



Lesson:

Introducing the Use of Dichotomous Keys to Students, Grade 6-8

Ages:

6th-8th Grade

Time:

Set up: 20 minutes

Activity: 1 hour

Overview:

This activity introduces the use of dichotomous keys to children as a simple means of beginning scientific observations in nature.

Goals:

This activity promotes critical thinking in students and develops careful, systematic observational skills as students learn how to use a "candy" key.

Objectives:

1. Students will understand how to use a dichotomous key.
2. Students will distinguish characteristics of a group of organisms.
3. Students will apply their understanding of the candy key to identifying plants.

Materials:

Per Student:

Candy: Gummy bears, Salt water taffy, Smarties, Choc. Kiss, Star Burst, Sweet tarts, Jolly Ranchers, Striped mints, Dum Dums. (enough for 1-2 pieces per student)

Candy keys

Weed key

Examples of keys available via an Internet search, or at:

http://gk-12.osu.edu/Lessons/02-03/DichotomousKeys_Web.pdf

http://www.buffaloschools.org/science/dichotomus_key/dichotomus_sort.pdf

<http://www.csd1.tamu.edu/FLORA/tfplab/lab1a.htm>

Per Group:

Flagging

6 species of invasive plants flagged nearby (flag more than one of each species for large groups)

Outline:

1. Explain the use of the candy key and have students practice identifying candy.
2. Explain the similarities and differences between the candy key and the weed key.
3. Have the students practice identifying weeds.

Details:

Introduce the term *Dichotomous key*. Di= 2, in this case there are two choices. A key is used to identify a species of plant, animal, bacteria etc. Plants have different characteristics that make it possible to identify them.

Pass out the candy keys to each student and identify a piece of candy as a group, leading the students through each step. Next, have the students use the candy key to identify their type of candy and its "Latin name". Students should share the "Latin name" of their candy with the group.

Review the parts of a plant that students will need to know to use the keys. Have students draw a plant and label its parts individually or on the board.

Now that everyone is familiar with dichotomous keys and the two-step process used to figure out what the organism is, as well as a few botanical terms, hand out the weed keys. Students should work with a partner to figure out the types of weeds in the area using their weed keys (these should be pre-determined and flagged, as some species are too difficult for kids/adults to figure out).

Modifications:

If weeds are not available near the classroom, pressed samples of weeds may be used instead.

Wrap-up/Evaluation:

Ask the students what they found. How did the weeds get here, and how might they be affecting the area? Can they think of a better way to ID plants? Could a dichotomous key be used with animals? Rocks?

Extension:

1. Have students create dichotomous keys for other groups of objects or plants.
2. Introduce students to the XID system of classification <http://www.xidservices.com/>.