

Comparing Salt and Fresh Water

Names: _____

Purpose: To determine how fresh water is different from salt water.

Materials:

Safety goggles, salt water, fresh water, microscope slides, eye dropper, microscope, beakers, egg, balance scales, food colouring.

Procedure:

Part A: Qualitative Observations

1. Collect a 25 mL sample of both fresh and salt water.
2. Examine the appearance and odour of both.
3. Record your findings in your data chart.

Part B: Residue

1. Place one drop of salt water on a microscope slide.
2. Place one drop of fresh water on a microscope slide.
3. Let sit until water has dried up.
4. Examine residue under a microscope.
5. Record your observations in your data chart.

Part C: Density

1. Record the mass of the graduated cylinder (empty)
2. Place 15 mL of fresh water in the cylinder, record the mass.
3. Repeat for salt water.
4. Calculate the density of each.

Part D: Buoyancy

1. Fill a beaker with 150 mL of fresh water.
2. Set an egg in the beaker.
3. Record how far under the surface the egg sits using a ruler.
4. Repeat with salt water.

Data Table: Comparing Salt Water and Fresh Water

	Fresh Water	Salt Water
Appearance		
Odour		
Residue after evaporation		
Density		
Buoyancy		

Discussion Questions:

1. Explain how you think increasing the amount of salt would affect buoyancy. Design an experiment that would allow you to test your response.

2. Explain any differences in density of between the salt and fresh water.

3. How do the densities of salt and fresh water explain the difference in their buoyancy?

