At Home with Nature

Nature doesn't just happen in a park; it can happen right at home!

Raleigh

A resource for **ELEMENTARY AGE CHILDREN** so they may feel right **AT HOME WITH NATURE.**

The Amazing Life of a Tree!

Videos, hands-on activities, stories and songs celebrating the lifecycle of a tree.

Let's Get Started

Discover how trees grow and change from seeds, to saplings, to mature trees and then to fallen dead trees that will decompose allowing new tree seeds to grow!

https://youtu.be/6HEBxRFyFHY

Hands-On Science

Create a tree cross-section that tells a tree's story***. Discover how some tree seeds are made to float in the wind*** with a fun activity.

Directions are below.

Music and Movement

Sing along and ***guess the creatures*** who live within the branches of trees.

https://youtu.be/ybMcb_Ydlq0

Literacy Connection

Enjoy a Native American legend attributed to the Cherokee Indians that tells why Pine stays green all winter long while many other trees are bare in the winter months…a sweet story that highlights the power of empathy. Find it at your favorite book seller.

Pine and the Winter Sparrow
Retold by Rabiah York Lumbard

Math Connection

Count and tally tree seeds and leaves. Use your math skills to ***estimate*** the height of trees.

Directions are below.

Creative Expression

Bake a batch of ***TREE COOKIES!***

Directions are below.

Let's Explore Outdoors

Take the learning outdoors with memorable family activities.

Details are below.

Hands-On Science

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Story of a Tree!

A slice of a tree's trunk can tell a tree's story. We can tell how old the tree was and how well it grew by looking at its annual rings. You will create growth rings that tell the story of a tree in this activity.

Materials Needed:

Paper Plate
Pencil or Pen

- Begin by placing a dot in the center of the paper plate. This dot represents the time when the tree's seed sprouted and the tree's life began.
- As you read the story below, draw growth rings around the dot. (Slow growth means that growth rings are close together. Rapid growth means growth rings are wide apart.)

Once upon a time, a tree grew in the forest. Its first 5 years were slow-growing years because the large trees overhead blocked the sunlight.

In its 6th year, the large tree next to it blew down in a storm. This allowed sunlight to reach the little tree and for the next 5 years it grew rapidly.

In its 10th and 11th year there was a drought and little tree could not get enough water. This caused the tree to grow very slowly for those 2 years.

In its 12th year, rain poured down in the forest. The tree had a good year of growth.

Then in its 13th year, bark beetles got under its skin and hungry caterpillars ate most of the tree's leaves. For 5 years the tree hardly grew at all and the tree was very weak.

- How will you finish the story? Draw rings to finish the tree's story.

Hands-On Science

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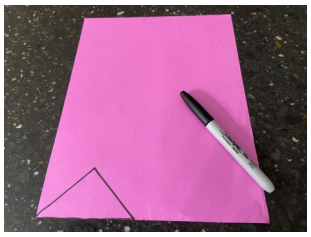
Twirling Tree Seeds!

Materials Needed:
Paper
Scissors
Paper Clips

Most plants have ways of dispersing their seeds. This gives the new plants a better chance to find what they need to grow. Some seeds float, some seeds roll, some seeds are carried away on the fur of animals. Some seeds are light and are carried by the wind. The samara that holds maple seeds has papery wings that twirl like a helicopter!

- You can make a helicopter that spins just like a samara that holds maple seeds.
- Cut a triangle that has a 4 inch base from paper.
- Cut a slit one inch into the center of the base.
- Fold one side of the cut up toward you and the other side down away from you.
- Put a paper clip across the opposite point.
- Hold the helicopter as high as you can and let if fall.

Watch your helicopter spin just like a twirling samara that holds maple seeds and moves them away from the parent tree.



Math Connection

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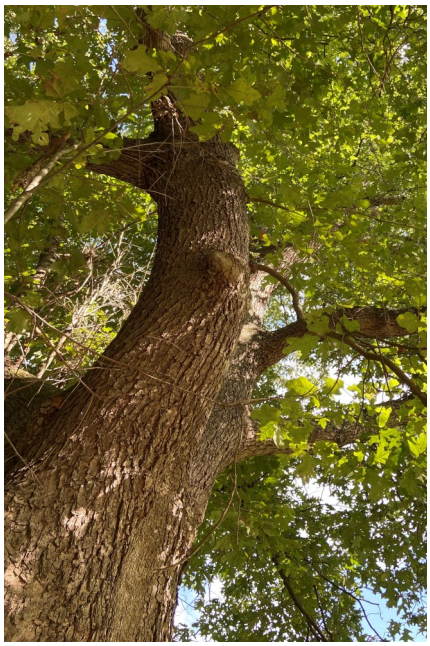
Collect and Count

Collect tree seeds and tree leaves that have fallen to the ground. Notice the different shapes of the leaves that you found. Notice that some leaves are single leaves with one stem - *SIMPLE LEAVES,* while others have leaf pieces attached to one stem - *COMPOUND LEAVES*. Make two piles - one with simple leaves and the other with compound leaves. Use paper and a pencil to tally the number in each category. Compare the total number in each category.

