak Inside the Acorn* (see bibliography)

SMALL GROUP LEARNING ACTIVITIES

Pinecone Toss Game (Math) Play outdoors if the weather is nice or inside if it's not.
www.toddlerapproved.com/2012/09/fall-pine-cone-toss-simple-counting-game.html

- Place three plastic bowls out in order from big to small (small is harder and farther away) and designate each bowl to have a certain number of points. Keep it simple and have the big bowl be worth 1 point, next bowl worth 2 points, and third (harder) bowl worth 3 points.
- Child sits or kneels behind the designated line.
- Child rolls the die and says/counts the number shown.
- Toss that number of pinecones into the bowls to try and earn the most points.
- Children will soon discover that throwing three into the farthest small bowl will earn more points than throwing all three into the first big bowl.

OUTDOOR LEARNING ACTIVITIES

Gather and classify seeds, using a stopwatch to see how long it takes for each to hit the ground. Children can then act out how the seed moves as it falls to the ground.

Make a seed parachute to demonstrate how seeds travel to grow more trees!

- Encourage students to explore the aerial transport and dispersal of seeds from large trees so they can understand some of the ingenious ways a tree uses its height and the wind to spread its seeds. Seeds from a tree can be carried far and wide by even a gentle breeze.
- Gather seeds from the pods of any local tree. Examine the helicopter wing structure of "whirly-gig" spinning seeds built for transport.
- You'll need: as many seeds as you can collect, Pringles potato chip can, plastic or cardboard hole punch, scissors, kitchen twine.
- Cut the base out of the Pringles can.
- Punch two holes into the sides near the base of the can so that you can feed twine through and hang the can upside down.
- Remove the serving cap at the top of the can and punch a hole in its center.
- Cut a length of twine and feed it through the hole in the cap, tie a stop knot at its end so that the twine "rip cord" will pop the cap off with a swift tug from below.
- Now snap the cap back on the can and, holding it upside down, pour seeds into the open base, filling it up to the brim with seeds.
- Hang your seed parachute from a tree or as high a spot as you can safely secure it to.
- When it is securely placed have a student pull the rip cord. If you have enough to make more than one, have students pull the cords in unison for an even larger explosion.

Extensions – Do more: Using a stopwatch, time how long it takes for all of the seeds to reach the ground from the moment the rip cord was pulled. Have students search the ground around the circle from where the seeds landed. Measure the farthest distances that any seeds flew from the source.

INVESTIGATION #5

Why do leaves change color in the fall?

LARGE GROUP LEARNING ACTIVITIES

Leaves changing color is a process that needs to be simplified for the developmental level of the child. Below you will find a good way to present this idea to children.

Trees are busy during spring and summer soaking up sun, water and oxygen. They use these three items to make their own food and to make chlorophyll. The chlorophyll coats their leaves with green, all spring and summer. In the fall, the weather changes; the days are shorter with less sunshine and the days are dryer with less water. Soon the tree does not have enough sun and water to make both its food and chlorophyll, so it stops making chlorophyll and the leaves return to its natural color. What do you notice about leaves in the fall? Yes, they fall off. Why do they fall off? They can't help the tree make food. There is not enough sun. If the leaves stayed on the tree they would get icy and heavy and might break the branches, damaging the tree. The trees store some of their food in the roots and save it for when they need it in the winter. The tree needs to go to sleep for the winter, just like animals.

SMALL GROUP LEARNING ACTIVITIES

Math/ELA/Science: How many days does it take for different kinds of leaves to turn *crunchy*? Go outside and gather a bag full of leaves. Seal them in a baggy at first to keep them from drying out too quickly.

- As young children observe the changes, you can help them build new vocabulary and record their observations.
- These leaves have been off of the tree for 1 day. The leaves are soft and pliable.
- After 2 days, they are starting to curl up around the edges.
- After 3 days, they are starting to get dry and stiff.
- After 4 days or more, they are starting to turn brown and crunchy.
- Children can compare data of different kinds of leaves.
- Sort a collection of leaves by size, shape and color, and texture.

