

Science Curriculum

Morris County USD #417

Grade 8 – Physical Science

**Understand: “understand” does not mandate “belief.” While students may be required to understand some concepts that researchers use to conduct research and solve practical problems, they may accept or reject the scientific concepts presented. This applies particularly where students’ and/or parents’ beliefs may be at odds with current scientific theories or concepts. (KS Science Standards, February 14, 2001, p. 76)*

Indicator	Description	Date(s)			
8KS1.1.1	Identify questions that can be answered through an investigation.				
8KS1.1.2	Design/conduct a scientific investigation.				
8KS1.1.3	Use appropriate tools.				
8KS1.1.4	Identify the relationship between evidence and conclusion(s).				
8KS1.1.5	Apply mathematical reasoning to investigation.				
8KS1.1.6	Communicate scientific procedures/explanations.				
8KS1.2.1	Differentiate between a qualitative and a quantitative investigation.				
8KS1.2.2	Adapt the process to guide the investigation.				
8KS1.3.1	Generate further questions for investigation.				
8KS1.3.2	Determine evidence of support/contradicts.				
8KS1.3.3	Identify faulty reasoning/conclusions to support data.				
8KS2.1.1	Identify properties of matter.				
8KS2.1.2	Distinguish components of various types of mixtures.				
8KS2.1.3	Categorize chemicals.				
8KS2.2.1	Measure and graph the effects of temperature on matter.				
8KS2.2.2	Understand that total mass is conserved in chemical reactions.				
8KS2.2.3	Understand the relationship of elements to compounds.				
8KS2.3.1	Motion (position, direction, speed, potential, and kinetic energy).				
8KS2.3.2	Measure motion and represent data in a graph.				
8KS2.3.3	Law of Inertia.				
8KS2.3.4	Unbalanced forces cause changes in speed.				
8KS2.3.5	Force (gravity and friction).				
8KS2.3.6	Investigate force variables of simple machines.				
8KS2.4.1	Energy transferred to other sources (mechanical, light, etc.)				
8KS2.4.2	Sequence of transmission of energy through systems.				
8KS2.4.3	How light interacts with matter, transmitted, reflected, etc.				
8KS2.4.4	Heat energy transferred from hot to cold (radiation, convection).				