

**IDAHO CONTENT STANDARDS  
GRADE 9-10  
BIOLOGY**

**Standard 1: Nature of Science**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7
<b>Goal 1.1: Understand Systems, Order, and Organization</b>	9-10.B.1.1.1 Explain the scientific meaning of system, order, and organization. (648.01a)	9-10.B.1.1.2 Apply the concepts of order and organization to a given system. (648.01a)					
<b>Goal 1.2: Understand Concepts and Processes of Evidence, Models, and Explanations</b>	9-10.B.1.2.1 Use observations and data as evidence on which to base scientific explanations. (648.02a)	9-10.B.1.2.2 Develop models to explain concepts or systems. (648.02b)	9-10.B.1.2.3 Develop scientific explanations based on knowledge, logic and analysis. (648.02c)				
<b>Goal 1.3: Understand Constancy, Change, and Measurement</b>	9-10.B.1.3.1 Measure changes that can occur in and among systems. (648.03b)	9-10.B.1.3.2 Analyze changes that can occur in and among systems. (648.03b)	9-10.B.1.3.3 Measure and calculate using the metric system. (648.03c)				
<b>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</b>	Reference to 7.S.3.2.1						
<b>Goal 1.5: Understand Concepts of Form and Function</b>	No objectives in Biology.						
<b>Goal 1.6: Understand Scientific Inquiry and Develop Critical Thinking Skills</b>	9-10.B.1.6.1 Identify questions and concepts that guide scientific investigations. (649.01a)	9-10.B.1.6.2 Utilize the components of scientific problem solving to design, conduct, and communicate results of investigations. (649.01b)	9-10.B.1.6.3 Use appropriate technology and mathematics to make investigations. (649.01c)	9-10.B.1.6.4 Formulate scientific explanations and models using logic and evidence. (649.01d)	9-10.B.1.6.5 Analyze alternative explanations and models. (649.01e)	9-10.B.1.6.6 Communicate and defend a scientific argument. (649.01f)	9-10.B.1.6.7 Explain the differences among observations, hypotheses, and theories. (649.01g)
<b>Goal 1.7: Understand That Interpersonal Relationships Are Important in Scientific Endeavors</b>	No objectives in Biology.						
<b>Goal 1.8: Understand Technical Communication</b>	9-10.B.1.8.1 Analyze technical writing, graphs, charts, and diagrams. (658.02a)						

**Standard 2: Physical Science** No goals or objectives in Biology.

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**Standard 3: Biology**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7
<b>Goal 3.1: Understand the Theory of Biological Evolution</b>	9-10.B.3.1.1 Use the theory of evolution to explain how species change over time. (652.01a)	9-10.B.3.1.2 Explain how evolution is the consequence of interactions among the potential of a species to increase its numbers, genetic variability, a finite supply of resources, and the selection by the environment of those offspring better able to survive and reproduce. (652.01a)					
<b>Goal 3.2: Understand the Relationship between Matter and Energy in Living Systems</b>	9-10.B.3.2.1 Explain how matter tends toward more disorganized states (entropy). (653.01a)	9-10.B.3.2.2 Explain how organisms use the continuous input of energy and matter to maintain their chemical and physical organization. (653.01b)	9-10.B.3.2.3 Show how the energy for life is primarily derived from the sun through photosynthesis. (653.01c)	9-10.B.3.2.4 Describe cellular respiration and the synthesis of macromolecules. (653.01d)	9-10.B.3.2.5 Show how matter cycles and energy flows through the different levels of organization of living systems (cells, organs, organisms, communities) and their environment. (653.01h)		
<b>Goal 3.3: Understand the Cell is the Basis of Form and Function for All Living Things</b>	9-10.B.3.3.1 Identify the particular structures that underlie the cellular functions. (651.01a)	9-10.B.3.3.2 Explain cell functions involving chemical reactions. (651.01b)	9-10.B.3.3.3 Explain how cells use DNA to store and use information for cell functions. (651.01c)	9-10.B.3.3.4 Explain how selective expression of genes can produce specialized cells from a single cell. (651.01e)			

**Standard 4: Earth and Space Systems** No goals or objectives in Biology.

**Standard 5: Personal and Social Perspectives; Technology**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7
<b>Goal 5.1: Understand Common Environmental Quality Issues, Both Natural and Human Induced</b>	9-10.B.5.1.1 Analyze environmental issues such as water and air quality, hazardous waste, forest health, and agricultural production. (656.01a)						
<b>Goal 5.2: Understand the Relationship between Science and Technology</b>	9-10.B.5.2.1 Explain how science advances technology. (655.01a)	9-10.B.5.2.2 Explain how technology advances science. (655.01a)	9-10.B.5.2.3 Explain how science and technology are pursued for different purposes. (656.01b)				
<b>Goal 5.3: Understand the Importance of Natural Resources and the Need to Manage and Conserve Them</b>	9-10.B.5.3.1 Describe the difference between renewable and nonrenewable resources. (656.03a)						