Place groups of leaves in different stages in containers for **leaf art**.

Leaf rubbings: Put the leaf underneath the paper so the rough (back) of the leaf is facing up. Take a crayon and peel off the paper. Lie the crayon on its side and rub it over the template

Make a Leaf Melty: Make fall leaves from grated crayon melted between layers of wax paper and cut into leaf shapes.

- Try several different crayon colors across the wax paper, mixing some and isolating others.
- Grate crayon on one sheet of wax paper; cover with other half.
- Iron on medium low temp, just enough to melt the crayons and layers of wax paper together.
- Let it cool, trace your leaf shape, and cut out.
- Thread them with string; tape up in a window.

Cut Four Seasons of a Tree template in resource section to make a sequence game.

OUTDOOR LEARNING ACTIVITIES

During the summer when there is a lot of sun, the green helps the sunlight to make the tree's food. But in the fall and winter, they stop making food. Because there is not as much sun, the green doesn't need to show and the other colors show on the leaf and the leaves fall off. Leaves are important because they make the tree's food with sunlight and water. What colors do you see? Can you point to a red leaf? How about a yellow one? Let's go collect some? How many different shapes and colors can you find?

Children rake leaves in piles, then practice jumping over the piles using a one-footed leap and a two-footed jump.

INVESTIGATION #6

Who lives in trees?

Do you know who lives in trees?
Why don't we live in trees?
What are some physical characteristics animals need to live in trees?

LARGE GROUP LEARNING ACTIVITIES:

There are many animals that build their houses in trees. Let's see how many we can name.

Animals need a place to live just as we do. Some live in the water and others in holes in the ground, but many animals live in trees. We cannot live in trees because we do not have the special characteristics that are needed to move about in trees. If we were to take away trees, we would leave many animals without homes. Animals have special characteristics that help them use the trees as their home.

Claws: Many animals have claws that grip to the trees. Squirrels build their nests (called dreys) high up on the treetops, or in the tree's canopy. They have small claws on their feet that help them hold on to tree trunks and branches, even upside down! Birds have claws to help them hold on and balance on tree branches.

Read *Who Lives in a Tree?*

SMALL GROUP LEARNING ACTIVITIES

Children make animal homes (for tree-loving animals) in shoeboxes using natural materials and being sure to provide food, water, shelter and air. Make use of existing tree cavities you may have found on your walks to demonstrate the concept of a shelter.

OUTDOOR LEARNING ACTIVITIES

Animal homes scavenger hunt (in trees) – have children look for holes in trees, nests (big and small), spiderwebs, etc.

Look for holes and relate to how birds make homes in tree cavities

Rotting logs: Children can use tweezers to pick apart a rotting log and discover many, many insects that need this log to survive! Relate logs to their homes by using words such as apartment, roof, basement, etc. Reinforce how important it is to "put the roof back on" when the activity is finished.

Search high in trees for dreys (squirrel nests). They are the large ones up high in a tree.

How do trees help us?

LARGE GROUP LEARNING ACTIVITIES

- Trees are important. Can you think of some things we get from trees?
- They provide wood for building and pulp for making paper.
- They provide habitats (homes) for all sorts of insects, birds, and other animals.
- Many types of fruits and nuts come from trees – can you name some? (apples, oranges, walnuts, pears, peaches, etc.)
- Even the sap of trees is useful as food for insects and for making maple syrup!
- Trees also help to keep our air clean and our ecosystems healthy. We breathe in oxygen and breathe out carbon dioxide. Trees breathe in carbon dioxide and breathe out oxygen.
- Wood from trees can be used in a number of different ways including as a building material and energy source (such as a campfire).
- Trees prevent soil erosion, protecting the upper layer of the soil from drifting caused by wind and water.
- Trees are the homes of many animals and help provide the shelter and food for them and many plants. Can you name some animals that live within and/or need trees?
- A tree gives shade in the summer and keeps us cool.
- Walk a "room walk" and identify everything that is made from trees.

