Bolus Dissection Activity

After presenting the PowerPoint Presentation provided on the Albatross Bolus Education page, found on the Pacific Islands Fish & Wildlife Office webpage, divide students into groups of 2-6 people for each bolus. Distribute the “Student Bolus Dissection Activity Sheet” and “Dissection Data Table” to each group.

1. Formulate research question.
   1. This should be done as a class, have students decide if they want to focus on inorganic (plastic) versus organic matter, size of contents, or something completely unique. Have students suggest questions that the dissection can answer.
2. Make a hypothesis.
   1. This can be done as a class or in the groups. Get students to infer what they expect to see within the bolus prior to distribution.

Examples: “The albatross bolus will contain a larger amount plastic than organic matter due to marine debris in the Pacific Ocean.”

1. Distribute materials.
   1. Materials should include:
      1. Bolus
      2. Dissection Tray
      3. Tweezers
      4. Magnify glass
      5. Ruler
      6. Scale (optional)
      7. Gloves (optional)
      8. Large tray or piece of paper to lay out the contents found in the bolus (optional)
2. Before dissection
   1. Have students take any preliminary data on the bolus and record this on their “Dissection Data Table”. This includes length and width, weight, and any observations, large pieces of plastic, smell, etc.
3. Dissection
   1. Allow students to begin dissection of their bolus using the tweezers. Have them sort organic and inorganic materials and categorize them, use of the magnify glass may be needed to identify smaller objects.
4. Data collection
   1. Using the “Dissection Data Table” log any observations during the dissection as well as the amount of organic and inorganic materials. This can be done by size or any category deemed fit depending on the research question.

Example: Have students weigh the inorganic and organic materials extracted from the bolus and calculate the weight difference. Another option is to have students categorize the findings by size and in each size group, figure out the ratio of organic to inorganic.

1. Conclusion
   1. Have students clean up their dissections. You can either throw away the bolus or keep them for further use. You may also separate the inorganic and orgic materials into jars to display.
   2. After cleaning up have students write their conclusions from the dissection and debrief as a class. Ask them if their hypothesis were right or wrong and what their results meant.
2. Fill out post-activity form (TEACHERS ONLY)
   1. Fill out the post activity Microsoft form and upload any pictures from the activity you would like to share with US Fish & Wildlife Service.