USING A DICHOTOMOUS KEY STUDENT INSTRUCTIONS

You will be using a dichotomous key to identify a group of shells or pictures of shells. At the end of the activity, every shell or picture should be accurately identified.

Some things to keep in mind when using a dichotomous key:

- Always read and consider both choices, even if the first one seems to be appropriate. Jumping to conclusions may lead to the wrong classification of the item.
- Always understand the meaning of the words used in each choice. Define the term. If you are not sure of the meaning, look it up in a dictionary. Never guess, as this could also lead to the wrong classification of the item.
- When there are measurements given in the choices, use the appropriate measuring tools or adjust them to match your own set of tools. For example, if a key measurement is given in centimeters but your ruler is divided into inches, convert the centimeter measurement into inches. Do not approximate and do not guess. Measure.
- If you are classifying a living or once-living thing, do not base your conclusion on a single observation. Living things almost always exhibit variability, so it is better to study many specimens in order to be sure that your results are representative of the majority.
- If you are left with two possible answers, read the description of both and decide which one seems to fit your specimen more precisely.
- Once you have identified all of your items, do not assume that it is correct. If there is any doubt, recheck the description of the organism to see that it appropriately matches. If it does not, then an error was made somewhere in key development.

How to use a dichotomous key:

"Dichotomous" means "divided into two parts." That is why dichotomous keys give two choices in each step. In each step, you are presented with two statements based on characteristics of the organism. If you make the correct choice every time, the name of the organism will be revealed at the end.

Example:

1. Sort shells by one characteristic; for example, whether the shell is over 3 inches in length or under 3 inches in length.

2. Next, those shells that are over 3 inches will be sorted by a different characteristic; for example, has spiny protrusions or no spiny protrusions.

3. Continue to sort shells by one characteristic until each shell has been identified.

4. With the shells under 3 inches, repeat the same process until all of those shells are identified.