



Duke Farms

Family Activity: Adopt a Tree

An activity for all ages

Procedure: Go outside, take a walk nearby, or go into your yard. Choose a tree that stands out to you personally. Choose carefully! You will be watching this tree for a long time - you're adopting it for an entire year. Once you have chosen your tree, complete the following activities.

On your first visit:

1. Note the location of the tree. How will you find it again?

a. GPS coordinates: _____

b. Landmarks: _____

2. Identify the tree. A tree has two names: a common name and a scientific name. Can you find both of them? ***PLEASE DO NOT REMOVE ANY PART OF THE TREE TO IDENTIFY IT***

Example: Common name - Red Oak Scientific name - Quercus rubra

Common name of your tree: _____

Specific name of your tree: _____

If you need help identifying a tree, try downloading Seek app on your phone. Then take a picture of the tree and the app will walk you through the steps of the IDing your tree.

3. Measure the diameter of the trunk of your tree. To do this, start at 4 feet up from the base of the tree, measure the circumference of the tree's trunk (in inches) with measuring tape. Take the circumference of the tree and simply divide it by 3.

Diameter of your tree: _____

4. Estimate the height of your tree. Measure the height of your partner. Working in pairs, one person stands behind the tree while their partner stands back and estimates how many times their partner fits into the height of the tree from root to crown. Estimate the height of the tree.

Estimated height of your tree: _____

5. Estimate the age of your tree.

How to estimate age:

a. Work in groups of 3 or 4

b. Determine the species of your tree. Make sure it is listed on the chart on page 2.

c. With a tape measure, find the circumference of the tree (in inches) 4.5 feet above the ground.

d. Determine the diameter of your tree. **Diameter = Circumference/3.14 (pi)**

Tree species	Growth factor
Red maple	4.5
Silver maple	3.0
Sugar maple	5.0
River birch	3.5
White birch	5.0
Shagbark hickory	7.5
Green ash	4.0
Black walnut	4.5
Black cherry	5.0

Tree species	Growth factor
White oak	5.0
Red oak	4.0
Pin oak	3.0
Linden/Basswood	3.0
American Elm	4.0
Ironwood	7.0
Cottonwood	2.0
Dogwood	7.0
Redbud	7.0
Aspen	2.0

Credits:

Lesson provided by Jim Gilbert & Cathie Plaehn

Drawn from the International Society of Arboriculture

6. Calculate the age of the tree using the formula: **Diameter x Growth factor**

What is the calculated age of your tree? _____

On future visits:

Adopt a Tree Leaf Sketch

Draw what the leaf of your tree looks like in each season.

Spring

Summer

Fall

Winter

Who is Using the Tree?

Answer these questions as you continue to visit your tree.

What types of birds are using your tree? _____

What types of insects are using your tree? _____

What types of mammals are using your tree? _____

Do you see any bird nests in your tree? _____

What evidence is there of people having an impact on this tree (pruning cuts, carved bark)?

Sketch your tree.



