

Appendix: “Implementing District Standards”

4.P.3.1 Recognize the basic forms of energy (light, sound, heat, electrical and magnetic) as the ability to cause motion/create charge.

4.P.1.2 Explain how electrically charged objects push or pull on other electrically charged objects-electrically charges can result in attraction, repulsion and electrical discharge.

4.P.3.2 Recognize that light travels in a straight line until it strikes an object or travels from one medium to another, and that light can be reflected, refracted, and absorbed.

In this curriculum unit, the students will begin by learning and experimenting with the basic forms of energy based on what the standards and CMS says we have to teach. They will complete simple labs that lead them to the basic knowledge of sound, light, heat, electricity, and magnetism. I want my students to dig deeper into these meanings. The students will then expand their knowledge of these forms of energy through chemical experiments. They will learn about endothermic and exothermic reactions which will further their knowledge of heat. They will create light through experiments that show how glow sticks work, which will further their knowledge of light beyond flipping on and off a light switch. The students will conduct acid experiments using fruit to conduct electricity and using their own bodies to also conduct electricity. These meaningful educational experiments will “stick” with them and hopefully will enhance their basic understanding of these topics.