

How the Forest Grows

Investigative Question- How can we describe how the trees in a forest are growing? What will my tree look like when it is mature?

Objectives

Knowledge- Students learn tree characteristics using bark and buds.

Skills- Students use guides and measuring tools to identify and measure tree seedlings to maturity.

Values- Tree seedlings help regrow/rebuild a forest.

VA Standards of Learning: Science (2018): 3.1, 3.5. Math (2016) 3.17, 3.9. English 3.4 b & f, 3.6 e & f, 3.7b

Materials

- Virginia Department of Forestry [Common Native Trees of Virginia](#) books
- Rulers
- Flexible tailor's tapes
- Hand lenses
- Data sheet
- Flags

Instructional Strategy

1. Engage- Inquire:
 - a. What are some of the characteristics you can observe to identify trees? (answers: Leaves, Bark)
 - b. Young trees or saplings are part of a whole forest that will either keep the forest ecosystem healthy or return an area to a forest ecosystem to support rich biodiversity. (Goals may be to turn the grassy areas into a forest, help replenish trees pulling water into groundwater.)
 - c. Why do we want to do that? What are some organisms that can benefit from restoring a forest?
2. Explore- Place students into groups of 2-3, give each a tree guidebook and a data sheet, clipboard and pencil. Instruct them to:
 - a. Look at the silver tag to find the scientific name and the use the index in the guide to locate the tree and its common name in the book. Record this on the data sheet.
 - b. Then use the guidebook to find and record on the data sheet the height of the small seedling.
 - c. Then read to find the mature size height range as well as values and uses of the tree. (Key words to look for are wildlife, birds, squirrels, raccoons, mammals, turkey, deer, dens, roosts.)
3. Explain- Next, instruct students to look at the larger trees around them.
 - a. Are some of the trees the same species as your small saplings?
 - b. Can we observe any of the same characteristics (again look at bark and leaves)?
 - c. Look at their tree's mature height; subtract to find the difference in young and mature trees.
4. Evaluate- Bring class back together to share- out either the height of the tree or discuss the animals that use the different trees.
5. Extensions/adaptations: Measure the diameter of the sapling and compare to the diameter of the mature tree in the guidebook's description. Research tree species online.



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Researchers: _____

Tree Name	
Height of your sapling/seedling	
“Mature Size” of Tree	
Who uses the tree? Scan “Values and Uses” for organisms	

What is the difference between the height of my tree now and its mature size?

Subtract

Height of mature tree _____

-

Height of your sapling _____

= _____

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