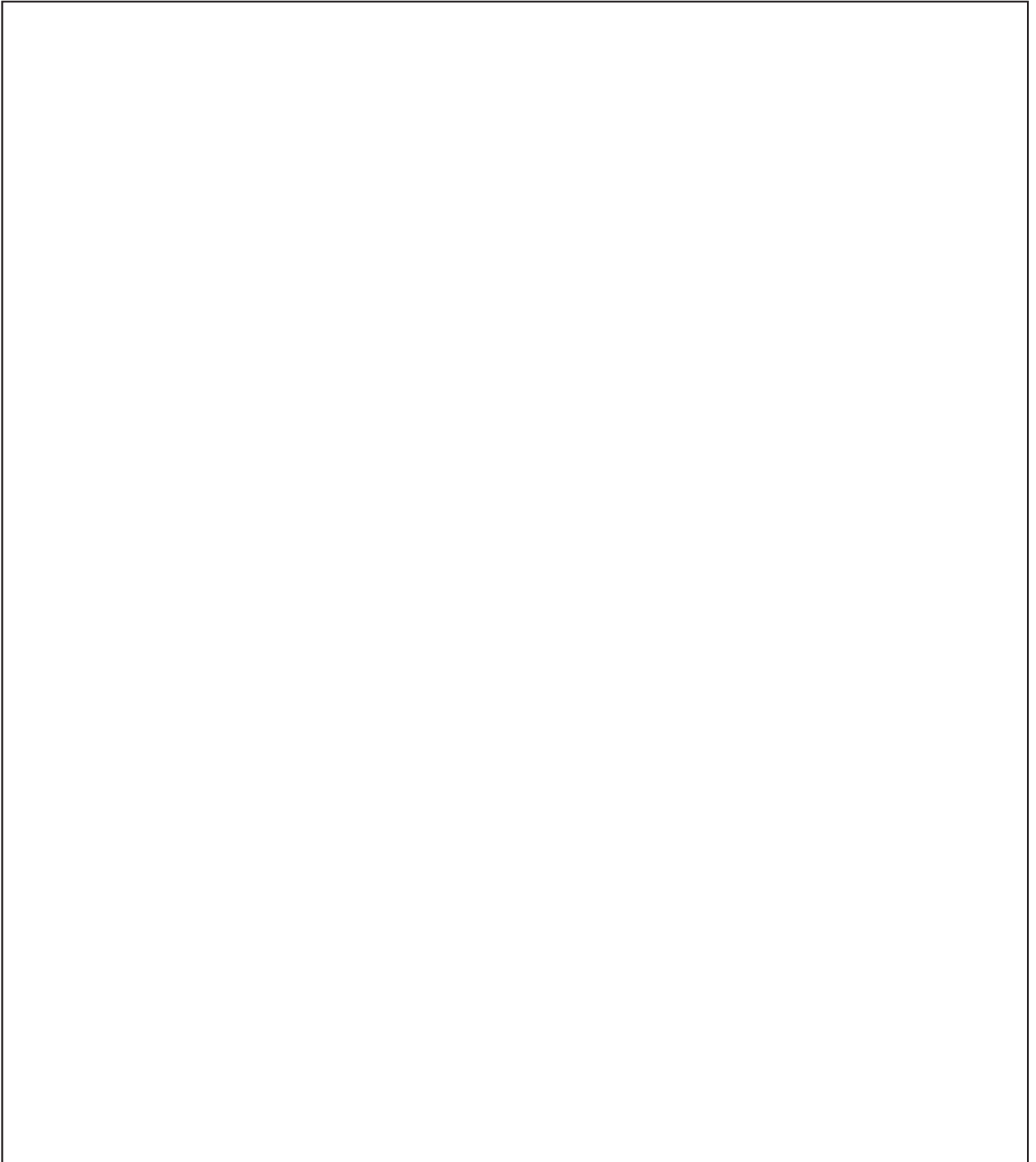
Visiting Your Tree

Try to visit your tree one time per month to see how it changes throughout the year. Note anything you notice about your tree in the spaces below. Some observations you may want to include are: flowers, fruits, nuts, seeds, animals, insects, fragrance, color change, damage, growth, etc.

Visit 1	Date	Notes
Visit 2		
Visit 3		
Visit 4		
Visit 5		
Visit 6		
Visit 7		
Visit 8		
Visit 9		
Visit 10		
Visit 11		
Visit 12		

Bark Rubbing

Using the side of a pencil, color pencil, or crayon, place this piece of paper over the bark of the tree and gently rub the pencil or crayon over the bark. Knowing what the bark of trees looks like is one way to identify trees in winter when they have no leaves.



Other Activities and Investigations to Complete During Your Tree Visits

(Adapted from Project Learning Tree © American Forest Foundation.)

Write 10 words to describe your tree.

Use your sense of touch to explore your tree. How does it feel?

Write a poem about your adopted tree.

Do you see any seedlings growing around your tree? Are they the same type of tree or different? How do you know?

Study the environmental factors around your tree and compare them to factors in the other area. (Examples: water, sunlight, surrounding vegetation, etc.)

Write a letter to a friend or family member telling them about your tree.

Take a picture of your tree at every visit.

Sit quietly near your tree and listen closely. What do you hear?

Are there any plants growing on the bark of your tree? What do they look like?

Look for the same kind of trees around Duke Farms. Where do you find them? Are they bigger or smaller than your tree? Older or younger? Taller or shorter?

Make up a song about your tree.

Write down all the reasons trees are important. Can you think of at least 10?

Take a close look at the tree bark. How many different kinds of insects are using the tree?

How many spiders can you find on the tree?

Compare and contrast this tree with another tree in the area. How are they the same? How are they different?

Draw what your tree would look like from a birds-eye-view.

