

8th Grade STAAR Reporting Category 1: Matter and Energy

SE, Standard, Main Idea of SE, and Key Vocabulary

TEKS	Standard	Main Idea	Key Vocabulary	
6.5C	Differentiate between elements and compounds on the most basic level	SS	The difference between an element and a compound is that compounds are made of more than one element.	Element, compound
6.6A	compare metals, nonmetals, and metalloids using physical properties such as luster, conductivity, or malleability	SS	Compare properties of metals, nonmetals, metalloids	Physical property, metal, nonmetal, metalloid, luster, conductivity malleability
6.6B	Calculate unknown density to identify an unknown substance	SS	Density	Density, substance
7.5C	diagram the flow of energy through living systems, including food chains, food webs, and energy pyramids	SS	Energy arrows flow from the source of energy to what is receiving the energy. Energy levels are trophic levels.	Food chain, food web, food pyramid
7.6A	identify that organic compounds contain carbon and other elements such as hydrogen, oxygen, phosphorus, nitrogen, or sulfur	SS	Organic (living) compounds are made of C, H, O, P, N, and S	Organic compound
7.6B	distinguish between physical and chemical changes in matter in the digestive system	SS	Know the difference between physical and chemical changes. Chemical changes produce new substances with different properties.	Physical change, chemical change, digestive system
8.5A	describe the structure of atoms, including the masses, electrical charges, and locations, of protons and neutrons in the nucleus and electrons in the electron cloud	RS	Parts of the atom and where they are found	Atom, atomic mass, protons, neutrons, electrons, nucleus, electron cloud

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8.5B	identify that protons determine an element's identity and valence electrons determine its chemical properties, including reactivity	RS	The atomic number determines the element's identity. Valence electrons determine how the element reacts with other elements.	Protons, valence electrons, chemical property, reactivity
8.5C	interpret the arrangement of the Periodic Table, including groups and periods, to explain how properties are used to classify elements	RS	The periodic table is arranged by least atomic number to greatest atomic number. Elements in the same group have similar properties.	Periodic table, group, period, atomic number, physical property, chemical property
8.5D	recognize that chemical formulas are used to identify substances and determine the number of atoms of each element in chemical formulas containing subscripts	RS	Chemical formulas tell you which elements are in a substance. The subscripts tell you how many atoms of that element are present in the formula.	Chemical formula, substance, subscript
8.5E	investigate how evidence of chemical reactions indicate that new substances with different properties are formed	RS	Chemical changes form new substances.	Evidence, substances, properties
8.5F	recognize whether a chemical equation containing coefficients is balanced or not and how that relates to the law of conservation of mass	SS	The number of atoms on one side of the equation must be the same as the number of atoms on the other side of the equation.	Coefficients, law of conservation of mass