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**Subject: Chemistry**

**Grade: 9& 10 (Honors Chemistry)**

### **Lesson Plan on Atomic Mass**

**Objective of the Lesson: To assist in calculating and understanding the concept of an element's atomic mass**

Procedure:

- Get a cup full of mixed up candies
- Count the total number of candies and record.
- Count the number of the colored candy by size and record. (The total number of candies should equal the sum of all of these colored candies.)
- Determine the mass of one piece of candy per size and record.
- Throw these candies away.
- Create a data table

Candy	Number	Mass of one piece
Small Size		
Medium Size		
Large Size		
Any other		
Total in cup		

Analysis:

- Assume your candy is a natural source of an element and each of that element's isotopes is represented by a different sized candy.
- Calculate the % Abundance for each different sized candy using the following equation and record
- $\% \text{ Abundance} = \frac{\# \text{ pieces of one size}}{\text{Total in cup}} \times 100 \%$  total in bag
- Total the % Abundances and record. This should nearly equal 100%.
- Using the mass from Table and the % Abundance calculate the weighted mass of each isotope (or size) and record.
- $\text{Weighted Mass} = (\text{mass}) (\% \text{ Abundance})$
- Total the weighted masses and record. This is your atomic mass and should be between the smallest and largest masses recorded.