DO NOT WRITE ON THIS WORKSHEET!
Making a Key for Classified Candy

In this lab you will:

- Compare structures and characteristics of several different candies
- Identify which characteristics can be used to distinguish one candy from another
- Communicate to others the distinguishing features of different candy

Background Information:

Candy is the object you will use in this lab today. There are many different kinds and everyone has their favorites. Although many are made from the same ingredient, sugar, they can be very different in taste, texture, shape, size, color etc.

Materials: 10-15 pieces of assorted candy

Procedure:

1. Working in your table groups (3-4 people), choose a single characteristic that will allow you to classify you candies into **2 groups**. Size, color, shape, texture or structures are _some possible characteristics_.
2. Record the characteristics used, along with a brief description of what is being looked at, in chart or list format. This must be done on a scratch sheet of paper before you draw it out on your poster.
3. Within each of the 2 groups you start with, form smaller categories by choosing characteristics, with a brief description, that will allow you to separate the candy of each group into 2 subgroups. Determine the order these characteristics should appear. Record these characteristics in that order. **NOTE:** you should be looking at one specific characteristic at a time…ex: the candy is <u>chocolate</u> or <u>not chocolate.</u> This makes it very clear for separating the candy at each step.
4. Continue following step 3 until only one specific type of candy remains in each group. Name the specific type of candy when it is by itself (brand, type, and flavor). At this step you can consider the candy as its own species, within the entire "Candy Kingdom."
5. Create a name using Binomial Nomenclature by adding a Greek or Latin sounding prefix (ex: -ius –ia –lys –icus, etc) to the end of the last 2 categories you used to classify that piece of candy with.
6. Someone who is not familiar with all types of candy should be able to use your key to correctly identify any candy it includes. Be specific and clear.

Analysis: **Answered individually on your journal page!!!**

1. What characteristics did you use to group your candy? Make a list.
2. Did other teams use the same characteristics? Name some you have in common and some you don't. How did the criteria affect their final groups compared with your final groups? Did you end with similar things grouped together near the end of your key?
3. Have someone outside your group (or another entire group) try using your key to identify candy. If they are unable to make it work, or have suggestions about clarity, try to determine the problem and make improvements. Use any of their suggestions to revise and make your key better. Explain any changes and/or comments from the other person or group.
4. Is there only one correct way to design and classify your specimens? Explain why or why not and use examples to support your answer.
5. Why is it an advantage to scientists to have and use one standard classification system?

Day 2 Activity-

1. Draw a final draft of your classification map and key on the large sheet of paper provided in class.

2. Include pictures of each item with their new scientific names (genus and species)

3. Answer the following extension questions on your individual paper:

    a. Describe in 2-3 sentences how you think this is similar to the way scientists classify living organisms.
    b. Why do we have a common name and a scientific name for every organism?
    c. Think about the big picture- if candy is the main item we started with, what other major items could candy be a smaller category of?
    d. Reflect- How well did **_you_** work with your group? Were you the person who did most or all of the work? Did you let someone else take over? Did you just copy or were you putting in your ideas and thoughts? (2-3 sentences)
    e. Reflect- How well did **_your group_** work together? What did you do well? What could you have done better? (2-3 sentences)