**Fence Post Activity**

*In this activity you will be installing a fence that requires you to dig out a cylindrical hole, determine the prism that will fit into the hole, and the amount of concrete needed for then fencing.*

1) You decide to put a fence into your back yard. You determine that you will need the fence to be 84 linear feet with a fence post being placed at every 6 feet. How many posts will you need?

2) If the posts are in a rectangular prism with a length and width that is 6 inches by 6 inches and there needs to be at least 2 inches of concrete on each side, then what would be the diameter of a cylindrical hole that you need to dig be?

3) If the manual says the hole needs to be 36 inches deep, then use your determination from number 2 to find the volume of one cylindrical hole.

4) Using what you know about the fence post find the volume of the post within the cylindrical hole.

5) How much concrete needs to go into the hole to hold the post in place?

6) A bag of concrete at Home Depot sells for $3.80 and covers 950 cubic inches. How much will it cost you to fill up the fence postings?

7) What would 950 cubic inches be in cubic feet?

8) What if the posts have sides that are ½ inch wide, but is hollow on the inside. Then how much concrete will need to go in each hole?

9) What if the fence posts were 2/3 the size, then what would be the volume of each hole?