Pinecone Weather Station:
(www.science-sparks.com/2012/08/13/pine-cone-weather-station/)
Students set up a pinecone weather station to predict what the weather will be like. Collect some pinecones with children while on a walk. Set them up on a windowsill or shelf outside that can be observed from inside so the students can record what is going on with the pinecones each day. It's a good idea to attach them to the shelf or sill with some blu-tack or modeling clay so they don't fall over. When the weather is dry, the pinecones open up and when it's going to rain, they close down. It's a really fun way for children to start to think about what the weather will be doing.

Why does it work? Pinecones open and close depending on the humidity to help seed dispersal. Inside the pinecone there are lots of feather-light seeds. When it is dry, the pinecone opens; wind will catch the seeds, allowing them to be dispersed far away from the original tree. When humidity rises, pine cones close up to prevent seeds from escaping because they would become waterlogged and travel only a short distance from the original tree – to be shaded out by the "parent" competing for resources.

SMALL GROUP LEARNING ACTIVITIES

Torn Paper Tree: Children tear scraps of paper to create a tree of their own design.

Lincoln logs: Children design and build house, furniture, and other items out of wood.

Children use pretzels (as wood) to design and shape something made from wood.

Children make a fruit salad from fruits that grow on trees. Families can participate by bringing in a particular fruit and a picture of the tree it came from. Just be careful of allergies!

Children make applesauce – many simple recipes available online

OUTDOOR LEARNING ACTIVITIES

Make a Special Friend (adopt a tree)
Invite students to choose and get to know one tree near the school as a special friend. Take a photograph of each student with his/her tree to post in the classroom. Help students learn what kind of tree it is and how it changes from season to season. Measure the circumference of your tree. Are there ways we can help a tree stay healthy (e.g., by watering, protecting against damage from lawn mowers, carving, breaking branches, etc.)? Visit the tree periodically and watch for changes.

Maple sugaring: Tap a maple tree in spring – collect sap, boil down to make syrup and then make pancakes. Include taste tests of different stages of sap to syrup and then compare to bottled syrup.

On warm days, children eat lunch, have a snack, or listen to a story under the shade of a tree.

EXTENSIONS....DO MORE

Possible extensions for this unit:

- Go to a local wildlife sanctuary or wildlife rehabilitation center for a program with a naturalist or rehabilitator.
- Keep a list of trees you see year-round in your school yard or community and observe the seasonal changes
- Plant a tree and care for it.
- Invite a local gardener or landscape company to visit.

CHILDREN'S BIBLIOGRAPHY

Title	Author	Description
A Grand Old Tree	Mary Newell DePalma	Once there was a grand old tree, whose roots sank deep into the earth and whose arms reached high into the sky. Every spring the grand old tree flowered and bore cherries for the squirrels and birds that made their homes in her leafy branches. And every year, seeds from the tree scattered in the wind, along with many millions of leaves.
A Tree for Emmy	Mary Ann Rodman	Emmy loves trees, but her favorite is a mimosa tree in her Gramma's pasture. She loves swinging on its branches, playing with its fuzzy pink blossoms, and shaking its seed pods like maracas. For her birthday Emmy wants a mimosa tree of her own, but she's disappointed to find that none of the local garden stores sell wild trees
A Tree Is a Plant	Clyde Robert Bulla	A tree is the biggest plant that grows. Trees can live for a very long time, and they are alive all year long, even when they look dead in winter.
A Tree is Growing	Arthur Dorros	A picture book introduction to trees follows the growth of an oak tree over the course of a year.
A Tree is Nice	Janice May Udry	Trees are beautiful. They fill up the sky. If you have a tree, you can climb up its trunk, roll in its leaves, or hang a swing from one of its limbs. Birds can make nests in the branches. A tree is nice.
Animals That Live in Trees	Jane McCauley	Introduces a variety of animals, such as koala, fruit bat, walkingstick, snail, and howler monkey, that seek safety, food, and shelter in trees.
Be a Friend to Trees	Patricia Lauber	Trees are a valuable natural resource. People depend on trees for food, and animals depend on trees for food and shelter. We must protect them because we can't live without them.
The Busy Tree	Jennifer Ward	Introduce young readers to the amazing activities that go on in a tree. Acorns nibbled by chipmunks, ants scurrying across a trunk, a spider spinning a web. Everything adds up to a "busy tree."
Can You Find These Trees?	Carmen Bredeson	Learn how to identify many common trees by reading about their traits and seeing photos of the trees and leaves in nature.