Notice the different shapes of the tree seeds you found. Are some items you found seed holders rather than seeds? Tree seeds need to move away from the parent tree so the new seedlings have enough space to grow well. Decide how each of the seeds you found might move away from the parent tree: roll away, attach to an animal's fur or float away in the wind. Use paper and pencil to tally the number in each category. Compare the total in each category.

How Tall?

There are many ways to measure trees. Here's a fun way! Ask a friend to stand next to a tree. While you are standing away from the tree, hold a pencil out at arm's length with the eraser end even with the top of the head of your friend. Place your thumb on the pencil even with your friend's feet. Note the spot on the tree that meets the tip of the eraser. Lift the pencil to measure this amount again. Continue to determine how many of that friend would fit into the height of the tree. Multiply this number by the height of your friend.



Music and Movement

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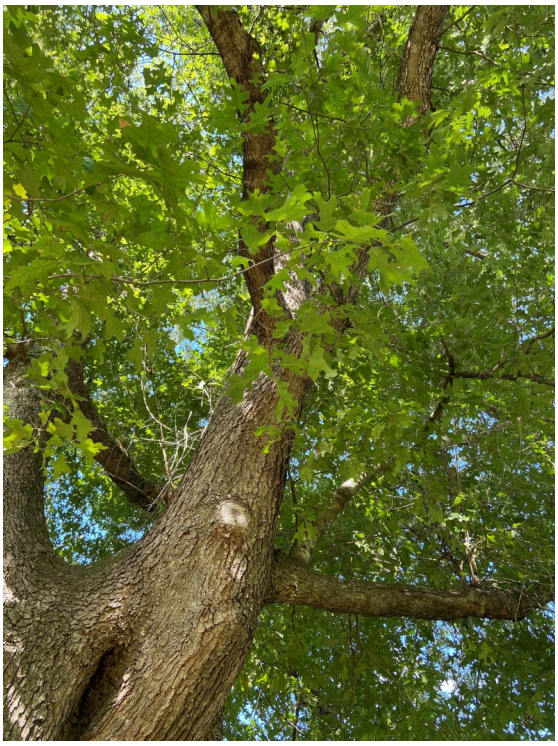

Guess Who?

After flying high, I need a place to rest.
On the branch of a tree is where I build my nest.
Squishy worms and grubs, I munch on eagerly.
Be kind to a tree, it is a home for me.

I scamper through the branches gathering my dinner.
If I am disturbed, you will surely hear me twitter.
A hollow in the trunk becomes my treasury,
Be kind to a tree, it is a home for me.

You might me find sleeping on a bright and sunny day.
When nighttime comes around, it's time to wake and play.
Mice taste delicious; I'm not sure if you'll agree.
Be kind to a tree, it is a home for me.

I hide in the branches and look just like a stick.
If you don't look closely, I'll give your eyes a trick.
You may not even notice I'm chewing on a leaf.
Be kind to a tree, it is a home for me.

Creative Expression

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Family Fun - Bake Tree Cookies!

Materials Needed:

1 1/2 cups all purpose flour
1/2 tsp ***nutmeg***
1/2 tsp ***cinnamon***
1/2 tsp baking soda
1/2 tsp salt
1/2 cup softened butter
2/3 cup brown sugar
1/4 cup sugar
1 egg
1 1/2 tsp ***maple*** extract
1 tsp vanilla extract

Cookie Topping:

2 tbsp brown sugar
1 tbsp sugar
1/4 tsp ground ***nutmeg***

Directions:

- Preheat the oven to 350 degrees.
- Mix the flour, nutmeg, cinnamon, baking soda and salt. Set aside.
- In a separate bowl, cream butter and sugars. Add the egg, maple extract and vanilla extract.
- Combine the wet and dry ingredients.
- Drop by heaping tablespoons onto a baking sheet that has been lined with wax paper.
- Bake for 8-10 minutes.
- Stir together topping ingredients and sprinkle over cookies as soon as they are removed from the oven.
- Remove cookies from the baking sheet and cool.

