

1. GRAPH

POINTS

Graph all of the points in the Data chart, and connect the points.
 Label the features listed in the Definitions below in pen or colored pencil.
 Color the graph to emphasis land and sea forms.
 Include Sea Level in the graph.

FORTY Points

2. DEFINITIONS

Define ; Continental shelf Trench Seamount Sea Level
 Continental slope Island Guyot Basin

TEN Points

3. QUESTIONS

Use your book pages **93, 94, & 95**

THIRTY Points

Answer in COMPLETE sentences on a separate sheet of paper

1. Explain what **Bathymetry** means.
2. Give an account of the *HMS Challenger's* approach in bottom exploration.
3. What did **Reginald A. Fessenden** develop?
4. What did the *German vessel Meteor* reveal?
5. Why wasn't **Echo Sounding** perfect?
6. How is the **Multibeam System** different from the **Echo Sounder**?
7. How many ships are equipped with **Multibeam Systems**?
8. How do **Satellites** measure in the oceans depths?
9. What makes the **ocean's surface** vary?
10. Name the **three Satellites** that map the ocean, and tell what they do.

4. MATH PROBLEMS

TEN Points

Use this Formula
$$\text{Time(s)} = \frac{2 (\text{Depth}) \text{ in (meters)}}{\text{Velocity (1,524 (m)eters / (s)econd)}} \text{ (a Constant in water)}$$

Now determine the time required for Echo Sounding to occur for the first **FIVE** Different Depths on the Data sheet. Do not do the calculation for the depth zero.

Be certain to always include the correct units, and show the entire equation.

5. ANALYSIS

TEN Points

(Extra credit if well done)

Given the information already covered in class , and this lab, write a two paragraphs or more expressing what you postulate (suppose) the ocean floor really looks like in a specific location example (Mid- Atlantic Ridge , Hawaiian Islands , Marianas Trench). Give scientific examples of geographic features, life , and other phenomena such as earthquakes, volcanoes, abyssal plains, trenches, or hydrothermal vents. Use your imagination , and do not state that the ocean floor looks just like the graphic.

As a ship sailed across the ocean, the data below was received by an echo sounder. Plot this data on your graph paper. Connect all points to draw the ocean bottom profile.

<u>Set of Data</u>	<u>Depth in Meters</u>	<u>Distance in Kilometers</u>
1	60	0
2	60	40
3	0	120
4	-60	161
5	-91	306
6	-366	442
7	-975	644
8	-1219	944
9	-1341	1080
10	-1341	1207
11	-1341	1408
12	-1341	1528
13	-1128	1576
14	-914	1609
15	-914	1689
16	-914	1810
17	-914	1890
18	-1127	1971
19	-1432	2011
20	-1432	2292
21	-1280	2333
22	-1005	2381
23	-670	2453
24	-944	2494
25	-1341	2575
26	-1554	2655
27	-1737	2695
28	-1646	2735
29	-1463	2775
30	-1402	2936
31	-1219	2976
32	-914	2992
33	-671	3025
34	-244	3041
35	0	3057
36	+183	3097
37	-122	3137
38	-457	3218