Chick Pea and the Changing Trees: A Pull-the-Tab Book about the Seasons	Linda Cole Design Ltd.	Join Chick Pea and his bluebird friend Sweet Pea as they learn about the changing seasons.
The Fall of Freddie the Leaf: A Story of Life for All Ages	Leo Buscaglia	This is a story of how Freddie and his companion leaves change with the passing seasons, finally falling to the ground with winter's snow, is an inspiring allegory illustrating the delicate balance in nature.
***I Can Name 50 Trees Today!: All About Trees* (Cat in the Hat's Learning Library Series)**	Bonnie Worth	While stopping to admire some of the world's most amazing trees, the Cat and Co. teach beginning readers how to identify different species from the shape of their crowns, leaves, lobes, seeds, bark, and fruit.
In My Tree	Sara Gillingham and Lorena Siminovich	Turn the colorful die-cut pages of this irresistible board book to discover just what makes little owl's tree so cozy.
Leaves, Leaves, Leaves	Nancy Elizabeth Wallace	Join Mama and Buddy Bear's stroll through the seasons as they examine the development of leaves on their favorite trees. In early spring, Buddy wonders when the leaves will emerge from their buds and blossom into the wonderful shapes he and Mama like to collect in the summer months.
The Seasons of Arnold's Apple Tree	Gail Gibbons	Arnold collects apple blossoms in spring, builds a tree house in summer, makes apple pie and cider in the fall, and hangs strings of popcorn and berries for the birds in winter, among other seasonal activities.
Tap the Magic Tree	Christie Matheson	It begins with a bare brown tree. But tap that tree, turn the page, and one bright green leaf has sprouted! Tap again – one, two, three, four – and four more leaves have grown on the next page.
Tell Me, Tree: All about Trees for Kids	Gail Gibbons	Featuring a special section on how children can make a tree identification book of their own, this title is a bright and colorful introduction to trees, leaves, and their inner workings in nature.
The Apple Orchard Riddle	Margaret McNamara	In this child-friendly classroom story, the students learn a lot about apples and apple orchards – including how apples are harvested, how cider is made, and what the different varieties of apples are – while trying to solve a riddle.

The Apple Tree Pie	Zoe Hall	Two sisters rejoice as the colorful blossoms on their tree develop into big, red, and ready-to-pick apples. This concept book about how things grow includes an easy recipe for apple pie.
Leaf Man	Lois Ehlert	Fall has come, the wind is gusting, and Leaf Man is on the move. Is he drifting east, over the marsh and ducks and geese? Or is he heading west, above the orchards, prairie meadows, and spotted cows? No one's quite sure, but this much is certain: A Leaf Man's got to go where the wind blows.
The Oak Inside the Acorn	Max Lucado	It was hard for Little Acorn to believe he would ever be a big, strong oak tree. Soon Little Acorn grew into Little Oak. But now what was he to do? He just grew and grew until he became Big Oak, and his branches were big and strong – but still he didn't know what he was to do. Then one day Big Oak found that his strong branches were just right for a very special purpose.
This Tree Counts!	Alison Formento	If you listen carefully to the lone tree behind Oak Lane School, it has a story to tell, about... one owl, two spiders, three squirrels, four robins, five caterpillars, six ants, seven crickets, eight flies, nine ladybugs, and ten earthworms. What does this tree need?
We're Going on a Leaf Hunt	Steve Metzger	There are lots of beautiful fall leaves to find! Three friends have a big adventure hiking over a mountain and through a forest to collect leaves of all kinds and colors. What will they do with all their leaves at the end of the story?
Who Lives in a Tree	Susan Canizares	Photographs and simple text depict the many different animals that live in trees, from the roots to the branches.
Why Do Leaves Change Color?	Betsy Maestro	As children jump into piles of leaves and help their parents rake the yard, they also wonder: Why do leaves change color? This book includes detailed pictures of leaves in different sizes, shapes, and colors and a list of activities that kids can do with leaves.

