

Make a Knuckle Contour Map

A contour map shows the high and low areas of geography. These maps are helpful when trying to imagine the terrain in ways that simple distances don't represent well. But these maps can be complicated. Here's an activity that will help your teenager understand contour maps like the back of her hand *with* the back of her hand!

This activity will help your child imagine how terrain maps work by charting the topography of her fist with the same methods contour maps use.

What You Need:

- Water-based or water-soluble markers
- Your child's hand
- Soap and water for cleaning



What You Do:

1. Take a look at how contour maps show features of the terrain. You can find these maps in a geography book or online. Notice that, as the surface of the land increases in elevation (height above sea level), a line is made on the map to indicate the shape of the change.
2. Observe how the mountains are shown with irregular shapes that mark changes in elevation. These shapes appear to be inside each other, like circles within larger circles. These shapes are cross sections or segments stacked like slices of an orange. Mountain peaks would be the highest points of the terrain and are the smallest, innermost shapes on the maps.
3. Now that you've reviewed what a contour map is, you can create your own. Make a fist with your non-writing hand and place it on a flat surface, knuckles facing up. This will be the terrain for your contour map.
4. The knuckles will be a mountain range, each knuckle a peak of a mountain. Draw contour circles around the surface of the "mountain range". First, draw a rough circle around the tops of your knuckles since they are the highest points on the "map".
5. Now draw a rough circle around the lowest area between your knuckles.
6. Continue to draw lines around the next lowest area as you move from the top of your knuckles to the base of your fist. You can use different colors for each layer of elevation.
7. When finished, flatten your hand out. You now have a two-dimensional contour map of your three-dimensional fist.

Now that you know how contour maps work go online or to the library and look at contour maps of where you live. Do you recognize the terrain?