

Creating a Dichotomous Key

Introduction:

How can you classify items? Scientists group organisms based on their characteristics. These groups are the basis for classification tools called dichotomous keys. A **dichotomous key** consists of a series of choices that lead the user to the correct identification of an organism. In this lab, you will develop a dichotomous key as you group familiar objects.

Procedure:

1. Remove one shoe and make a pile in the center of your group.
2. Classify the shoes according to their characteristics. First put the shoes into two groups according to their distinguishing characteristics. **Group 1:** _____, **Group 2:** _____
3. Divide those groups into subgroups. Continue dividing up each group into subgroups until there is only **one** shoe in each group. Create a branching diagram to identify each shoe with a distinctive number. Use the space below for your **work/data**:

Name: _____

4. Create a list of questions and answers/directions to identify each shoe (like the keys we've used in bellwork/practice questions). Write this on a separate sheet of paper and staple it to the back of this paper.
5. Use your dichotomous key to identify your teacher's shoe.

Classification of teacher's shoe: _____

Analysis:

1. Relate the groups you used to classify shoes to taxonomy. Which group would be the kingdom, phylum, class, species?
 - a. What characteristics of your teachers shoe did you use to classify it?
 - b. How could you modify your classification system to be more effective to incorporate your teacher's shoe?
2. Explain how you were able to classify your teacher's shoe in step 5.
 - a. What characteristics of your teachers shoe did you use to classify it?
 - b. How could you modify your classification system to be more effective to incorporate your teacher's shoe?
3. The term dichotomous means "divided into two parts." Why is the key you made called a dichotomous key?