

Core Lab Activity pages 18- 19

Activity 1-3A "Salinity's Effect on Water Density"

Name: _____

Section#: _____

Question: How does salinity change the density of water?

Materials: 250 mL beaker

Medicine dropper

5 samples of water

Plastic spoon

- Tap water (colorless)
- Tap water (blue)
- Slightly salty water (red)
- Very salty water (colorless)
- Very salty water (green)

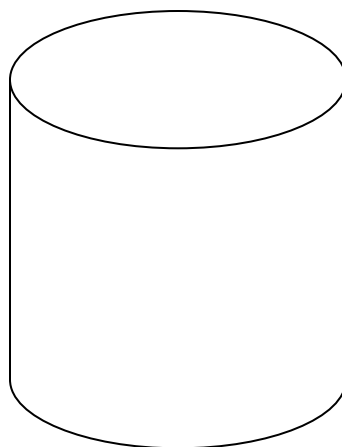
Coloring pencils

(red, blue & green)

Procedure: Refer to text. Pg. 18 & 19

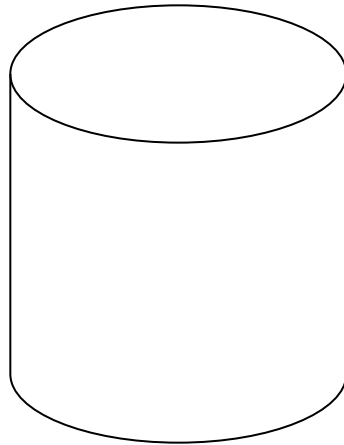
Observations: 12 marks

Test 1:



Tap Water (Colorless)
+
Very Salty Water (green)

Test 2:

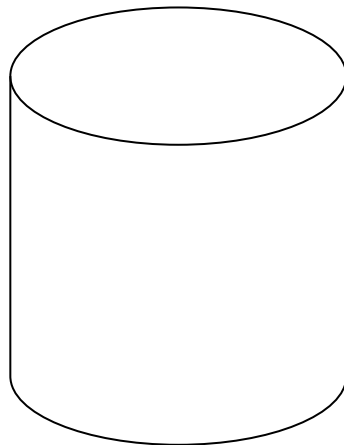


Very Salty Water (Colorless)

+

Tap Water (blue)

Test 3:



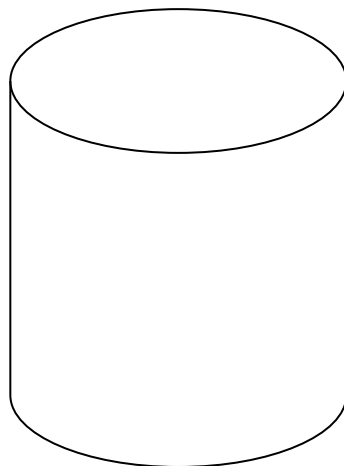
Very Salty Water (green)

+ (Using a spoon)

Tap Water (colorless)

*****Do not empty this beaker.**

Test 4:



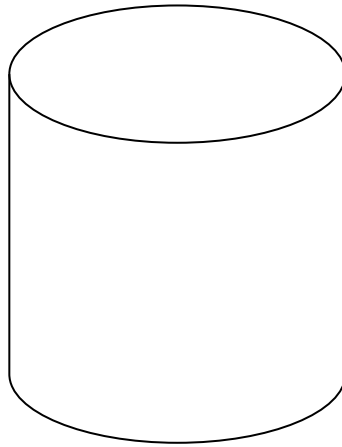
Slightly Salty Water (red)

Inject into

Very Salty Water (green layer)

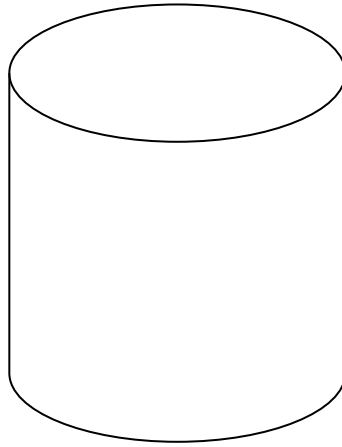
*****Do not empty this beaker.**

Test 5:



Slightly Salty Water (red)
Inject into
Tap Water (colorless layer)

Test 6:



Stir!

Analysis:

1. When you put the very salty water (green) into the colorless tap water, which one sank? Explain why this happened. 3 marks

2. When you put the blue tap water into the very salty water, which one floated on the other? Explain why this happened. 3 marks

3. (a) What happened when you added the slightly salty water (red) to the: 2 marks

(i) Vary salty water (green)layer_____

(ii) Colorless tap water layer_____

(b) Why did the red water do this? 2 marks_____

4. Why did the different types of water not mix by themselves? 2 marks

5. From this activity, describe what happens when fresh water from a river meets salty ocean water. 2 marks

6. What causes salt water and fresh water to mix in the ocean? 2 marks

7. Describe environments on Earth where fresh water would meet salt water. 2 marks

Conclusion: 2 marks

(How does the amount of salt dissolved in water affect its density? How do waters of different densities act when they meet?)
