How Can A Classification Key Be Used To Identify Organisms?

Subject: Life science, classification

Grade: 6-8

Lesson Topic: Classification, Dichotomous Keys

Length: 1

Learner Objective:

After completing this investigation students will be able to;

1) *Identify* a set of pictured organisms by using a classification key with 100% accuracy
2) *Write* a dichotomous key for the identification of a set of pictured organisms, with 90% accuracy of content.

Introduction:

Future studies of invasive weed species will involve the need to understand dichotomous keys. These practice lessons, although not specific to alien weed species, provide students with a means to gain understanding of keys using plants and animals that are more familiar to them. Once the skill has been learned, it is easily transferable to the study of other plants and animals that may not be as familiar to students.

Content:

Suppose while walking through the woods you find a large colorful wildflower. Chances are the flower has already been named and classified, but how can you learn its identity? As an aid to help others identify unknown organisms, biologists have developed classification keys.

Many kinds of classification keys have been developed to identify wildflowers and many kinds of plants and animals. Though some of these keys may vary in purpose and complexity, they share certain features in common. These classification keys are often called *dichotomous keys*. The word dichotomous comes form the word dichotomy meaning "two opposing parts." A dichotomous key presents the user with two opposite statements about some trait of an organism. By choosing the statement that best describes the unknown organism, the user is led to further pairs of statements. By going from one set of statements to another, the name of the organism or its classification group is finally discovered.

Materials and Supplies:

Overhead of wildflowers
Overhead of frog anatomy
Overhead of frog species
Classification packet for each student (includes pictured organisms and worksheets)

Created by Mark Goddard for *Aliens In Your Neighborhood* - 2003