Play-Dough Topo

Materials:
- Clay
- Fishing line or floss
- Pencil
- 2 pieces of blank paper (per group)
- Spoon
- Butter Knife

Instructions:

1) Place the clay on a piece of scrap paper. With your hands, spoon, knife, shape the clay into a steep volcano-like mountain (hint - warm the clay in your hands). Add as much shape to it as you can.

2) Using the front of the class as north, make a straight deep groove from top to bottom.

3) Measure the elevation of your mountain using using centimeters. Divide the elevations by 5 or 6 to determine contour interval (i.e. the distance between each contour line.) Rounding is permitted.

4) Holding your pencil horizontal, mark holes or lines at each calculated interval, completely around your model. Try to keep the intervals 1-2 cm if you can.
5) Using a length fishing line, wrap securely around your hands or fingers, cut the model parallel to the table horizontally at the elevation marked by dots or lines. Keep your hand as steady as possible. Make the slices as even and parallel. Lay all your slices out in order from top to bottom.

6) On a blank piece of paper mark North. Starting with your bottom-most slice (the biggest slice) line up your “North” groove with the north mark on your paper. Use a pencil to carefully trace the outline of the slice, paying attention to the indentations and shapes of your mountain. Remove the slice and line up North points with your next slice (second biggest) and repeat until all shapes have been traced.

7) You’ve just created a topographic map! Go you!

8) Using the clay, construct a 3D model for each topographical map below. Make a simple drawing of each model next to each topographical map.