**Team Members**

**Guiding Question**

How can we visualize data collected by Glider Jane to understand the relationships that drive ocean mixing and circulation?

**Mapping the Path of the Glider:**

Where did the glider travel?

Why is there a part missing in the data? What may have happened?

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| Draw Map of where the Glider Jane Traveled:  Label the Longitude and Latitude of its starting and ending place. |

**Draw the pattern the glider made through the ocean. Label min and max for depth Y-axis, and time on the X-axis.**

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| Ocean Surface |

**Relationships with Depth**

As the Glider gets deeper in the water, what do you expect to happen? Complete the chart below prior to analyzing each variable and then check to see if you are correct.

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| --- | --- | --- | --- |
|  | **How do you expect the variable change as the glider will gets deeper in water?** | **Max and Min Value Recorded** | **What is the relationship between each variable and depth? (e.g. as depth increases, “X” increases/decreases/no-relationship)** |
| Pressure |  |  |  |
| Salinity |  |  |  |
| Temperature |  |  |  |
| Density |  |  |  |
| Oxygen  (need to support life in the ocean) |  |  |  |
| CDOM  (dissolved organic matter) |  |  |  |
| Chlorophyll  (photosynthetic molecules associated with phytoplankton) |  |  |  |

**Making Predictions about Ocean Mixing:**

Test your knowledge to predict where an ocean water with particular qualities will go in the water column.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Description** | **Will that water travel up, down, or stay the same?** | **Explain your answer.** |
| Salty and Cold | There is **salty cold** ocean water that is pooling on top of warm ocean water. |  |  |
| Warm Fresh Water | **Warm fresh** water is raining down on to cold salty ocean water |  |  |
| BONUS |  |  |  |
| A lab partner hands you a temperature controlled sample of ocean water collected at 150ft deep. Based on the data in this activity, what temperature and salinity would you expect that sample to be? | | | |
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