Lesson 3: Tree Talk

Target audience: K- 6th-grade youth
Time needed for station: 30 minutes
Volunteers needed to support station: one to two

Objectives

Youth will be able to:

- Describe how tree rings relate to tree age
- Describe xylem [zi-luhm] and phloem [flo - um] using a model of a tree
- List and identify tree parts, and describe their function
- Describe leaf characteristics
- Identify trees by their leaves
- List and identify products from trees.

Materials

PROVIDED

- 1 tree cookie
- 1 magnifying glass
- Tree and Leaf Teaching Mats (*https://www2.ag.purdue. edu/extension/nature/Documents/Tree%20and%20 Leaf%20Teaching%20Mats.pdf*)
- One copy of 50 Trees of Indiana book (*https://mdc.itap. purdue.edu/item.asp?Item_Number=4-H-15-80*)
- Learning About Leaves: A Forestry and Natural Resources Coloring Book (*https://www.edustore.purdue. edu/item.asp?Item_Number=FNR-411-W*)
- Know Your Trees handout (*https://ag.purdue.edu/ extension/nature/Documents/Know%20Your%20Trees.pdf*).
- Mystery Bag; need to be filled with nature (pine cones, flowers, etc.)
- Goods from the Woods box
- Goods from the Woods cards
- Paper
- Crayons
- Parts of a tree model-made of a toilet paper roll, straws, paper, and a dowel rod

NOT PROVIDED

- Leaves to use for leaf rubbings
- Mystery bag items
- Goods from the Woods info sheet (*https://www. ncforestry.org/wp-content/uploads/2014/04/GFWCARD.pdf*)
- Parts of a Tree image (*https://www.ncforestry.org/ wp-content/uploads/2013/06/Parts-of-Tree-Image.gif*)
- Parts of a Tree Model Sheet and instructions (*https:// www.plt.org/educator-tips/diy-model-to-explain-inner- tree-parts*)

Background info

General description of how this activity connects families with nature and health:

Participants will learn together about the trees in their environment. Learning more about trees will support curiosity and interest in nature, encouraging participants to spend time with their families outdoors while gaining the benefits of better health.

- Participants will connect with nature while practicing the life skills of decision making, problem solving, interpreting information and communicating with others.
- Participants will identify trees in the surrounding environment.

> **WIN! Tip**
>
> *Access to parks and greenspace can foster increased physical activity and reduce risk of obesity*
> *(Children & Nature Network, 2016).*

Procedure

BEFORE THE WORKSHOP
Collect paper and crayons, and several types of leaves for leaf rubbings. Collect tree-related materials for the mystery bag. Print copies of Learning About Leaves: A Forestry and Natural Resources Coloring Book (*https://www.edustore. purdue.edu/item.asp?Item_Number=FNR-411-W*) for each participant to take home.

SAFETY GUIDELINES
Visit the site ahead of time to locate any hazards, such as holes, hanging branches, protruding tree roots, poison ivy, etc. Always encourage youth to walk, rather than run.

Consider these:

- Are boundaries for participants clear?
- Have you set expectations for being outside?
- Do you have a warning system for inclement weather, a first aid kit, insect repellent, and sunscreen?
- Is everyone dressed appropriately?

1. Explain to participants that they will be learning about trees from the inside-out. They will begin by looking inside a tree at the tree's rings and learning how trees transport food and water.

2. Guide participants through Activity 1: Tree Cookies, and Activity 2: Parts of a Tree Model.

3. Explain to participants that they will now look at the outside of a tree and all its parts.

4. Guide participants through Activities 3-5 below.

5. Tell participants that they can use their knowledge of tree parts and tree leaves to identify trees.

6. Take participants outside and guide them through Activity 6: Know Your Trees. While outside, share the WIN! Tip with participants (Background Info).

7. Lastly, explain to participants that we use trees for many things in our daily life.

8. Take participants inside and guide them through Activity 7: Goods from the Woods.

ACTIVITY 1: TREE COOKIES
Youth can examine the tree cookie to determine the age of the tree. Ask youth to count the tree rings. A tree ring is added under the bark each year of the tree's growth. The greater the width of the tree ring, the better the growing conditions. Ask youth to share: How old was the tree when harvested? What can you learn about this tree by examining the tree rings? Use the magnifying glass to more closely examine the tree rings.

ACTIVITY 2: PARTS OF A TREE MODEL
Use the Parts of a Tree Model Sheet (*https://www.plt.org/educator-tips/diy-model-to-explain-inner-tree-parts*) and/or the physical model to explain how xylem and phloem transport water and food.

ACTIVITY 3: PICTURES OF TREE PARTS
Use the Parts of a Tree image (*https://www.ncforestry.org/wp-content/uploads/2013/06/Parts-of-Tree-Image.gif*) to introduce the following terms. Ask youth how each tree part is like one of our body parts.

Crown – Leaves and branches at top of tree

Trunk – Supports the tree

Bark – Protects the tree from insects, disease, storms and hot or cold weather

Leaves – Make food through photosynthesis

Needles – Make food through photosynthesis

Roots – Give trees water and minerals from soil

ACTIVITY 4: GETTING IN TOUCH WITH TREES (MYSTERY BAG)
Collect one or more objects related to trees (twig, acorn, leaf, bark). Place the objects in a "mystery bag" so they can be felt but not seen. Ask youth to reach in and try to identify the object in the bag by feeling it:

• Can you identify objects by only feeling them? What is important about your sense of touch? How do you use it? What parts of the tree did you touch? (relate back to Activity 3).

ACTIVITY 5: LOOKING AT LEAVES
Show the participants the Tree and Leaf Teaching Mats (*https://www2.ag.purdue.edu/extension/nature/Documents/Tree%20and%20Leaf%20Teaching%20Mats.pdf*).

Ask youth: What differences and similarities do you see? Tell participants that they will be further exploring leaves by creating leaf rubbings.

Instruct participants to place a leaf on a smooth, hard surface, vein side up, and cover with a piece of paper. Rub crayon back and forth across the paper, directly over the leaf. Ask the participants: What do you see?

ACTIVITY 6: KNOW YOUR TREES
Go outside and see how many different trees you can find to complete the Know Your Trees activity, which involves finding trees in nature that fit certain descriptions. Use the Fifty Trees of Indiana book to identify trees (*https://ag.purdue.edu/extension/nature/Documents/Know%20Your%20Trees.pdf*). Give participants copies of Learning About Leaves: A Forestry and Natural Resources Coloring Book (*https://www.edustore.purdue.edu/item.asp?Item_Number=FNR-411-W*) to take home.

ACTIVITY 7: GOODS FROM THE WOODS
Go through the box filled with labeled products from trees. Ask participants what part of the tree they think each item comes from. Refer to the Goods from the Woods info sheet for more detail (*https://www.ncforestry.org/wp-content/uploads/2014/04/GFWCARD.pdf*). Use the Goods from the Woods Cards to introduce even more wood products.