



Dear Parents,

Welcome to 4<sup>th</sup> grade science! Physical science will be the focus for the 1<sup>st</sup> nine weeks. Classifying matter will allow your student to classify matter based on physical properties, including mass, magnetism, physical state (solid, liquid, and gas), relative density (sinking and floating), solubility in water, and the ability to conduct or insulate thermal energy and electric energy. Fourth grade students will then compare and contrast a variety of mixtures and solutions such as rocks in sand, sand in water, or sugar in water. Your student will learn that energy exists in many forms and can be observed in cycles, patterns, and systems. The student is expected to differentiate among forms of energy, including mechanical, sound, electrical, light, and thermal. We will be doing activities and experiments with the different forms of energy. We will close out the first nine weeks studying of different forms of energy.

**The concepts students are expected to master:**

- We can measure physical properties of matter including size, mass, volume, and temperature.
- We can compare and contrast matter based on its physical properties such as state of matter, magnetism, and ability to sink or float.
- Mixtures are formed when materials are combined; a solution is a type of mixture in which the materials mix but do not change their chemical makeup or physical properties.
- The materials of mixtures may be visible such as when sand is mixed in water, or not visible as when sugar is mixed in water.
- The materials in mixtures can be separated using purely physical means, including settling, straining, filtering, evaporation, or with magnets. Not all solutions can be separated, but those that can must be separated by evaporation
- There are different forms of energy including mechanical, sound, electrical, light, and heat.
- We can observe and differentiate forms of energy.
- Light bulbs, toasters, fans, and televisions are common everyday objects that produce or use light, heat, mechanical, sound, and electrical energy.

We look forward to working with you and your child in science this year! Get your child involved in the kitchen. A dinner salad is a mixture, and Kool Aid is a solution. What else can they identify or better yet – CREATE? Have meaningful conversations about different forms of energy found in the home. What forms of energy are involved with a stove? - Thermal, electrical, light, and mechanical!

Sincerely,

The Fourth Grade Team