

Alignment Document

State of Wisconsin And Aventa Learning Physics

Physics

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		
D.12.2	Explain the forces that hold the atom together and illustrate how nuclear interactions change the atom		
D.12.3	Explain exchanges of energy in chemical interactions and exchange of mass and energy in atomic/nuclear reactions		
0	Chemical Reactions		
D.12.4	Explain how substances, both simple and complex, interact with one another to produce new substances		
D.12.5	Identify patterns in chemical and physical properties and use them to predict likely chemical and physical changes and interactions		
D.12.6	Through investigations, identify the types of chemical interactions, including endothermic, exothermic, oxidation, photosynthesis, and acid/base 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	Physics and the Laws of Motion Physics and the Laws of Motion Physics and the Laws of Motion	Free-Fall Acceleration Lab Projectile Motion Lab Forces and Friction Lab
D.12.8	Understand the forces of gravitation, the electromagnetic force, intermolecular force, and explain their impact on the universal system		
D.12.9	Describe models of light, heat, and sound and through investigations describe similarities and differences in the way these energy forms behave		
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		
0	Interactions of Matter and Energy		
D.12.11	Using the science themes, explain common occurrences in the physical world	Physics and the Laws of Motion Physics and the Laws of Motion Waves	Free-Fall Acceleration Lab Forces and Friction Lab Sound Lab
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		