FINGERPLAYS

The Apple Tree

Way up high in the apple tree,	*Point up high*
Five red apples looked at me.	*Hold up five fingers*
I shook that tree as hard as I could,	*Pretend to shake the tree with both hands*
Down came an apple,	*Wiggle fingers down from the air*
Mmmm, it was good.	*Rub tummy!*

Repeat with four, three, two, and one apple "smiled at me."

Five Little Squirrels

Five little squirrels with acorns to store. One went to sleep and then there were four!
Four little squirrels hunting acorns in a tree. One fell down, and now there are three!
Three little squirrels wondering what to do. One got lost, and now there are two!
Two little squirrels tossing acorns for fun. One got tired, and now there is one!
One little squirrel playing in the sun. He ran away, now there are none.

POEMS

The Beech Tree by Rose Fyleman

I'd like to have a garden
With a beech tree on the lawn;
The little birds that lived there
Would wake me up at dawn.

And in the summer weather
When all the leaves were green,
I'd sit beneath the beech boughs
And see the sky between.

Trees, trees, trees

Trees, trees, trees
Have roots, and trunks, and leaves,
Trees, trees, trees,
Have buds, and fruits, and seeds,
Trees, trees, trees,
A home for birds and bees,
We all need our trees, trees, trees...

Every Time I Climb a Tree by David McCord

Every time I climb a tree
Every time I climb a tree
I scrape a leg
Or skin a knee
And every time I climb a tree
I find some ants
Or dodge a bee
And get the ants
All over me

And every time I climb a tree
Where have you been?
They say to me
But don't they know that I am free
Every time I climb a tree?
I like it best
To spot a nest
That has an egg
Or maybe three

And then I skin
The other leg
But every time I climb a tree
I see a lot of things to see
Swallows rooftops and TV
And all the fields and farms there be
Every time I climb a tree
Though climbing may be good for ants
It isn't awfully good for pants
But still it's pretty good for me
Every time I climb a tree

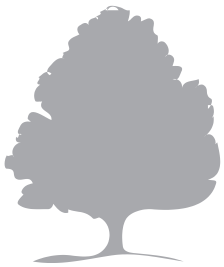
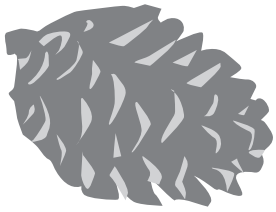
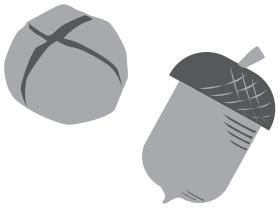
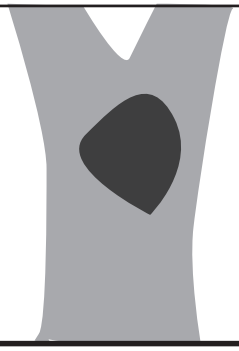
A Squirrel Song (Tune: "She'll Be Coming Round the Mountain")
I'll be gathering all the acorns till they're gone.
I'll be gathering all the acorns till they're gone.
I'll be gathering all the acorns, gathering all the acorns,
Gathering all the acorns till they're gone. (*children make collecting motion with their hands*)

I will put them all inside my little home.
I will put them all inside my little home.
I will put them all inside, put them all inside,
Put them all inside my little home. (*children pretend to place nuts in tree house*)

I will eat the nuts until the winter's gone.
I will eat the nuts until the winter's gone.
I will eat the nuts until, eat the nuts until,
Eat the nuts until the winter's gone. (*children pretend to eat acorns*)

