



Dear Parents,

We are beginning our fourth unit in which we will learn about matter and energy. We will focus on using the periodic table to recognize elements (pure substances), identifying the limited elements that make up four areas of Earth, being able to tell the difference between elements and compounds, and identifying signs of chemical changes. We will also learn to calculate density to identify unknown substances and compare metals, nonmetals and metalloids. In our Argument Driven Inquiry lab we will be identifying evidence for chemical and physical changes. The following standards will be covered, and your child will be expected to do the following:

- know that an element is a pure substance represented by a chemical symbol and that a compound is a pure substance represented by a chemical formula;
- recognize that a limited number of the many known elements comprise the largest portion of solid Earth, living matter, oceans, and the atmosphere;
- identify the formation of a new substance [compounds] by using the evidence of a possible chemical change such as production of a gas, change in temperature, production of a precipitate, or color change;
- compare metals, nonmetals, and metalloids using physical properties such as luster, conductivity, or malleability; and
- calculate density to identify an unknown substance.

We encourage you to talk to your child about what they are learning in class. Here are some questions that you can ask your child throughout this unit.

- What is the definition of an element?
- Which elements make up the solid portion of Earth? Are common to living organisms? Make up the oceans? And are found in the atmosphere?
- What is the difference between an element and a compound?
- What is a chemical change?
- What forms from a chemical change?
- What are some signs of a chemical change?
- What are the three main element groups and how do you compare them?
- What are the predominate physical properties of element groups classified as metals? Non-metals? And metalloids?

If your child struggles with any material taught during this unit, we would urge you to make sure your child attends tutoring for assistance to gain a better understanding and demonstrate mastery. If you have any questions or concerns, please don't hesitate to contact your child's teacher. We look forward to your child's success in Science this year.

Sincerely,

The 6<sup>th</sup> Grade PreAP Science Team