Chemistry – Unit 5 Activity: Rice-O-Rama!

Problem:

What are some different ways that can be used for "counting" large numbers of objects?

Procedure:

   Obtain a container with rice from your instructor. Your job will be to determine the number of grain of rice in the container without counting them one by one. Experiment with a number of different methods of counting. Keep accurate notes of any counting methods attempted.

Analysis:

1. Write a description of each of the counting methods you tried for the objects. Describe at least 2 different methods.

2. List the advantages and disadvantages of each counting method used.

3. Of the counting methods used, which method is the most accurate? Why?

4. How many grains of rice did you sample contain? Show your work.

5. Calculate the number of grains of rice with a mass equal to your body mass (1 lb = 0.45 Kg ; 1,000 g = 1 Kg)

6. Describe the most accurate method to determine the density of rice.

7. Based on your experience in this lab, how do you think chemists determine the mass of an atom?