Mapping the Ocean Floor

Lab Preview

Directions: *Answer these questions before you begin the Lab.*

1. What information do you need to plot a point on the graph?

2. What would you expect to find if you were standing at station number one (0,0)?

In this lab you will use sonar data from the Atlantic Ocean to make a profile of the ocean bottom.

Real-World Question

What does the ocean floor look like?

Materials

graph paper

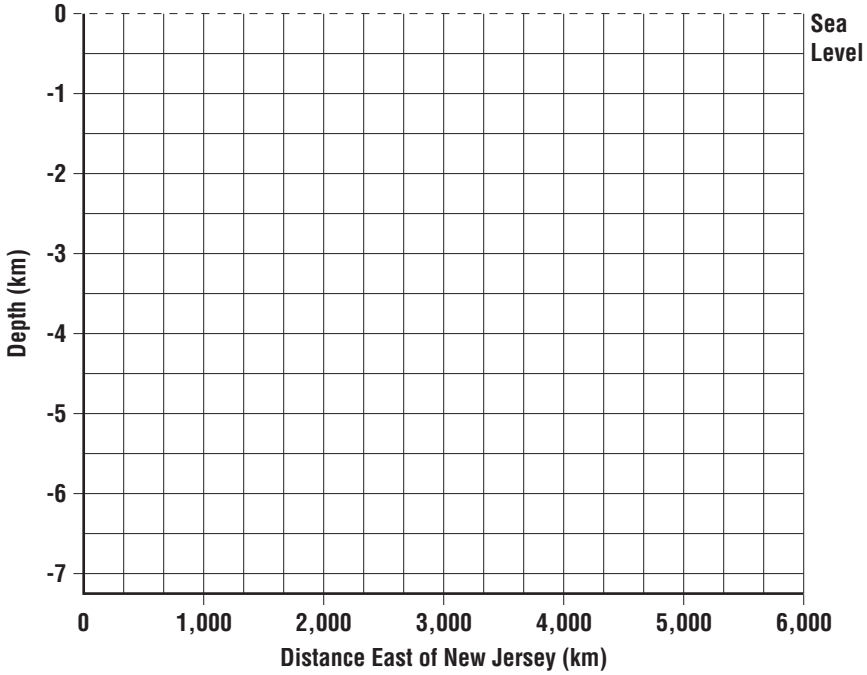
Goals

- **Make** a profile of the ocean floor.
- **Identify** seafloor structures.

Procedure

1. Copy and complete a graph like the one shown.
2. **Plot** each data point and connect the points with a smooth line.
3. Color water blue and the seafloor brown.

Graph 1



LAB (continued)

Table 1, Ocean Floor Data

Station Number	Distance from New Jersey (km)	Depth to Ocean Floor (m)	Station Number	Distance from New Jersey (km)	Depth to Ocean Floor (m)
1	0	0	14	3,450	3,400
2	160	165	15	3,550	2,100
3	200	1,800	16	3,700	1,275
4	500	3,500	17	3,950	1,000
5	1,050	5,450	18	4,000	0
6	1,450	5,100	19	4,100	1,800
7	1,800	5,300	20	4,350	3,650
8	2,000	5,600	21	4,500	5,100
9	2,300	4,750	22	5,000	5,000
10	2,400	3,500	23	5,300	4,200
11	2,600	3,100	24	5,450	1,800
12	3,000	4,300	25	5,500	920
13	3,200	3,900	26	5,650	0

Conclude and Apply

1. What ocean floor structures occur between 160 km and 1,050 km east of New Jersey? Between 2,000 km and 4,500 km? Between 5,300 km and 5,500 km?

2. When a profile of a feature is drawn to scale, the horizontal and vertical scales must be the same. Does your profile give an accurate picture of the ocean floor? Explain.