



Trees and Keys Pre-visit

Classroom Activities

Brief Synopsis

Identifying tree species can be a difficult thing to do on your own. Students will learn how a dichotomous key helps unlock the mysteries of complex identification. Practicing with a worksheet to decode the “alien” names for common household items will help students get comfortable with using a dichotomous key. As an extension, students may go on-line to try their hand at identifying trees by their leaves, or creating their own dichotomous key.

Ages: Designed for 5th–8th grade

Time Considerations: 20-30 minutes

Materials:

- Chalkboard
- Worksheets (photocopies)
- Pencils
- Internet access (Extension Option)

Vocabulary (for the Extension Option): Alternate, Broadleaf, Conifer, Deciduous, Dichotomous, Entire, Lobe, Margin, Midrib, Opposite, Palmate, Petiole, Pinnate, Serrate, Simple leaf, Toothed, Whorled

Outcomes:

1. Students will accurately use a dichotomous key to differentiate 12 “alien” objects.
2. Students will use sound decision making to correctly identify objects.
3. Students will apply the skills they practiced to an on-line dichotomous tree key.

Minnesota Academic Standards:

Science: 7.IV.B.4

Math: 4.V.B.1

Language Arts: 4.I.A.1&2, 4.I.B.1, 4.III.A.1&2, 5.I.A.1&2, 5.III.A.1, 6.III.A.3, 7.I.A.1, 7.III.A.1, 8.III.A.1&7

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Set-up

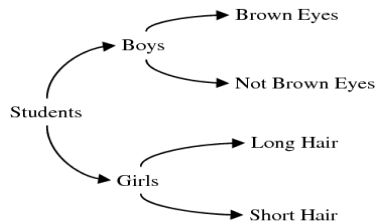
During the *Trees and Keys* class at Eagle Bluff, your students will be working in pairs to identify as many as 15 of Southeastern Minnesota’s most common trees. Their main tool will be using a dichotomous key specifically designs for Eagle Bluff’s *Tree Course*. To help prepare your students for understanding dichotomous keys, photocopy the attached **worksheet**, one for each student (or each pair if preferred), and each student will need their own **pencil**.

Activity 1: Practicing with a Dichotomous Key

Background: The identification of complex or unknown items (like trees, insects, flowers) can be made easier by using tools such as dichotomous keys. A dichotomous key is an organized set of couplets (two statements) of mutually exclusive characteristics. A dichotomous key will begin with general characteristics and move on to progressively more specific characteristics. By following a key and making the correct choices, anyone should be able to identify the items they are learning about, as long as they have the proper vocabulary.

Procedures:

1. Explain how a dichotomous key is made, using your students as an example: a group of students my first be divided into “boys” and “girls”, then into “brown eyes” and “not brown eyes”, or “long hair” and “short hair” and so on.
2. Draw out the above example visually on the board like this:



Because drawing a key in this way takes up a lot of room, and would require a huge piece of paper to illustrate something more complex, dichotomous keys are usually written out in words. To have success with this kind of key, it is important to use them correctly.