Cinnamon – *Cinnamon comes from the bark of the cinnamomum tree. Farmers remove the outer bark off the tree, then shave off the inner bark - the cinnamon layer. As it dries, the cinnamon curls into quills which are cut into sticks or crushed into powder.*

Nutmeg *- Nutmeg comes from the seeds of myristica trees.*

Maple Extract – *Pure maple extract is made from the sap of maple trees.*

Let's Explore Outdoors

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A Tree Picnic

Sit beneath the shade of a favorite tree and enjoy a TREE PICNIC - foods that come from trees! Enjoy fruits like apples, cherries, bananas, oranges and other tree fruits. Enjoy nuts like almonds and walnuts. Enjoy "tree cookies" made with maple extract as well as cinnamon and nutmeg, both spices that come from trees. If you happen to use paper plates or paper napkins for your picnic, thank a tree!

Many Gifts

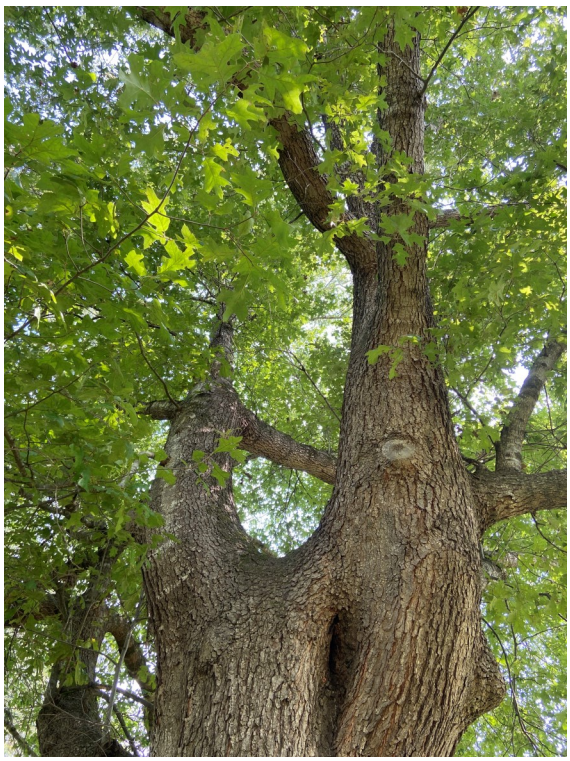
Begin by walking through your home and identifying all the different "tree objects" you can find. Make a list of all the things that come from trees. From wood furniture and doors... to baseball bats... to rubber bands made from latex... to the many items made from paper... our lists are long ones!

Sit under a tree and read
The Giving Tree
written by
Shel Silverstein.

Let's Explore Outdoors

Raleigh

Going on a Tree Hunt



Search your yard or neighborhood for trees! Can you find:

- ◊ **Tree seeds lying on the ground**
- ◊ **A tree seed that has been chewed upon by a hungry animal**
- ◊ **A tree seed that has sprouted**
- ◊ **A small tree - count its branches and its leaves**
- ◊ **A tree the same size as each of your family members**
- ◊ **Exposed tree roots**
- ◊ **A tree with a trunk so wide it takes two family members to reach their arms around it**
- ◊ **A tree with an unusually shaped trunk or branches**
- ◊ **A tree with a swing attached to a branch**
- ◊ **A tree with a nest in its branches**
- ◊ **A fallen tree that is now a home for bugs or other wild creatures**

Let's Explore Outdoors

Raleigh

Meet a Tree

Get to know a tree near your home. Choose a tree that is easily accessible. *Look* closely at the tree's bark and its leaves. *Listen* to the tree. Does it make sounds? Sit quietly beneath the tree and listen for animals that may live in its branches. Put your ear to the tree's bark and listen to the inside of your tree. *Touch* the bark of the tree. How does it feel? *Smell* the bark and leaves. What do these smells remind you of?

Stand back from the tree. What is its shape? Is your tree standing alone or is it a part of a forest? Are there flowers, seeds or fruit on your tree? Are there plants growing under your tree? Are there animals - birds, insects, squirrels - on your tree?

If you could ask your tree a question, what would you ask?

Draw a picture of your tree. Hang this picture in your home.

Visit your tree in each season and observe how your tree has changed.

Look Closely

Look closely at a tree stump or dead log. Do you see creatures or plant life on the log or beneath the bark? These creatures are called decomposers. They live in, tunnel through and chew upon the dead log and turn it into soil!