Clay Topographic Maps

Procedure

1. Make a model mountain out of clay that is 8 centimeters tall. Make one side of the mountain steeper than the other.
2. Use a paperclip to make a channel in the mountain from top to bottom that represents a river.
3. Place the model in the center of the plastic tub.
4. Use tape to hold a ruler upright in the tub. One end of the ruler should rest on the bottom of the tub. Put the zero end of the ruler down.
5. Add water to the tub to the level of 1cm. Use a paperclip to trace a line around the clay where the clay and water meet.
6. Raise the water level 1cm at a time until you reach the top of the model. Each time you add water to the container, trace a line around the clay where the clay and water meet.
7. When you have finished, pour the water out and remove the model.

Vocabulary - define these terms in your **science folder**.

1. Each line you traced in the model is called a **contour line**. A contour lines represent land of equal elevation (height above sea level).
2. The distance between each line is called the **contour interval**.
3. A **topographic map** is a map that uses contour lines to show the elevation of an area. It portrays a in 3D area in 2D.

Analysis Questions - write the answers to these questions in **sentence form** in your **science notebook**.

1. What is the contour interval of your model?
2. Observe your model from directly above. On a piece of paper, draw and try to duplicate the size and spacing of the contour lines to make a topographic map.
3. Compare the contour lines on a steep slope with those on a gentle slope. How do they differ?
4. How is a valley represented on the map?
5. Look at the drawing of the Lida Picton Willey Lake in your science notebook. Which banks would have contour lines which are close together and which would have them farther apart?