

# Field Enhancement 1: All About My Tree

## NUTSHELL

*In this lesson – located in the schoolyard, park, or forest with enough trees for each student (or pair of students) to adopt one tree as their own – students record their observations and draw an adopted tree. Students then share information about their trees and create a class scrapbook.*

### ENDURING UNDERSTANDING

- A tree is a perennial plant (lives more than one growing season) with a well-defined woody stem, crown, and roots.

### ESSENTIAL QUESTION

- How does a tree's structure enable it to survive?

### OBJECTIVES

Upon completion of this lesson, students will be able to:

- Observe various features of trees.
- Draw these tree parts: trunk, crown, and roots.
- Draw a picture of a tree's basic needs: nutrients, sunlight, space, air, and water.

### SUBJECT AREAS

Arts, Science

### LESSON/ACTIVITY TIME

**Total Lesson Time:** 55 minutes

- Introduction .....10 minutes
- Activity .....30 minutes
- Conclusion .....15 minutes

### STANDARDS CONNECTIONS

Standards for this lesson can be viewed online at the LEAF website ([www.leafprogram.org](http://www.leafprogram.org)).

### FIELD ENHANCEMENT CONNECTIONS

This lesson ties closely with **Lesson 1, Tree Hardware**.

### BACKGROUND INFORMATION

Just like people, every tree is different. Even two trees of the same age and species planted right next to each other take on individual characteristics. Although their general growth pattern might be similar, each tree has its own fingerprint, so to speak. In addition, environmental factors (like insects chewing on leaves and birds building nests) can add to the differences.

There are several things about all trees that are similar no matter the species, age, or growing site. All trees have the same basic needs. Trees need **nutrients** from the soil in order to grow and reproduce. Air is necessary for trees to get the carbon dioxide they use in photosynthesis. Trees also need energy from the sun to complete the process of photosynthesis. In photosynthesis, trees use the sun's energy to convert carbon dioxide and water into sugars and oxygen. Besides aiding in photosynthesis, water aids in the transportation of nutrients. **Space** is also one of the tree's basic needs. Root systems need room to grow, as do branches, leaves, and trunks.

Another thing that makes all trees similar is their three basic parts: **trunk**, **crown**, and **roots**. The trunk provides support for the branches and leaves. It also acts as a transportation connection between the leaves and roots. The leafy crown is where photosynthesis takes place. A tree's unseen root system may spread out even farther than the crown of the tree. Large roots anchor the tree, store sugar, and serve as a path for nutrients and water to reach the rest of the tree. Small roots that grow from the large roots absorb water and nutrients from the soil.

## VOCABULARY TERMS

**Crown:** The part of a tree with live branches and leaves.

**Nutrients:** The things in the soil that a tree needs to live and grow.

**Roots:** The part of a tree that works underground to get water and nutrients for a tree to use.

**Space:** The area that a living thing needs to grow.

**Trunk:** The part of a tree that the crown grows on and connects the crown to the roots (often called the stem).

## TEACHER PREPARATION

Visit the teaching site to be sure there are enough trees for each student (or pair of students) to adopt one. In addition, locate as many of the following as possible:

- Dead trees
- Living trees
- Young trees
- Old trees


## PROCEDURE

### Introduction - Tree Observation Walk

1. Take your group on a short walk outside to take a closer look at some trees. Try to find dead trees and living trees, old trees and young trees. Allow students time to get a close look at several different trees.
2. Stop at one tree and point out the trunk, crown, and roots of the tree.
3. At another tree, discuss what trees need to survive: nutrients, sunlight, space, air, and water. (*Nutrients come from the soil and help*

## MATERIALS LIST


### For Each Student

- Student Pages  **1-2, All About My Tree**, with holes punched in them with a 3-hole punch
- Crayons
- Clipboard

### For the Class

- Three-ring binder

### For the Teacher

- One copy of Student Pages  **1-3, Forest Memory**
- Tape/poster putty
- One ball
- Marker board or chart paper and markers


## SAFETY PRECAUTIONS

Visit the teaching site ahead of time to locate any hazards, such as hanging branches, protruding tree roots, holes, poison ivy, or stinging nettle. Encourage students to walk, not run, at all times when in a forested area.

*the tree grow. Sunlight is where trees get energy that they make into food. Space is needed so trees can grow and spread their roots and branches. Air is needed for the tree to get carbon dioxide. Water is needed for trees to make food and to transport nutrients in the tree.)*

4. Explain that each student (or pair of students) will adopt a tree. Students should record special information about their tree on a worksheet. Later, the worksheets will be put together to make a class scrapbook about their adopted trees.

