

How Do Biologists Identify Organisms?

Species identification

Proper identification of species is important to biologists if they want to compare their study area to other regions. Knowing the organisms that live in your region can help you to learn about their function within the ecosystem and why it is important to protect them.

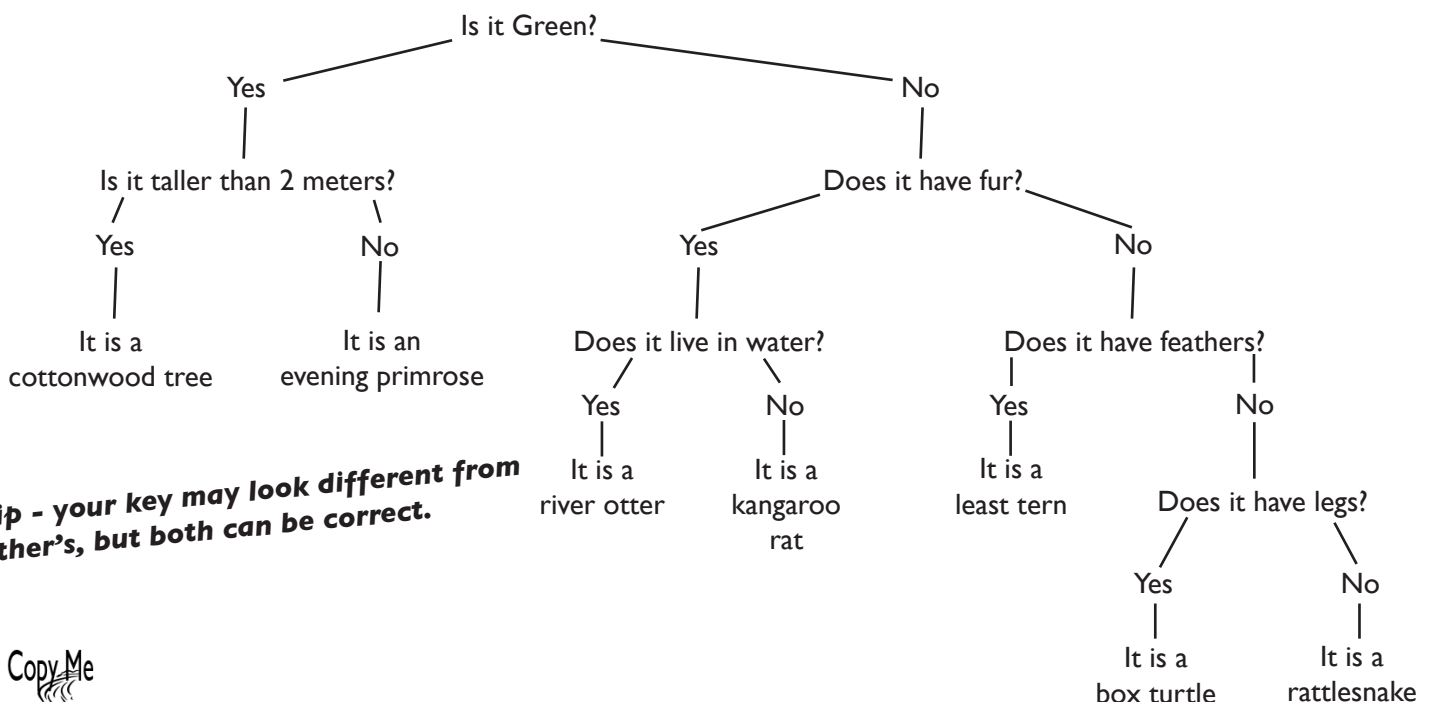
Dichotomous Keys

You have probably used a field guide to determine what bird or plant you saw on a field trip. To aid identification, many field guides group organisms based on features you can see. For example, a wildflower guide will group plants with the same flower color into one section. However, beyond that, most field guides expect you to flip through the pictures to figure out which species you observed. Unfortunately most field guides do not have an entry for all the species found in a region, and often pictures do not have all the information necessary to correctly identify a species. Biologists use identification guides that contain dichotomous keys to correctly identify species they observe. Dichotomous keys use a series of yes or no questions based on characteristics of the organism to determine the species identification.

Activity - Create Your Own Dichotomous Key

- Print out 20 pictures of organisms from your area or use the images from the Prairie River species profiles.
- Divide the pictures into two piles based on one characteristic of the organisms (*for example, does it photosynthesize?*). It doesn't matter if the piles are uneven.
- Use a large piece of paper and record the characteristic on your tree.
- Focus on one of the two piles. Divide this pile again based on one characteristic.
- Record on the tree.
- Continue dividing piles until there is only one organism in each pile.
- Repeat with your second pile from the first split.

Example dichotomous tree using some of organisms found on the poster.



Tip - your key may look different from other's, but both can be correct.

