Name:

Date:

# Graded Assignment

## Lab Report: Ocean Water Density

Answer the questions. When you are finished, submit this assignment to your teacher by the due date for full credit.

Total score: \_\_\_\_ of 15 points

(Score for Question 1: \_\_\_ of 3 points)

1. How will the ice water mix with the salty water? Write your hypothesis below.

Answer:

| Solution | Hypothesis Describing Mixing | Hypothesis Describing Temperature (Will the top be warmer, cooler, or the same as the bottom?) |
| --- | --- | --- |
| **Solution 1 Freshwater** |  |  |
| **Solution 2 Salty Water** |  |  |
| **Solution 3 Saturated Water** |  |  |

(Score for Question 2: \_\_\_ of 6 points)

1. Complete the data tables. At each interval, note the temperature at the top and bottom of the glass. Sketch or use your computer to draw the way the ice melted into the different solutions using the descriptions provided in your Student Guide.

Answer:

| Solution 1 Freshwater | 0 minutes | 5 minutes | 10 minutes | 30 minutes |
| --- | --- | --- | --- | --- |
| **Description** |  |  |  |  |
| **Top of Glass, Temperature (°C)** |  |  |  |  |
| **Bottom of Glass, Temperature (°C)** |  |  |  |  |

| Solution 2 Salty Water | 0 minutes | 5 minutes | 10 minutes | 30 minutes |
| --- | --- | --- | --- | --- |
| **Description** |  |  |  |  |
| **Top of Glass, Temperature (°C)** |  |  |  |  |
| **Bottom of Glass, Temperature (°C)** |  |  |  |  |

| Solution 3 Saturated Water | 0 minutes | 5 minutes | 10 minutes | 30 minutes |
| --- | --- | --- | --- | --- |
| **Description** |  |  |  |  |
| **Top of Glass, Temperature (°C)** |  |  |  |  |
| **Bottom of Glass, Temperature (°C)** |  |  |  |  |

(Score for Question 3: \_\_\_ of 3 points)

1. Summarize your data. Describe how the ice melted into each solution, and compare the temperatures at the top and bottom of the glass.

Answer:

| Solution | Mixing (How did the colored, fresh, meltwater mix with the salty water?) | Temperature (Was the top warmer or cooler, or was it the same as the bottom?) |
| --- | --- | --- |
| **Solution 1 Freshwater** |  |  |
| **Solution 2 Salty Water** |  |  |
| **Solution 3 Saturated Water** |  |  |

(Score for Question 4: \_\_\_ of 3 points)

1. What does your experiment suggest about what happens when icebergs melt into the ocean? Based on your data, do you think the sea-surface temperatures are warmer or cooler due to the melting water? Make sure you explain how your experiment helps you answer this question.

Answer:

Type your answer here.