## Activity - All About My Tree

1. Match each student or pair of students with one tree that they can adopt as their own.
2. Give each student Student Pages  **1-2, All About My Tree**, a clipboard or notebook to use as a writing surface, and several crayons. (Even if two students are adopting one tree, each student will still fill out a worksheet.) Guide them through the following activities on their Student Page:
  - Using the space on the worksheet, draw a picture of your tree, including the trunk, crown, and how the roots might look underground. Be sure to notice leaf shape, bark color, etc. Draw an arrow from the word “crown” in the left column to the crown of your tree. Do the same for the trunk and roots.
  - Circle the picture on the worksheet that reminds you of how big your tree is.
  - Do any animals live on or near your tree? Look carefully on the ground around your tree, on the bark, branches, and leaves of your tree. Circle all the animals on the worksheet that you found on or near your tree.
  - Use the space on the worksheet to draw what your tree needs to survive (nutrients, sunlight, space, and water).
  - Look at the shape of your tree’s crown. Circle the picture on your worksheet that reminds you of the shape of your tree.

## Conclusion - Sharing About My Tree

1. Take your students back to the classroom. If necessary, give them a few minutes to finish drawing and writing about their trees.
2. Ask students to share with the group one special thing about their tree. Review what trees need to survive: nutrients, sunlight, space, air, and water. Review the three basic parts of a tree: trunk, crown, and roots.
3. Put the student worksheets together in the three-ring binder to make one class scrapbook.

## Extension - Optional Ideas

You may want to have students create a journal page about their tree.

- Listen to your tree. Does it make any sounds? Write or draw about the sounds that you hear on a piece of paper.
- Look at your tree from different angles: lie on the ground underneath your tree and look up at the branches, look at your tree from far away, sit with your back to your tree and look at your tree’s surroundings, stand very close to your tree and take a careful look. Draw a picture of your tree from one of these new angles.
- Carefully collect something from your tree that’s already on the ground: leaf, seed, twig, soil, or small piece of bark. Add it to your scrapbook.
- Make a leaf and/or bark rubbing with crayons.
- Make a leaf print with paint.
- Dip a twig in paint and paint a picture.

## Extension - Seasonal Ideas

You may decide to make seasonal visits to your adopted trees. In this case, each student can create a scrapbook about his or her tree.

- Draw a picture of how your tree looks this season and include the surroundings. Be sure to notice how the tree’s shadow looks different at different times of the day or year.
- Are any new animals living on or near your tree? Look carefully on the ground around your tree, as well as on the bark, branches, and leaves of your tree.
- Draw pictures of the animals you see this season.

