

Dear 8<sup>th</sup> graders,

Eighth grade science is an exploration into the World of Physical Science. This exploration consists of a semester of chemistry and a semester of physics. In preparation for the semester of chemistry, I am asking you to learn about the first 20 elements on the Periodic Table of Elements, including symbols and atomic numbers. It's fun to learn relevant information about elements because they are the basic unit of all matter...Chemistry is the study of matter!

The goal of focusing on this information for the first 20 elements includes beginning to understand:

- the Periodic Table of elements is organized (according to atomic number)
- neutral atoms contain the same number of protons and electrons
- how to determine the atomic structure of various atoms and how the atomic structure dictates how atoms interact (including bonding)
- how to determine the numbers of each subatomic particles (protons, electrons and neutrons)
- foundational information to support writing chemical formulas and balancing equations

Students will use a Periodic Table of Elements throughout our study of chemistry; however, understanding the information provided in the Periodic Table of Element through study will effectively support the ultimate goal of understanding atomic structures.

I look forward to working with you in the fall!

Eugene