Student Worksheet: Seamounts and Biological Productivity

Name(s): ______________________ **Date:** ____________ **Class:** ______________

Experience the Phenomenon

Data Set 1: Seamounts, Fisheries and Chlorophyll

Write down two observations and two questions about Data Set 1.

Notice - Observations	Wonder - Questions

What is the Driving Question?

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Investigate

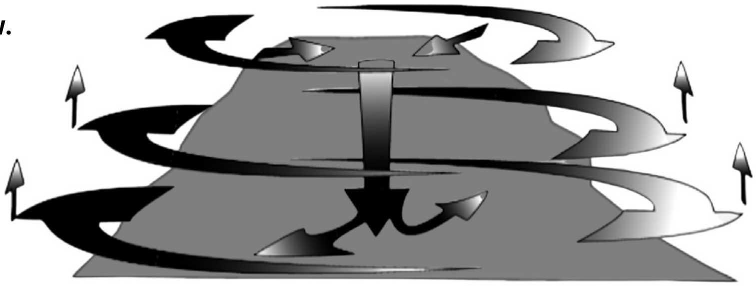
Analyzing Data and Evaluating Models

Review and discuss Data Set 2:
Fieberling Guyot Map and Data Table **as a class.**

Use the following models to answer the questions below.

Model 1: 3-D Diagram of Mean Flows in the Fieberling Guyot Circulation Cell

Model 2: Physical Simulation Model



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1. What do these models help us figure out about currents around seamounts and their effect on biodiversity?

2. How are these models limited? How could they be improved?

Put the Pieces Together

Read the *"What is Upwelling?"* handout. Then, watch the remainder of the *Exploring the Deep Waters of American Samoa* video as well as the *Tenants of Titov Seamount* video to help gather more insight for the ***Driving Question:*** *How do seamounts establish areas of enhanced biological productivity?*

Seamount ecosystems form through unique interactions among the geosphere, hydrosphere, and biosphere. Using all the information you have learned through the data sets, models, videos, and reading, explain why seamounts are such unique ecosystems and why it is important to understand them.