

Name: _____

Date: _____ Period: _____

Lab Activity: Topographic Maps

INTRODUCTION:

Topographic maps are models that represent a portion of the Earth's surface. The relief, or topography, such as hills and valleys can be shown by using isolines called contour lines. A contour line is a line drawn through points of equal elevation, or distance above sea level. Contour lines show both the shape and relief of the feature or area being mapped.

The difference in elevation between adjacent, or successive contour lines is the contour interval. Usually, contour intervals are expressed in meters and feet.

OBJECTIVE:

You will see how contour maps are drawn and how they represent topography.

VOCABULARY:

Topographic Maps -

Elevation -

Contour Line -

Contour Interval -

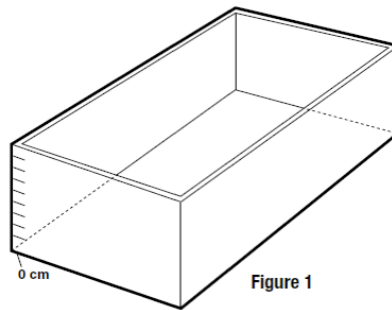
Index Contour -

Depression Contour Lines -

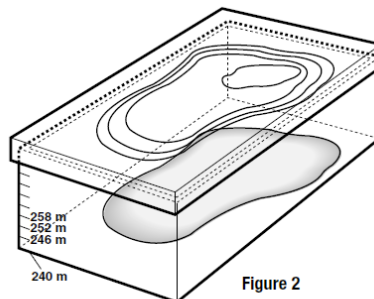
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PROCEDURE:

1. Fill the shoebox with water, stopping when the water level reaches the 0 centimeter marking. This is sea level which is equal to 0 meters in elevation.



2. Have your teacher place in food coloring or dye to make the shoreline more visible.
3. Place the clear plastic lid on top of the shoebox. Using a marker trace the shoreline. Be sure to keep your eye directly over the shoreline as you trace it onto your clear plastic lid.
4. Take the clear plastic lid off and fill to the next centimeter marking line.
5. Replace the lid and trace the shoreline.
6. Repeat the procedure for every centimeter marking until you get to the top centimeter marking line.



7. After you have completed the drawing all the lines, every member of your group should trace your contour lines from the clear plastic lid onto a white sheet of paper.
8. Label each contour starting with the first marker line. This represents 0 meters in elevation.
9. The contour line at the top of the volcano should be different from the other lines. Make sure you label it correctly with hachured lines.

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DISCUSSION QUESTIONS

1. What do contour lines represent on a topographic map?
2. Why is it unlikely that two contour lines will ever cross?
3. Referring to your contour map, how does a topographic map show areas of steep gradient?
4. How do contour lines indicate streamflow on a topographic map?
5. Would a topographic map of a mountain today have the same appearance in the future?

CONCLUSION: To accurately create a topographic map, what types of data do you need to collect?