**Title: Sea Water Lab** **name_____**

**Purpose**: To observe and experiment with the properties of seawater.

**Procedure:**

1. Seven stations have been set up. Visit each one and record the data.
2. Answer the analysis and conclusion.

**Station 1-Hot and Cold Water**

1. Use the baby food jars. Set one in the pie tin and fill it with cool water.
2. Fill another jar with hot, red water from the beaker. Place a laminated card over the top.
3. Carefully flip the covered jar on top of the first jar. Gently pull the card out from in between them. Observe and draw what happens.
4. Repeat, this time place the hot water on the bottom, cool water on top.

Data: drawings

**Station 2-Water Temperature**

1. The thermometers are sitting in ice. Thermometer 1 is just ice, thermometer 2 is ice with salt in it.
2. Ice melts in a similar fashion to water boiling. The temperature remains at the melting point until all the ice is gone.
3. Write down the melting point of the ice and the ice and salt:

Data: thermometer 1_____ thermometer 2_____

**Station 3-Water Pressure**

1. Find the holes on the side of the pop bottle. Dry them and place a long piece of masking tape over them.
2. Fill the bottle with water and place it on the edge of the sink.
3. Quickly pull the tape off the holes and allow them to drain into the sink.
4. Draw the results:

Data:

**Station 4-Water Density**

1. Pour 10 ml of red, salty water into a test tube.
2. Slowly, drop by drop, add an equal amount of fresh clear water. If a two layer system hasn't formed, start over.
3. Add several drops of the green water until you can see where it floats.
4. Draw and label your test tube. Color the water as you see it.

Data:

**Station 5-How Much Denser?**

1. Add 25 ml of fresh water to the vial labeled "fresh water. Mass the vial containing 20 ml of fresh water. _____ g
2. Add 25 ml of salt water to the vial labeled "salt water". Mass the vial containing 20 ml of salt water. _____g

**Station 6-Cold Water**

1. Add 300 ml of water to the beaker. Place it in front of the white paper.
2. Add a piece of red ice. Observe and draw the beaker.

Data:

**Station 7-Waves**

1. Add several paper circles to the water in the plastic box.
2. Gently tap the side of the box to produce waves. Observe the movement of the paper circles.
3. Blow across the surface of the water. Record the movement of the circles now.

Data:
wave movements:

wind movements:

**Analysis for "Sea Water Lab"**

Station 1

1. Where did the warm water want to be? The cold?

2. Why does water behave this way?

3. Where will cold water be in the ocean?

Station 2

4. What does salt do to the melting point of ice?

5. Why do we put salt on the roads?

Station 3

6. Which hole pushed water out the fastest and furthest?

7. Why?

8. Where in the ocean will pressure be the highest?

Station 4

9. Which color water was densest?

10. What caused it to be most dense?

11. How much salt must have been in the green water?

12. When the sun evaporates water from the ocean it makes the seawater saltier. What would that water do next?

Station 5

13. Why was it important to use the same amounts of each type of water?

14. Which weighed the most for its size?

Station 6

15. Arrange these in order starting with the least dense: tap water, ice, melting ice water.

16. As ice melts from the polar regions, where would it go next?

Station 7

17. Where will a ball floating in a wave pool go?

18. Where will a ball floating in a pool go if the wind blows?

19. Do waves move water?

Conclusion: (3 things you learned)