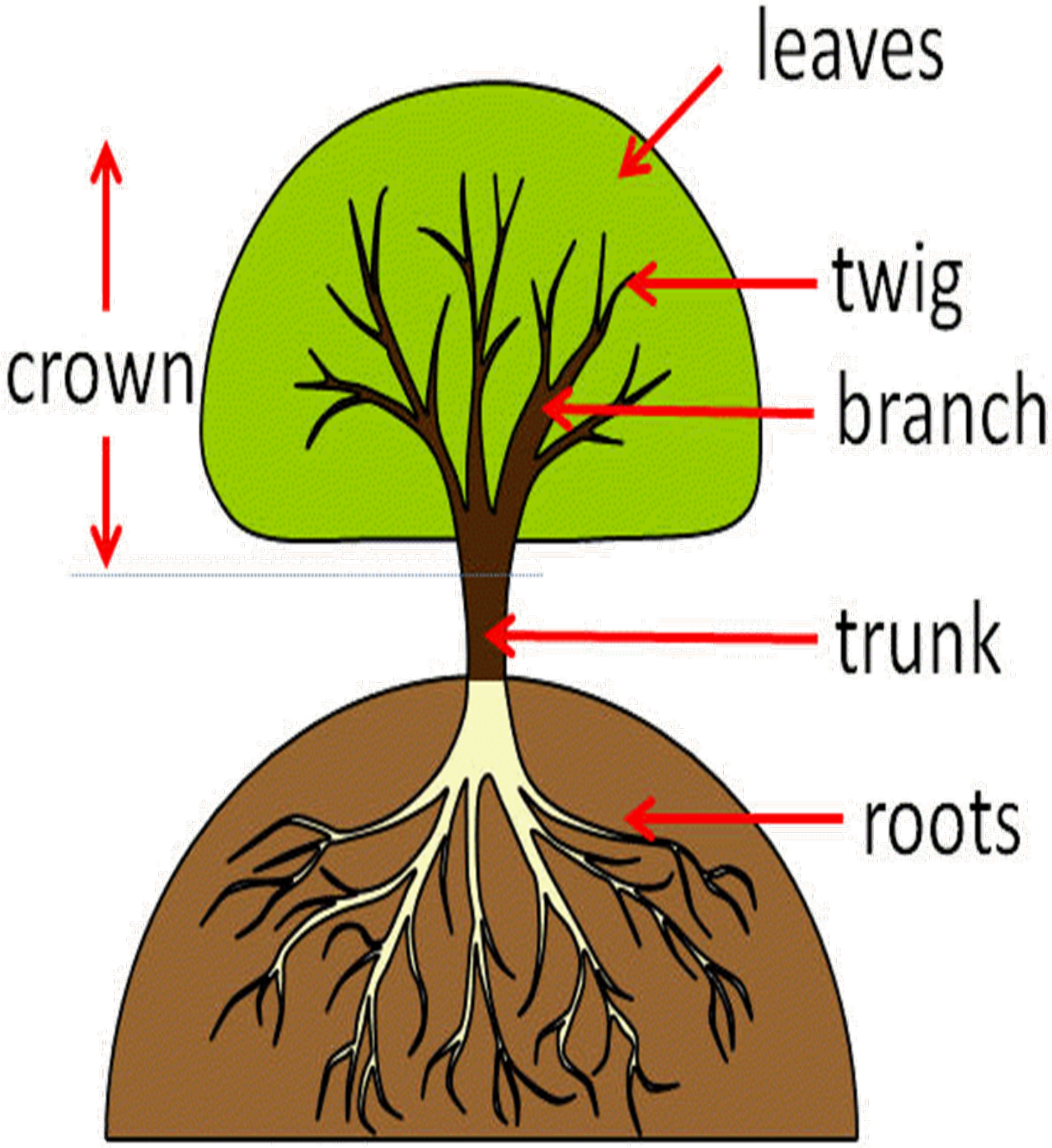
Then I'll do it all again come next fall.
I will do it all again come next fall.
I will do it all again, do it all again,
Do it all again come next fall. (*children make gathering motion with hands and arms again*)

BINGO

		
	**Free Space**	
		

Mass Audubon

Protecting the Nature of Massachusetts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