Sea Solids

Objectives:

The students will determine the percentages of materials dissolved in sea water.

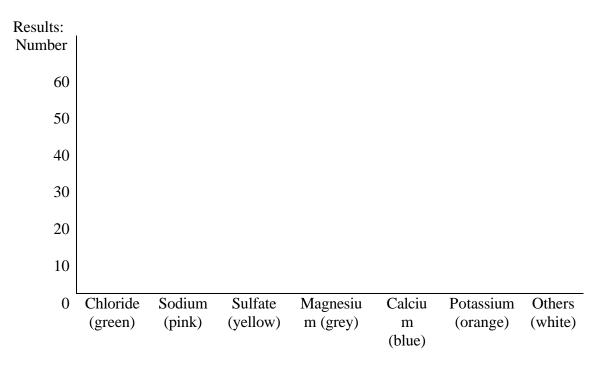
The students will make a graph of the materials dissolved in sea water.

Materials:

Circles (hole punches) of green, pink, yellow, grey, blue, orange, and white card stock; 6" by 9" brown envelopes



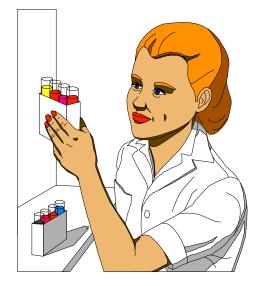
- 1. Reach into the envelope (without looking) and remove 10 circles of paper. You may reach in more than once if you do not get 10 circles on your first try.
- 2. Make a bar graph of the circles you drew from the bag.
- 3. Add the data from the rest of the class to your graph.



1. From your data, which of these materials occurs most frequently in sea water?



- 2. Add the class data to your bar graph. From these data, which material occurs most frequently in sea water?
- 3. Why do you need the data from the class to add to your bar graph?
- 4. What does the envelope represent?
- 5. Calculate the percentages of each of the materials from your bar graph.



6. What do the percentages tell you about the materials found in sea water?

Sea Solids Teacher's Instructions

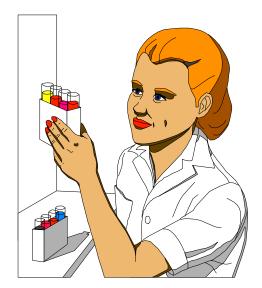
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Procedure:

1. Punch out the following number of holes in the associated colors:

Chloride	Green	54
Sodium	Pink	31
Sulfate	Yellow	8
Magnesium	Grey	4
Calcium	Blue	1
Potassium	Orange	1
Other	White	1

2. Make one envelope for each group of students. Encourage them to only remove 10 circles at a time. They may put all the circles back and repeat their draw if you would like for them to collect data more than once.