

Learning Target: I will be able to explain and demonstrate how to use dichotomous keys to identify organisms.



[How to use Dichotomous Keys Video Notes](#)

What is a Dichotomous Key?

A dichotomous key is a tool that can be used to _____ or objects in the natural world, such as _____. They key consists of _____ statements or _____ about features or _____, providing a stepwise guide toward identifying each entity.

As you go from one step to the next, the clues gradually _____ the list of possible things until all are _____. Dichotomous keys are useful for _____ or living _____ as well as identification.

The word _____ is derived from the _____ words meaning _____. Each step in the key provides two _____ (opposite) choices about a _____. Each alternative choice then leads to another pair of _____ and then another, until the items are _____.

A group of leaves, for example, might first be separated the basis of _____ patterns. Each group could then be further _____ on the basis of other traits such as _____ and _____ arrangement.

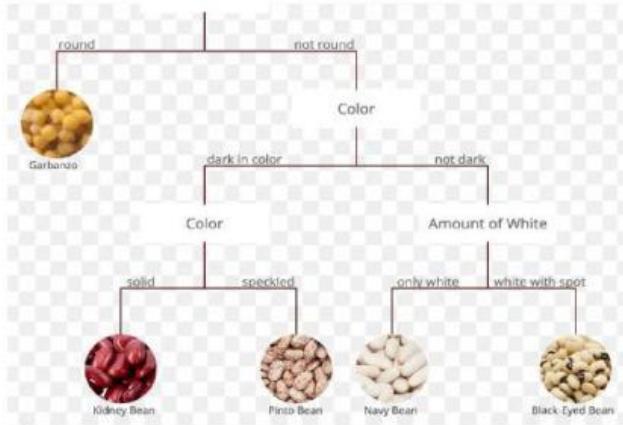
The number of steps in a key depends on how many _____ (objects or individuals) are being _____. There is generally one _____ step than the total number of entities to be identified. Thus a key used to identify _____ unknown entities would have _____ steps, whereas identifying _____ entities would require _____ pairs of clues. The clues may be presented as _____ or _____.

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Look at the following paired clues as an example of a simple dichotomous key that might be used to identify different types of beans. Let's identify the type of bean based upon the

- 1b. The bean is not round — go to step 2.
- 2b. The bean is dark in color — go to step 4.
- 4b. The bean is solid

What type of bean is it? _____



The most important elements of a good key are that each set of clues offers _____ contrasting choices and that the clues gradually _____ (make smaller) down the list of possible objects or _____ so that _____ is possible.

The following key could be used to identify _____ familiar _____. For example, the descriptions that could be used to describe a _____ would be that its wings are covered by an _____ (skeleton on the outside of the body) and that it has a _____ shape.

Quick Check for Understanding! Use the dichotomous key to identify an insect that has wings that are not covered by an exoskeleton, and the wings point outward from the body. Start from the beginning.

Dichotomous key for insects



What type of insect is it? _____

- 1a. Wings are covered by an exoskeleton — go to step 2.
- 1b. Wings are not covered by an exoskeleton — go to step 3.
- 2a. Body has a round shape — ladybug.
- 2b. Body has an elongated shape — firefly.
- 3a. Wings point outward from the body — dragonfly.
- 3b. Wings point toward the rear of the body — bee.

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Quick Check for Understanding! Use the following dichotomous key to identify the specific type of rock.

Dichotomous key for rock sample identification



- 1a. The rock is not black — go to step 3.
- 3b. The rock does not have bands — go to step 4.
- 4b. The rock has small grains.

What type of rock is it? _____

- 1a. The rock is black — go to step 2.
- 1b. The rock is not black — go to step 3.
- 2a. The rock has a glassy texture — obsidian.
- 2b. The rock does not have a glassy texture — slate.
- 3a. The rock has bands — gneiss.
- 3b. The rock does not have bands — go to step 4.
- 4a. The rock has large, heavy grains — conglomerate.
- 4b. The rock has small grains — granite.

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