

Lesson Title: Using a Dichotomous Key to Classify Trees

Grade levels: Grades 4 and 5

Applicable SOL:

Science: Investigations: 3.1, 4.1, 5.1

4.4 (plant structure) 5.5 (classification of organisms)

English: 4.9 (using information resources)

5.9 (using research resources)

Materials:

- Digital or hard copies of Virginia Department of Forestry's Common Native Trees of Virginia
- Slides 15 through 20 of the Plant Vocabulary PowerPoint
- Journals
- Ribbons and permanent markers

Procedure:

Building Supporting Knowledge: (20 minutes)

1. Use slides 15 through 20 of Plant Vocabulary PowerPoint to develop the necessary vocabulary.
2. Have students create labeled sketches in their journals to help them as they identify trees.

Main Lesson: (2 sessions of 45 minutes each)

1. As a group, use the Virginia Dept. of Forestry's Common Native Trees of Virginia to identify a tree. If necessary, identify more trees until you are confident the students can use the key in small groups.
2. Split students into groups of 3 to 4.
3. Using the Virginia Dept. of Forestry's Common Native Trees of Virginia, and their journals, students use the keys to label outdoor classroom trees. Labels can be created with ribbons, written on with permanent markers.
4. Two groups identify each tree (blindly from each other), to confirm their findings. If discrepancies occur, they each go through the key again.

Follow-up:

- After one of each type of tree is labeled, students devise a way to count the trees of each type.
- Students work in pairs to further research the tree; its uses, its history in the area, its size and other areas of growth.
- Students design and write a field guide page for each tree, adding photographs and scanned images of bark rubbings.

Assessment Opportunities:

- Accuracy of dichotomous key use.
- Research notes.
- Group discourse about project.
- Design procedure for counting trees.