Radio Active Decay

Directions.

Count out how many M&Ms you started with. Place them in your container and shake them up. Now pour out the M&Ms and count the number of M&Ms that are face up. Record the number, and remove the Face up M&Ms. Now repeat this process until you run out of M&M’s. Record each trial run. Feel free to eat the M&Ms that land face up. Now use excel to graph your results (trial number vs. remaining M&M’s).

***Excel graphing***

Open up Microsoft Excel. Create two columns for data. One column for trial number and one for the number of M&Ms that landed face up. Once the data is entered, then go to the top of the toolbar menu and click insert, then scroll down and chose chart. This should pull up a chart toolbar at the top of your excel document. From here you want to choose x/y scatter, and then pick the chart on the far left (looks like a bunch of dots). Then right click on the chart, and choose select data. This should pull up another menu. At this point you want to remove all series. Then add a new series. Now you want to select your x and y values. To the right of where it says X values there will be a little read cursor. Click on this. Now highlight the trial numbers column. Click on the red cursor. You should now be back in select source data. Now repeat this step for your y values (number of M&Ms face up). Once this is completed name your chart and the click on ok.

1. Draw the general shape of your graph below:

2.       What happened to the number of M&Ms that landed face up over time?

3.       If Uranium decays in the same way as the M&Ms in your lab what does this tell you about the radioactive waste?

4.      If we continue to use nuclear power in the World, what is to be done with this waste?

Part II Radioactive Waste Storage

There are currently no long-term nuclear waste storage sites in the U.S. (nor anywhere else in the World). If we do build a national nuclear waste storage site, how will we mark this site for future generations? Considering that the English Language is less than 2,000 years old, how do we mark a waste site that will remain hazardous for millions of years in a way people in the future will understand the warning?

In the space below; design and draw a label that you think would be a safe way to mark a U.S. Nuclear waste site.