



Michigan Nature Association

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Beau-TREE-ful!

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Learning Objectives:

At the end of the lesson, students will be able to:

1. Explain how Deciduous and Conifer trees are different.
2. List and describe the parts of a tree .
3. Name three things a tree needs to survive
4. Identify items from a from the forest floor.
5. Compare a conifer leaf to a deciduous leaf.
6. Explain what trees provide for people.
7. Name 3 things trees provide for animals.

List of Needed Materials:

Mystery Objects- Lunch bags

Leaf Imprints – Crayons, Paper, Clipboards

What lives in the forest?

- Squirrels, chipmunks, birds, deer, worms, insects, and Trees

Did you know that most of these animals rely on trees for their shelter or home?

- Trees make up the forest canopy and create a place for the animals to live.
- Some trees also provide food like nuts and berries for smaller animals to eat. Acorns are a great meal for a chipmunk or squirrel and even some birds. Insects eat the leaves and bark from a tree, that is where the holes in some of the leaves come from. Deer and moose also eat the leaves, as well as the bark and fruit!

Trees are very important to humans, animals, and even bugs! There are many different types of trees, let's investigate how trees are different.

We are going to start today with a Scavenger hunt. I am going to hold up a part of a tree that I want you to find on the forest floor. Do not take any parts from living trees, only from the ground.

Ok, here we go. Can everyone find a leaf on the ground? (Hold up a leaf). Pine cone, needles, bark, twig or branch, helicopter, acorn (if available) Great job everyone! Place the parts in your paper bag so that we can use them later.

Life Cycle of a Tree

We are going to act out a tree's entire life, use your imagination!

- a. Trees begin as seeds! Let's crouch down and pretend we are seeds.
- b. Ohh, I think I feel water! Oh look, I am sprouting roots! Are you sprouting roots yet? OK, now that we all have our roots, we are ready to sprout up and out of the ground.
- c. Sprout up and out into the world! Can you feel the sun warming you and giving you energy? The first thing that grows when I come out of the ground is my trunk.
- d. Its time to grow some branches! Stick your arms out like they are new branches.
- e. That sun feels so good and provides me with so much energy! I feel like its time to have some leaves! All of your fingers, one by one, look! We all have leaves!
- f. Well, its time to grow into an adult tree and form part of the forests canopy, bring your arms together and over your head, just like mine. Now we are all mature trees!
- g. Now we need to make seeds so that we can create other little trees. Sprout some seeds in your hands and hold onto them dearly.
- h. Oh no! A bad storm is coming! Hopefully we grew some tough roots and have a sturdy trunk! Whoa! (leaning over but not falling) That wind is strong, can you feel the wind? Use your imagination, lean! During the storm, I let my seeds go, that way they can begin their lives the same way we did ours!
- i. Well, I've been alive for a very long time and I am getting tired of standing up straight and tall, it's time for me to let the other trees join in on the canopy. Slowly I will shrink down.

Trees and Their Parts

- A tree begins its life by sprouting roots out of a seed. These roots suck up water and nutrients to help it grow! Nutrients are the tree's vitamins, just like you take vitamins to help you grow.

-Next, the tree begins to grow up. It grows a trunk, or stem. This (pointing to the trunk) is the trunk of a tree. Can anyone tell me what this covering on the trunk is called? Right! Its called the bark. Bark helps protect the tree from harm. Deer and other animals, as well as snow and rain can be harmful to trees. So they grow bark to protect their 'insides'.

-Next, the tree grows branches. Can everyone look up and see the branches?

-Off of the branches, are smaller branches called twigs. Then from there, can you see what is on the ends of the smallest branches? Leaves! Leaves are very important to a tree.

-Trees need sunlight to make energy. Do you need energy to live? Yes, every plant needs energy to live! The leaves create more area for the tree to collect sunlight. In the fall the trees have stored enough energy and they let go of their leaves before winter.

- Some other parts of the tree are seeds. Did any of you know that an acorn is a seed? How about this? (holding up a helicopter...) this is a seed as well! Sometimes we call these seeds helicopters because of the way they spin to the ground. What do these seeds turn into? Yes, seeds grow into trees, just like we talked about a few minutes ago. They sprout roots, then grow up from there!

