

**IDAHO ACHIEVEMENT STANDARDS
GRADE 8-9
PHYSICAL SCIENCE**

Standard 1: Nature of Science

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7
Goal 1.1: Understand Systems, Order, and Organization	8-9.PS.1.1.1 Explain the scientific meaning of system, order, and organization. (648.01a)	8-9.PS.1.1.2 Apply the concepts of order and organization to a given system. (648.01a)					
Goal 1.2: Understand Concepts and Processes of Evidence, Models, and Explanations	8-9.PS.1.2.1 Use observations and data as evidence on which to base scientific explanations. (648.02a)	8-9.PS.1.2.2 Develop models to explain concepts or systems. (648.02b)	8-9.PS.1.2.3 Develop scientific explanations based on knowledge, logic, and analysis. (648.02c)				
Goal 1.3: Understand Constancy, Change, and Measurement	8-9.PS.1.3.1 Measure changes that can occur in and among systems. (648.03b)	8-9.PS.1.3.2 Analyze changes that can occur in and among systems. (648.03b)	8-9.PS.1.3.3 Measure and calculate using the metric system. (648.03c)				
Goal 1.4: Understand the Theory that Evolution is a Process that Relates to the Gradual Changes in the Universe and of Equilibrium as a Physical State	No objectives in Physical Science.						
Goal 1.5: Understand Concepts of Form and Function	No objectives in Physical Science.						
Goal 1.6: Understand Scientific Inquiry and Develop Critical Thinking Skills	8-9.PS.1.6.1 Identify questions and concepts that guide scientific investigations. (649.01a)	8-9.PS.1.6.2 Utilize the components of scientific problem solving to design, conduct, and communicate results of investigations. (649.01b)	8-9.PS.1.6.3 Use appropriate technology and mathematics to make investigations. (649.01c)	8-9.PS.1.6.4 Formulate scientific explanations and models using logic and evidence. (649.01d)	8-9.PS.1.6.5 Analyze alternative explanations and models. (649.01e)	8-9.PS.1.6.6 Communicate and defend a scientific argument. (649.01f)	8-9.PS.1.6.7 Explain the differences among observations, hypotheses, and theories. (649.01g)
Goal 1.7: Understand That Interpersonal Relationships Are Important in Scientific Endeavors	No objectives in Physical Science.						
Goal 1.8: Understand Technical Communication	8-9.PS.1.8.1 Analyze technical writing, graphs, charts, and diagrams. (658.02a)						

Standard 2: Physical Science

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7
Goal 2.1: Understand the Structure and Function of Matter and Molecules and Their Interactions	No objectives in Physical Science.						
Goal 2.2: Understand Concepts of Motion and Forces	8-9.PS.2.2.1 Explain motion using Newton's Laws of Motion. (650.04b)						
Goal 2.3: Understand the Total Energy in the Universe is Constant	8-9.PS.2.3.1 Explain that energy can be transformed but cannot be created nor destroyed. (650.05a)	8-9.PS.2.3.2 Classify energy as potential and/or kinetic and as energy contained in a field. (650.05b)					
Goal 2.4: Understand the Structure of Atoms	8-9.PS.2.4.1 Describe the properties, function, and location of protons, neutrons, and electrons. (650.01a)	8-9.PS.2.4.2 Explain the processes of fission and fusion. (650.01b)	8-9.PS.2.4.3 Describe the characteristics of isotopes. (650.01c)	8-9.PS.2.4.4 State the basic electrical properties of matter. (650.01d)	8-9.PS.2.4.5 Describe the relationships between magnetism and electricity.		
Goal 2.5: Understand Chemical Reactions	8-9.PS.2.5.1 Explain how chemical reactions may release or consume energy while the quantity of matter remains constant. (650.03a)						

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Standard 3: Biology No goals or objectives in Physical Science.

Standard 4: Earth and Space Systems No goals or objectives in Physical Science.

Standard 5: Personal and Social Perspectives; Technology

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7
Goal 5.1: Understand Common Environmental Quality Issues, Both Natural and Human Induced	No objectives in Physical Science.						
Goal 5.2: Understand the Relationship between Science and Technology	8-9.PS.5.2.1 Explain how science advances technology. (655.01a)	8-9.PS.5.2.2 Explain how technology advances science. (655.01a)	8-9.PS.5.2.3 Explain how science and technology are pursued for different purposes. (656.01b)				
Goal 5.3: Understand the Importance of Natural Resources and the Need to Manage and Conserve Them	No objectives in Physical Science.						