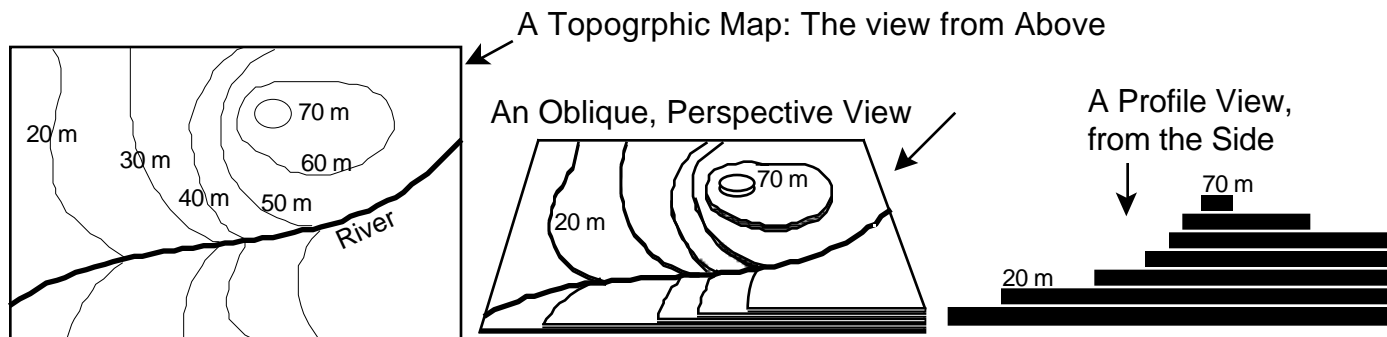


On page 2 of this paper you will find an enlarged contour map.

You will be using this map to make a three dimensional model of the land around Briarcliff High School.

The number of people in your group will be determined by the number of contour lines (lines of equal elevation) to be used. The procedure below should make this clear.



**Procedure:**

1. What is the minimum (lowest) elevation on the map on page 2 of this activity? \_\_\_\_\_  
(Hint: It is less than 250')
2. What is the maximum elevation shown in the region of your map? \_\_\_\_\_ (It's more than 550')
3. What is the range of elevations? (The highest elevation minus the lowest.) \_\_\_\_\_
4. How many dark 50 foot index contour levels are shown on your map? \_\_\_\_\_
5. In order to use this interval, how many contour levels will you need have?  
(This is the answer to step 4, plus 1.) \_\_\_\_\_  
This is the maximum number of sheets of foam/people in your group for this activity.
6. Now that you have determined the number of people in your group, you will need to assign each person a different contour level, starting at the contour below the lowest elevation in the map area.  
(For example, if the lowest level on your map is 275 feet and the contour interval (#4 above) is 50 feet, your group will start with 250'. The next person will get 300', and the following person 350', etc.)

What is your index contour? (Each person in the group will have a different contour!) \_\_\_\_\_

7. The person with the lowest contour will simply paste the whole map to a piece of stiff cardboard and cut the sheet of cardboard along the rectangular edges of the map region.

Cut out your paper along your contour, then paste the paper to a standard thickness of corrugated cardboard cutting along the selected contour line to isolate the areas at the index level or above.  
(Do not cut along the roads or the streams. Just cut along the contour lines.)

8. When each person in the group has cut out her/his own piece of cardboard, paste the sections together from the bottom up to make a three dimensional model of the area around the school.



A Portion of the  
Ossining Quadrangle  
New York

**LEGEND:**

|                             |   |         |
|-----------------------------|---|---------|
| Roads: Major:               | Minor:                                  | ← NORTH |
| Paths:                      | Ponds:                                  |         |
| Houses and other Buildings: | Elevations in feet above mean sea level |         |

0 km 0.1 0.2 0.3 0.4 0.5  
Scale: 16 cm: 1 km

1. Below 230 ft. (Between 220 and 230 ft.)
2. Above 570 ft. (Between 570 and 580 ft.)
3. About 350 ft.
4. Six 50 foot contours.
5. 7
6. Variable

# A Topo Map in 3-D Tips

**Difficulty:** Fairly Easy

**Content:** Important

**Preparations:** None

**Materials:** One 8½ by 11 foam food tray or  
Sheet of Corrugated Cardboard per person.  
One pair of Scissors Per Person  
Glue Sticks or Jars of Glue  
A model to show from a former year  
Highlighter pens or colored pencils

**Time:** ~ 80 Minutes

**Suggestions for the Teacher:** Do not duplicate the map on the back of the directions.

Can be used in place of the ESCP activity, Making a Topo Map

- Student Intro:**
1. Please conserve materials (foam trays, glue, markers, etc.)
  2. Explain what index contours are.
  3. The ideal group size is about 5. (Maximum of 7)
  4. Please conserve the glue.
  5. Paste a whole sheet onto the cardboard to make the base.
  6. Explain what a closed depression is. (Lower right side of the map.)

**Post-Lab:** None

**Extensions:** Take student to an exposed place where they will be asked to draw/sketch a contour map of the immediate area.

Work with your own local topographic map.