

Introduction to Topographic Maps, Contouring and Aerial Photos

Geology

Mr. Traeger

Name: _____

Period: _____

Date: _____

Partner's name: _____

Score: _____

Purpose

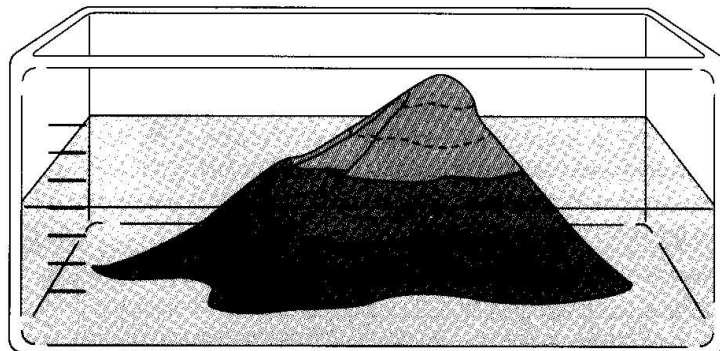
The purpose of this activity is to become acquainted with the basic concept of the topographic map. The student will learn to draw and interpret contour lines of Mt. Capulin, NM, a cinder cone volcano. Student will also learn to analyze aerial photos using a stereoscope.

Materials

- Metric ruler
- Overhead pen
- Transparent $\frac{1}{2}$ gallon box with lid
- Styrofoam cup
- Colored water
- tracing paper
- pencil
- page 697 and Chapter 3 in textbook
- Stereoscope and image of Mt. Capulin, NM

Procedure

1. Obtain a transparent $\frac{1}{2}$ gallon box, transparent lid, overhead pen, pencil, ruler, and Styrofoam cup with water. Be careful not to spill any water!
2. Mark the bottom of the box $6,280$ feet.
3. Mark one of the sides of your $\frac{1}{2}$ gallon box in 1 centimeter increments, starting from the bottom. Make sure to use the overhead erasable pen. Each centimeter will be equal to 250 feet in the real world.
4. Fill your Styrofoam cup with colored water.
5. Pour water in to the tray until the water level reaches a height of 1 cm ($6,280$ feet + 250 feet = $6,530$ feet).
6. Put the transparent lid on top of the box. Looking down from the top, take your overhead pen and draw a contour line along the point where the water meets the $\frac{1}{2}$ gallon box.
7. Mark this line $6,530$ feet.
8. Now, being careful not to smear your lines, remove the transparent cover.
9. Pour more water into the box until the water level rises to a height of 2 cm.
10. Replace the lid and draw the contour line for 2 cm. Make sure to mark it $6,780$ feet.
11. Continue drawing contour lines and labeling elevation for each centimeter mark, up to the top just before the box overflows. You will add 250 feet to each contour line as you go up.
12. Take your transparent cover off. Using a white sheet of tracing paper, draw your contour lines on to the sheet of paper. Make sure to label each contour line's actual elevation in feet above sea level.
Hint: The tracing is easiest if you hold the paper up to a light or use one of the windows.
13. Once you have transferred all of your lines on to the paper, you will erase the lines from the plastic sheet. The best way to do this is to run it under water.
14. Carefully pour your water out into the bucket. Make sure to erase the lines that you drew on the side.
15. Clean up any mess that you may have made.
16. Answer the following questions.



Questions

1. What is a contour line?
2. Do any of your contour lines ever cross each other? Why or why not?

