

Student Name: _____

Date: _____

Activity Sheet

Constructing and Visualizing Topographic Profiles

Directions: Complete each task below.

Read the following definitions and compare it to the images displayed on the board.

Profile -- noun (proh-fahyl)

The outline or contour of the human face, especially the face viewed from one side.

An outline of an object.

A set of characteristics that identify or are thought to identify a particular type of person.

Below write how each portrayed image fits the definition of profile. What are the similarities between the two images?

Share your response with a partner. After discussing your response, add to or revise your initial response below,



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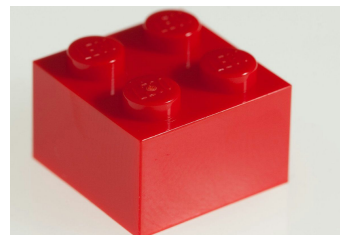
Part A

1. From your teacher, obtain a packet of Lego blocks, ruler, and contour gauge.

2. Measure the length and width of a block that is 2x2. Two pegs by two pegs in cm. Include your units.

_____ length

_____ width



3. Build a structure with the Lego blocks that is less than eight (2x2) blocks long and four (2x2) Lego blocks high.

4. Draw your structure from the front, the top, and from the left side in the space below. Do not share your drawings with other groups.

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5. Measure the length and height of your structure. Record your measurements below and on each of your diagrams.

_____ length

_____ width



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Part B

6. Duplicate the front edge of your structure by placing the contour gauge on the front end of the structure. Holding onto the yellow tabs, pull the gauge down. Ensure the gauge's teeth are fully extended by gently pushing down on each tooth with your finger.

7. Trace the profile outline below. Include measurements.

8. Repeat steps 6 and 7 at the center of your structure. Include measurements.

9. Repeat steps 6 and 7 at the back edge of your structure. Include measurements.



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Return your profile gauge to your teacher.

10. Compare each of your drawings in Part A to each of your drawings in Part B. Be sure to explain the similarities and differences as you move left to right. Why are they the same? Why are they different? Use qualitative and quantitative evidence as well as any other relevant ideas from the drawing to support your explanation.

11. What surprised you about your drawings?



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Part C

12. Exchange your structure with another group. Do not share your drawings with them.

13. Using the new structure, draw either the front, middle, or back profile. You only need to draw one below. You are NOT permitted to use the contour gauge. The use of a ruler may be helpful.

14. Compare your drawing in 13 to the profile made with the gauge. You will need to look at the drawings from the group you exchanged with. Were you successful _____. If you were successful, why do you think you were? If you were not successful, why not?

15. As you move left to right across the profile, how does it change?



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Questions

16. What is a profile?

17. What are ways that topographic maps can be useful to people?

18. Why would we use Lego blocks to learn about Earth's surface?

19. If we wanted to draw the profile of the landscape around the school, would we use a contour gauge? How might we accomplish this task?

20. What was challenging about today's activity?