-What kind of tree has its leaves all year round? Let me give you a hint, its leaves don't look like leaves, but they are, and they are called needles. Can you think of a tree that has needles?

- Conifer trees, or evergreens, are green all year round, that's why they call them ever green! Deciduous trees have leaves which they lose in the fall.

- The Conifers have leaves also, we call them needles. They are a different type of leaf though. Conifers are different from deciduous trees in that they don't drop their leaves in the winter. They hang onto their leaves and continue to collect sunlight all year long creating energy!

- Conifers have their seeds inside of cones! Can everyone find a cone on the ground? Cones differ in shapes and sizes, as well as how they feel.

Activity: Leaf Imprints

Now we are going to make leaf imprints.

- Find 3 different leaves that you would like to make an imprint of. This leaf can be big, small, round, jagged, whatever you want! Find 3 perfect leaves and bring them back.

- Ok, take the first leaf and place it under the paper. Now, run your crayon back and forth over the leaf. You can use the same color of crayon as the leaf if you would like, that way you can remember what color the leaf was too! You can even use two colors if you want! You have to press down a bit to get the imprint to show through. Once you are done with the first leaf, try it again in a new spot on the paper with your second leaf. Now you can do a third leaf if you would like.

Activity: Mystery Bags

You are going to reach into one of the bags that I have made for you. Do not look into the bag or pull what is in it out of the bag. I want you to feel what is inside of the bag, only using your hands, and then I want you to go into the forest to see if you can find the part of the tree that is the same as the one in the bag. Take your time feeling the item in the bag and don't peek!

Test What You Learned!

1. Compare deciduous and conifer trees.
 - *Deciduous drop their leaves and conifer keep needles and stay green all year; conifers have seeds in cones.*
2. Name me three types of food that trees make for animals?
 - Seeds, nuts, leaves bark, fruit
3. What three things do trees need to survive?
 - Sunlight, nutrients and water
4. List and describe the parts of a tree
 - Roots, leaves, trunk, bark, seed
5. Name 3 things trees provide for animals.
 - Food, homes (shelter), hiding (cover)

Possible Mystery Bag Contents:

- A: Leaf
- B: Acorn
- C: Branch (twig)
- D: Needles
- E: Helicopter
- F: Bark
- G: Cone
- H: Root

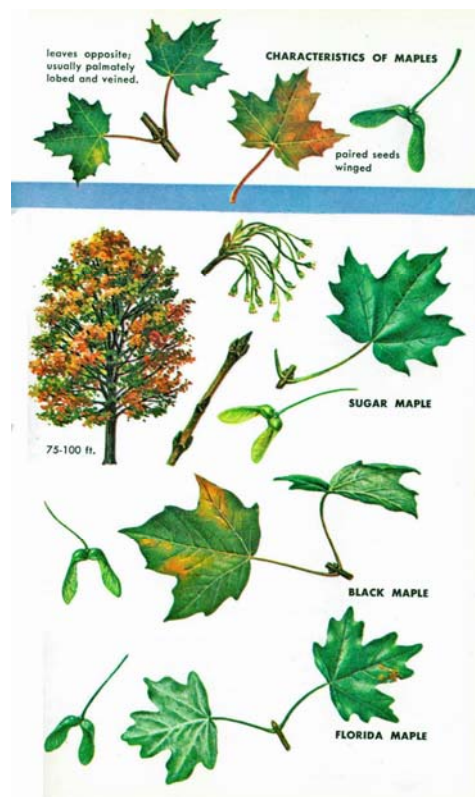
Other Resources

There are many field guides that can help you identify trees based on the shape and color of their leaves, where they typically live and how the tree has grown.

These guides are wonderful resources that you can take with you into the forest, so if you have a chance pick one up before you complete this lesson and bring it with you.

This is a great guide:

<http://www.amazon.com/National-Audubon-Society-American-Trees-E/dp/0394507606>



Sources:
American Forest Foundation. 2003. *Project Learning Tree PreK-8 Activity Guide*.