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| **Fuller/Diehl/ Wood - Science /8th / December 2-6** |
| **Standard(s)** | **S8P1. Obtain, evaluate, and communicate information about the structure and properties of matter.** a. Develop and use a model to compare and contrast pure substances (elements and compounds) and mixtures. (*Clarification statement:* Include heterogeneous and homogeneous mixtures. Types of bonds and compounds will be addressed in high school physical science.) b. Develop and use models to describe the movement of particles in solids, liquids, gases, and plasma states when thermal energy is added or removed. c. Plan and carry out investigations to compare and contrast chemical (i.e., reactivity, combustibility) and physical (i.e., density, melting point, boiling point) properties of matter. d. Construct an argument based on observational evidence to support the claim that when a change in a substance occurs, it can be classified as either chemical or physical. (*Clarification statement:* Evidence could include ability to separate mixtures, development of a gas, formation of a precipitate, change in energy, color, and/or form.) e. Develop models (e.g., atomic-level models, including drawings, and computer representations) by analyzing patterns within the periodic table that illustrate the structure, composition, and characteristics of atoms (protons, neutrons, and electrons) and simple molecules. f. Construct an explanation based on evidence to describe conservation of matter in a chemical reaction including the resulting differences between products and reactants. (*Clarification statement:* Evidence could include models such as balanced chemical equations.) **S8P2. Obtain, evaluate, and communicate information about the law of conservation of energy to develop arguments that energy can transform from one form to another within a system.** a. Analyze and interpret data to create graphical displays that illustrate the relationships of kinetic energy to mass and speed, and potential energy to mass and height of an object. b. Plan and carry out an investigation to explain the transformation between kinetic and potential energy within a system (e.g., roller coasters, pendulums, rubber bands, etc.). c. Construct an argument to support a claim about the type of energy transformations within a system [e.g., lighting a match (light to heat), turning on a light (electrical to light)]. d. Plan and carry out investigations on the effects of heat transfer on molecular motion as it relates to the collision of atoms (conduction), through space (radiation), or in currents in a liquid or a gas (convection). **S8P3. Obtain, evaluate, and communicate information about cause and effect relationships between force, mass, and the motion of objects.** a. Analyze and interpret data to identify patterns in the relationships between speed and distance, and velocity and acceleration. (*Clarification statement:* Students should be able to analyze motion graphs, but students should not be expected to calculate velocity or acceleration.)b. Construct an explanation using Newton’s Laws of Motion to describe the effects of balanced and unbalanced forces on the motion of an object. c. Construct an argument from evidence to support the claim that the amount of force needed to accelerate an object is proportional to its mass (inertia).  |
| **Essential questions****Or** **“I Can…” statements** | **Monday**- I can explain cause and effect relationships between forces, masses, and motions of objects. | **Tuesday**- I can explain the structure and properties of matter. | **Wednesday**- I can explain the structure and properties of matter. | **Thursday**- I can explain energy transform-ations and the conservation of energy. | **Friday**- I can explain cause and effect relationships between forces, masses, and motions of objects. |
| **Warm-up** | DO NOW Smart Notebook | DO NOW Smart Notebook | DO NOW Smart Notebook | DO NOW Smart Notebook | DO NOW Smart Notebook |
| **Opening** | Activate prior knowledge | Activate prior knowledge | Activate prior knowledge | Activate prior knowledge | Activate prior knowledge |
| **Work Session** | Exam return and review | Midterm Content Review | Midterm Content Review  | Midterm Content Review  | Midterm Content Review  |
| **Homework** | Study notes and vocabulary | Study notes and vocabulary | Study notes and vocabulary | Study notes and vocabulary | Study notes and vocabulary |
| **Closing** | Student questions | Student questions | Student questions | Student questions | Student questions |
| **Materials needed** | Student notes | Student notes | Student notes | Student notes | Student notes |
| **Assessment for understanding**  | Student responses | Student responses | Student responses | Student responses | Student responses |