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An Introduction to a Dichotomous Key

If the shoe fits...

Introduction:

Most students of a high school biology class have never been exposed to a dichotomous key, nor know why such a key would be useful. The following activity introduces the students to how to create and use a dichotomous key.

Procedure:

Have students sit on the floor in a wide circle with something to write with and paper to record their key. Ask students to remove their right shoe and toss it into the middle. Ask questions of the students to get them thinking about the differences of each shoe and how we could “identify” the shoe’s owner. Using observation skills, ask them to determine one characteristic of the shoes that would separate them into two separate groups. Ex. Shoes with laces, shoes without laces. Have them record that characteristic as in a dichotomous key. Choose one group to work with first; looking for a characteristic that could separate the group into two different groups until there is one shoe left that can be identified.

Example:

1A Shoes with lacesGo to 2

1B Shoes without lacesGo to 5

2A Shoes with black lacesGo to 3

2B Shoes with pink lacesGo to 4

3A Shoes with a white sole Johnny Green

3B Shoes with a black sole Jill Smith

4A Shoes with a pink tongue Sammi Jones

4B Shoes without a pink tongue Jane Brown

When the shoe has been “identified” give it back to the owner to make sure it matches with the left shoe! When everyone’s shoe has been identified, have everyone put their shoe back into the middle. Pick up one shoe & point to a student who will read their key and follow their directions until they properly “identify” the owner of the shoe, then give the shoe to the owner. That person

will then “identify” the next shoe that you pick up using their key until all shoes have been “identified”.

I usually follow up this with use of a dichotomous key to identify different tree leaves. Students then are pretty comfortable using the key.