



Trash to Treasure: Data Quantification Exercise

This component of the project is completed in the classroom and lead by the classroom teacher.

Background:

Now that you have collected all your trash from your clean-up location, it's time to turn that trash into data. The goal is to tally the data from each individual group into a collection of class data. This data quantification process will be a starting point for the poster project each group has to complete. It will also give you a good sense of what was collected as a whole at your location.

Materials Needed:

- completed data sheets** from beach clean-up (each group should have a copy of their data)
- empty data sheets** (one per group)
- poster handout sheet (one per group)
- whiteboard/chalkboard
- resource binder or access to online documents (one per classroom)

Procedure:

1. Have groups sit together and ensure they have a copy of the data they collected from the beach.
2. Pass out the empty data sheet with all the categories listed- one per group.
3. Write all the headings from the table sheet on the board.
4. On the board, start to tally the data for each item. Every item collected should be accounted for. Go one category at a time, each group calls out the number of items they had for that category.
5. Continue until you have all the individual group data compiled on the board.
6. Have students add up and record the group data on their new data sheet. They should end up with a total number of items for each category. This will allow them to compare their individual group data to the data for the entire class.
7. Additionally, have the students add up a complete item total (add all the items together from all categories so see how many total items they collected as a class from the beach).
8. Add all the individual group weights together to determine a total weight of garbage collected by the class.
9. Take a picture of the board in case any group loses their data.
10. Have a group discussion about sources of error. For example, different groups could classify a piece of garbage under a different category. Also, there could be recording errors as communication is passed through the group members. Talk about why certain types of garbage are more prevalent. What are the effects of debris on local wildlife?
11. Talk about the requirements of the poster. You should have a resource binder (or use the links on the NS3 website <http://nanaimoscience.org/resources-for-teachers/>) to help create your poster. Outside research is also encouraged.
12. Set your garbage somewhere outside where it can dry. Keep an eye on the garbage, to make sure it is all drying properly as to be prepared for the Art Challenge!