**“He who plants a tree.  
Plants a hope.”**

★ Lucy Larcom ★

## SUMMATIVE ASSESSMENT

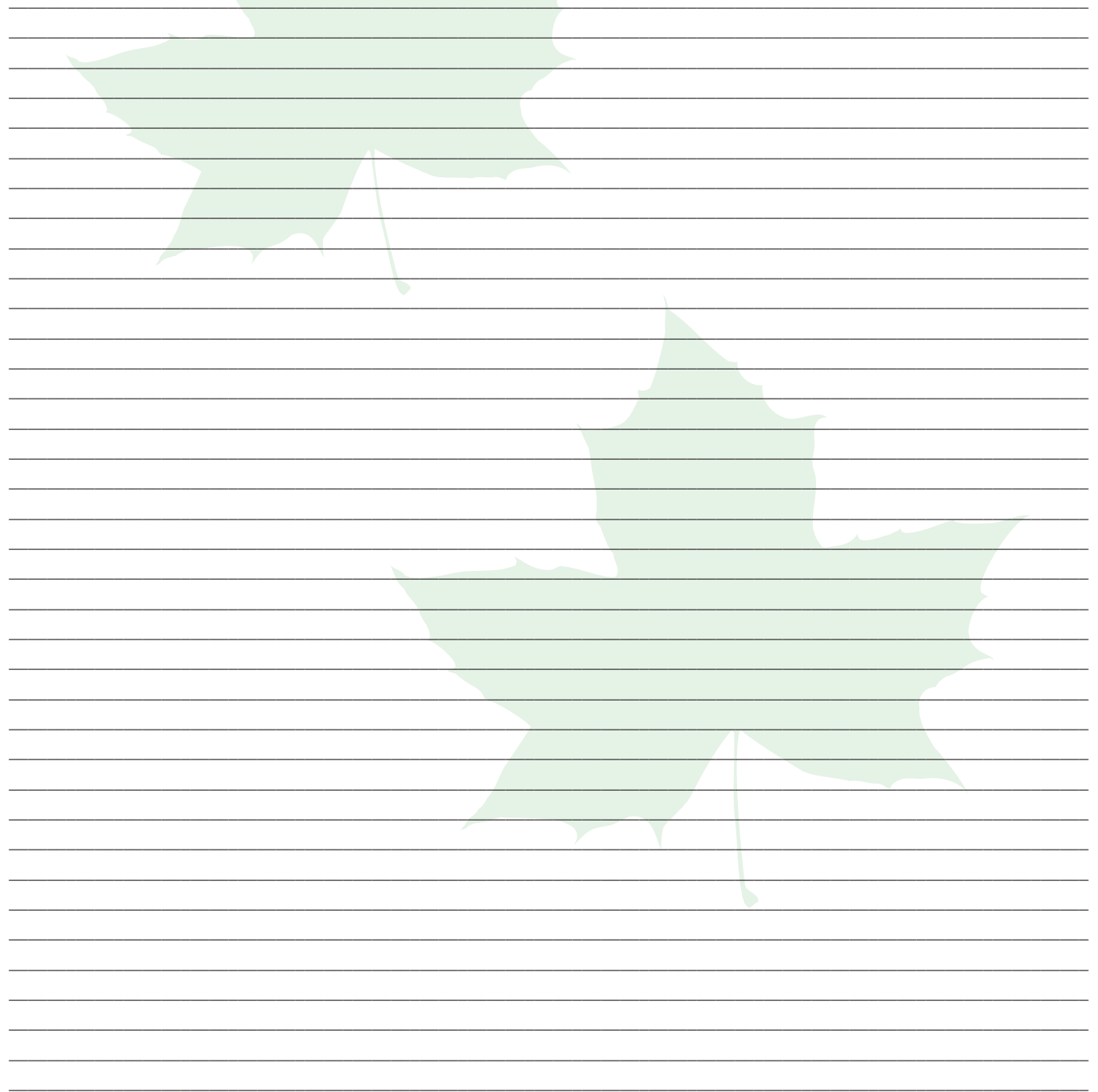
Have students draw a tree near their home. They should label its parts (crown, trunk, roots) and list or draw the animals that live in or near the tree. They can also note any unique features of their tree.

## SOURCES

*Project Learning Tree K-6.* (1990). Washington D.C.: The American Forest Council.

*A Teachers' Guide to Arbor Month.* (1996). St. Paul: Minnesota Arbor Month Partnership.

## NOTES



## ALL ABOUT MY TREE

This is a drawing of my tree. It has a crown, trunk, and roots.

## ALL ABOUT MY TREE

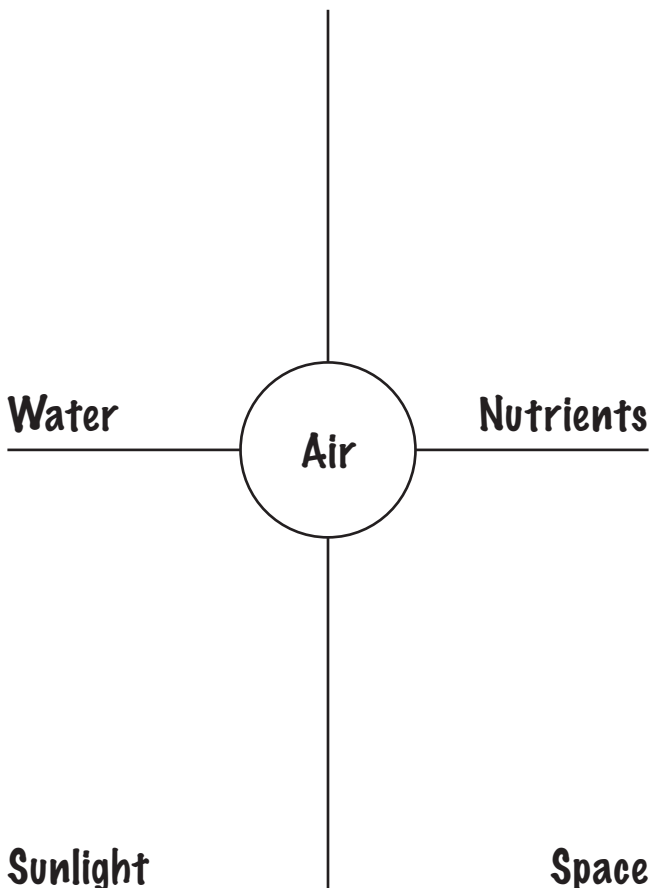
My tree is this big:



These animals live near my tree:



My tree needs these to survive:



The shape of my tree's crown is:

