



Standard 1: Students apply the processes of scientific investigation and design, safely conduct, communicate about, and evaluate such investigations

*PYS1: Creates and conducts plans for investigations that include: Asking questions, stating a testable hypothesis, identifying variables and constants, collecting data accurately, and identifying different methods for investigating scientific questions

- c. Uses the appropriate observation/measurement technique for data collection
- d. Follows the established procedure for an investigation/experiment

PYS3: Communicates the design and results of scientific investigations in appropriate ways (written, oral, pictorial, digital)

- a. Communicates about a scientific investigation in a variety of ways- including writing in science notebooks

Standard 2: Students know and understand common properties, forms and changes in matter and energy

PYS5: Uses the particulate model of matter to explain the physical properties of solids, liquids, gases, and plasma state and their change

- a. Accurately describes the particulate model for solid, liquid, gas, and plasma including arrangement, motion, and energy of particles (for example: a lit fluorescent bulb contains plasma which has widely spaced and highly energetic particles)
- b. Uses kinetic molecular theory, predicts how changes in temperature affect the behavior of particles of matter
- c. Uses particulate model to explain the changes in energy and molecular motion that take place in phase transitions among solids, liquids and gases

PYS7: Applies an understanding of the conservation of mass to physical and chemical changes within a system

- b. Applies the law of conservation of mass to physical change (for example: predict the mass of a substance after a physical change)
- c. Explains that mass will remain the same in a closed system (for example: a sealed jar) even if changes take place within the system

Technology Integration Expectations: (Technology Integration and Information Literacy)

Students will use technology:

- responsibly for communication and transfer of ideas
- to gather, organize, analyze and communicate about data
- to collaborate with others to identify information problems and seek their solutions

*PYS stands for Physical Science