Physical science

This course will provide an overall understanding of physical science with an emphasis on hands-on physics and experimental chemistry. The year will begin with an introduction to physics and Newton's Laws. Students will then be introduced to, design, and build six simple machines. The physics portion of the class will culminate with a study of, and labs related to, light and sound. The latter portion of the school year will begin with a brief overview of the periodic table, atoms and molecules. We then delve into experimental chemistry with brief introductions to concepts such as decomposition, conductivity, etc. followed by experiments to test said concepts. This will be a customized course that will be heavy on projects, experiments and writing sound lab reports.

We will be using portions of Apologia's 2nd edition Exploring Creating with Physical Science. We will also be using Apologia's microchem kit and various building materials.

Below is a proposed overview of the modules:

Module 1: Introduction to Physics

Module 2: Newton's Laws

Module 3: Simple machines: lever

Module 4: Simple machines: wheel and axle

Module 5: Simple machines: pulley

Module 6: Simple machines: inclined plane

Module 7: Simple machines: wedge

Module 8: Simple machines: screw

Module 9: Waves and sound

Module 10: Light

Module 11: Periodic Table, atoms and molecules

Module 12: Boyle's Law, Charles's Law

Module 13: Experimental chemistry: electrical conductivity

Module 14: Experimental chemistry: melting points, cooling

Module 15: Experimental chemistry: decomposition

Module 16: Experimental chemistry: experiment extravaganza