

## Instructions for Using a Dichotomous Key

A dichotomous key is a tool that allows the user to determine the identity of items in the natural world, such as trees, wildflowers, mammals, reptiles, butterflies, etc. Keys consist of a series of choices that leads the user to the correct name of a given item. “Dichotomous” means “divided into two parts”. Therefore, dichotomous keys always give two choices in each step.

### Hits for Using Dichotomous Keys

1. Always read both choices
2. Be sure you understand the meaning of terms involved. Do not guess – look it up!
3. When measurements are given, use a calibrated scale. Do not guess.
4. Study several specimens of living things to be sure your specimen is typical.
5. If the choice is not clear, try both divisions. If you end up with two possible answers, read the description of the two choices to help you decide.
6. Having arrived at an answer in a key, do not accept this as absolutely reliable. Check a description of the organism to see if it agrees with the unknown specimen. If not, an error has been made. The ultimate check is with an authentically named “Type Specimen” (one found in an official collection like a natural science museum).

## Instructions for Creating a Dichotomous Key

Keys should be **dichotomous**; meaning that each step toward identification is a choice between two statements. Each of the two statements is a **lead** and the pair of statements is a **couplet**.

1. Make all parts of a key dichotomous. There must always be two, and only two, choices.
  - a. Choices should be labeled 1a and 1b....2a and 2b....
2. Use proper indentation technique.

1a.  
1b.  
2a.  
2b.  
3a.  
3b.  
4a.  
4b.

3. Begin key by using characteristics that will allow specimens to be divided into two or just a few different groups. Leave the more varied characteristics for later in the key.
4. Accompany each character used by the alternative condition in the next lead of the key; if you mention a character in one lead, mention it in the other lead of a couplet.
5. Make the wording of leads parallel.
6. It is best to use positive statements. Avoid using negative statements; they often fail to describe the condition in question.
7. Make quantitative characters as definite as possible and express their values as a range of units in the metric system.
8. Make the key so that it can be used in as many seasons as possible. Include such features as vegetative characters, flowers, and fruits together in the key to make it as generally applicable as possible. If the key is to be used in a certain season, be sure to mention this fact in the title of the key. Do not change the season for which the key is useful to another season in the same key.
9. For species whose individuals are unisexual, include characters for both sexes in the same key or write two keys, one for each sex.
10. Avoid using classification names (e.g. chordate, marsupial, monocot) as key characters.
11. Keep terminology and characters employed as simple as possible. Try to avoid obscure, highly technical, and geographical characters. Construct the key so that identification is as simple as possible from the most obvious aspects of specimens.
12. Identify the specimens clearly in the key and do not repeat specimens.