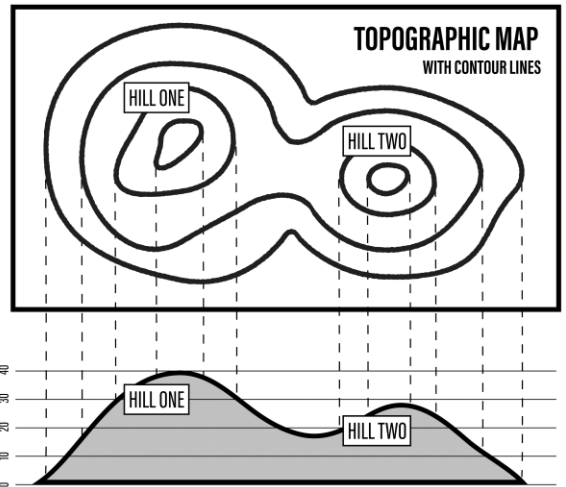


# Topographic Map Activity

## Materials:

- Clay or dough
- 1-2 sheets of plain paper
- Floss or string (approx. 18in/46cm)
- toothpicks
- Ruler
- Pen, pencil, or marker



## Procedure:

- 1) Shape the dough into a mountain.
- 2) Divide the paper into 4 equal parts. It might be helpful to fold the paper in half in each direction, then when the paper is unfolded trace the folds, so you create a + shape with the intersection of the lines at the center of the paper.
  - a. These will be your cardinal direction North, South, East & West lines. You can label them N (top), S (bottom), W (left), and E (right).
- 3) Place your mountain in the center of the paper on top of the +.
- 4) Holding your ruler up so that 0 is on the paper next to your mountain and on one of the direction lines, measure 1cm (or ½ in) up and place a toothpick into your mountain at the 1cm (½ in) height. When you put your toothpick in, make sure that it lines up with one of the 4 lines you drew on the paper.
  - a. Continue around your mountain at each line on the paper and measuring 1cm up in all 4 directions.
  - b. Repeat this step in all 4 directions for 2cm, 3cm, 4cm, etc. until you reach the top of your mountain.
- 5) Trace the bottom of your mountain onto the paper using the pen.
- 6) Wrap the floss/string around your mountain. Make sure that the floss is directly under the lowest set of toothpicks. With both ends of the floss in one hand, pull the floss towards you to cut the mountain at the height of the lowest set of toothpicks.
- 7) Carefully lift the top part of your mountain and remove the bottom part that you just cut off. It is best to lift STRAIGHT up and try not to move off center too much.
- 8) Replace the top/remaining part of your mountain back on the paper. Remember to line up the toothpicks with the N, S, E & W lines and put your mountain back to center.
- 9) Repeat steps 5-8 until you have reached the top of your mountain.

The lines you have traced on your paper are contour lines. They have connected points of equal elevation that you measured with the ruler.

- 1) Now you can label your contours. The largest contour that was at the very bottom of the mountain will be labeled 0, the next contour line inward will be labeled 1. This contour line represents the 1<sup>st</sup> measurement you took with your ruler, 1cm. The 3<sup>rd</sup> contour line inward represents the 2<sup>nd</sup> toothpick measurement that you measured with your ruler and will be labeled 2. Keep labeling each contour until all your contours are labeled.

You can now compare your mountain to the topographic map you have just made!

8 Inch Ruler | 20 cm Ruler

