South Carolina Science

Chemistry

Matter and Its Interactions PS1	**1** Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms. C-PS1-1
	2 Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties. C-PS1-2
	3 Plan and conduct an investigation to gather evidence to compare the structure of substances at a bulk scale to infer the strength of various forces between particles. C-PS1-3
	4 Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy. C-PS1-4
	5 Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs. C-PS1-5
	6 Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium. C-PS1-6
	7 Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction. C-PS1-7
	8 Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay. C-PS1-8
Motion and Stability: Forces and Interactions PS2	**6** Communicate scientific and technical information about why the molecular structure determines the functioning of designed materials. C-PS2-6
Energy PS3	**4** Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperatures are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics). C-PS3-4
Wa Ap	Skip to main content **valuate the validity and reliability of claims in published materials of the effects hat different frequencies of electromagnetic radiation have when absorbed by**

Technologies for Information Transfer PS4

matter. C-PS4-4

5 **Communicate technical information about how some technological devices use the principles of the electromagnetic spectrum to cause matter to transmit and capture information and energy.** C-PS4-5