

Alignment Document

State of Wisconsin And Aventa Learning Physical Science

Physical Science 2005-2007 Benchmark Blueprint

State Standard Number	State Standard Area / Description	Unit Name	Course Topic Description
D.12	Physical Science		
0	Structure of Atoms and Matter		
D.12.1	Describe atomic structure and the properties of atoms, molecules, and matter during physical and chemical interactions	Matter	Changes in Matter
		Atomic Structure	Protons, Neutrons, and Electrons
D12.2	Explain the forces that hold the atom together and illustrate how nuclear interactions change the atom	Atomic Structure	Protons, Neutrons, and Electrons
D.12.3	Explain exchanges of energy in chemical interactions and exchange of mass and energy in atomic/nuclear reactions	Chemical Reactions	Chemical Reactions
		Chemical Reactions	Chemical Reactions and Energy
0	Chemical Reactions		
D.12.4	Explain how substances, both simple and complex, interact with one another to produce new substances	Chemical Reactions	Chemical Reactions and Energy
		Chemical Reactions	Chemical Reactions
D.12.5	Identify patterns in chemical and physical properties and use them to predict likely chemical and physical changes and interactions	Matter	Changes in Matter

D.12.6	Through investigations, identify the types of chemical interactions, including endothermic, exothermic, oxidation, photosynthesis, and acid/base reactions	Chemical Reactions	Carbon
		Chemical Reactions	Oxidation Reduction Reactions
		Chemical Reactions	Endothermic and exothermic reactions
0	Motions and Forces		
D.12.7	Qualitatively and quantitatively analyze changes in the motion of objects and the forces that act on them and represent analytical data both algebraically and graphically	Energy and Motion	Newton's First Law of Motion
		Energy and Motion	Sir Isaac and Seat Belts
		Forces	Newton's Second Law of Motion
		Forces	Newton's Third Law
D.12.8	Understand the forces of gravitation, the electromagnetic force, intermolecular force, and explain their impact on the universal system	Simple Machines	Overcoming gravity and friction
D.12.9	Describe models of light, heat, and sound and through investigations describe similarities and differences in the way these energy forms behave	Waves	Waves
		Waves	Electromagnetic Radiation
0	Conservation of Energy and the Increase in Disorder		
D.12.10	Using the science themes, illustrate the law of conservation of energy during chemical and nuclear reactions	Chemical Reactions	Chemical Reactions
		Chemical Reactions	Chemical Reactions and Energy
0	Interactions of Matter and Energy		
D.12.11	Using the science themes, explain common occurrences in the physical world		
D.12.12	Using the science themes and knowledge of chemical, physical, atomic, and nuclear interactions, explain changes in materials, living things, earth's features, and stars		