

Idaho Extended Content Standards Draft
Extended Content Indicators
Grade 6
Science

Standard 1: Nature of Science - Students gather evidence to differentiate between predictions, observations, and inferences. Students read, give, and execute technical instructions.

Extended Standard 1: Students differentiate between predictions, observations, and inferences. Students execute technical instructions.

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Topic	Gr	Goal	Objectives	Essence	Extended Content Indicators
Interrelated nature of science	6.S.1.2	Understand Concepts and Processes of Evidence, Models, and Explanation	6.S.1.2.1 Explain how observations and data are used as evidence on which to base scientific explanations and predictions. (618.02.a)		6.S.1.2.1.A Respond to observations and data as recorded on a chart
			6.S.1.2.2 Use observations to make inferences. (618.02.b)		6.S.1.2.2.A Identify relative data to make an inference.
			6.S.1.2.3 Use models to explain or demonstrate a concept. (618.02.c)		6.S.1.2.3.A Replicate or make a model to explain or demonstrate a concept.

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Topic	Gr	Goal	Objectives	Essence	Alternate Content Indicators
Interrelated Nature of Science	6.S.1.3	Understand Constancy, Change, and Measurement	6.S.1.3.1 Analyze changes that occur in and among systems. (618.03.b)		6.S.1.3.1.A Demonstrate changes that occur in systems.
			6.S.1.3.2 Measure in both U.S. Customary and International System of Measurement (metric system) units with an emphasis on the metric system. (618.03.c)		6.S.1.3.2.A Measure in either U.S. Customary System of Measurement or the metric system.

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Topic	Gr	Goal	Objectives	Essence	Extended Content Indicators
	6.S.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 at this grade level.		No objectives at this grade level.

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Topic	Gr	Goal	Objectives	Essence	Extended Content Indicators
Interrelated Nature of Science	6.S.1.5	Understand Concepts of Form and Function	6.S.1.5.1 Analyze how the shape or form of an object or system is frequently related to its use and/or function. (618.05.a)		6.S.1.5.1.A Identify how the shape or form of an object is frequently related to its use and/or function.

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Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	6.S.1.6	Understand Scientific Inquiry and Develop Critical Thinking Skills	6.S.1.6.1 Write and analyze questions that can be answered by conducting scientific experiments. (619.02.a)		6.S.1.6.1.A Identify questions that can be answered by conducting scientific experiments.
			6.S.1.6.2 Conduct scientific investigations using a control and variables. Repeat same experiment using alternate variables. (619.02.b)		6.S.1.6.2.A Observe change in scientific investigations using a control and variables.
			6.S.1.6.3 Select and use appropriate tools and techniques to gather and display data. (619.02.c)		6.S.1.6.3.A Use appropriate tools and techniques to gather and display data.
			6.S.1.6.4 Use evidence to analyze data in order to develop descriptions, explanations, predictions, and models. (619.2.d)		6.S.1.6.4.A Use data for a reasonable explanation or prediction.
			6.S.1.6.5 Test a hypothesis based on observations. (619.02.e)		6.S.1.6.5.A Test a prediction or hypothesis based on observations.
			6.S.1.6.6 Communicate scientific procedures and explanations. (619.02.g)		6.S.1.6.6.A Communicate scientific procedures.

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Topic	Gr	Goal	Objectives	Essence	Extended Content Indicators
Interrelated Nature of Science	6.S.1.7	Understand That Interpersonal Relationships Are Important in Scientific Endeavors	No objectives at this grade level.		No objectives at this grade level.

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Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	6.S.1.8	Understand Technical Communication	6.S.1.8.1 Read, give, and execute technical instructions. (628.01a)		6.S.1.8.1.A Follow technical instructions.

Standard 2: Physical Science - Students compare and contrast elements, compounds and mixtures. Students explore the effects of force and energy on objects.

Extended Standard 2: Students compare the properties of elements, compounds and mixtures. Students identify effects of force and energy on objects.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
Physical Science	6.S.2.1	Understand the Structure and Function of Matter and Molecules and Their Interactions	6.S.2.1.1 Compare and contrast the differences among elements, compounds and mixtures. (620.01.a)		6.S.2.1.1.A Compare mixtures.
			6.S.2.1.2 Define the properties of matter. (620.01.b)		6.S.2.1.2.A Identify the properties of matter.
			6.S.2.1.3 Compare densities of equal volumes of a solid, a liquid, or a gas. (619.01.c)		6.S.2.1.3.A Compare density of equal volumes of a solid and a liquid.
			6.S.2.1.4 Describe the effect of temperature on density. (620.01.c)		6.S.2.1.4.A Describe the effects of temperature.
			6.S.2.1.5 Explain the nature of physical change and how it relates to physical properties (the distance between molecules as water changes from ice to liquid water, and to water vapor). (620.01.d)		6.S.2.1.5.A Show a physical change and how it relates to its physical properties.

Standard 2: Physical Science - Students compare and contrast elements, compounds and mixtures. Students explore the effects of force and energy on objects.

Extended Standard 2: Students compare the properties of elements, compounds and mixtures. Students identify effects of force and energy on objects.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
Physical Science	6.S.2.2	Goal 2.2: Understand Concepts of Motion and Forces	6.S.2.2.1 Describe the effects of different forces (gravity and friction) on the movement, speed, and direction of an object. (620.03.d)		6.S.2.2.1.A Observe and identify the effects of different forces (gravity and friction) on speed or movement.

Standard 2: Physical Science - Students compare and contrast elements, compounds and mixtures. Students explore the effects of force and energy on objects.

Extended Standard 2: Students compare the properties of elements, compounds and mixtures. Students identify effects of force and energy on objects.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
Physical Science	6.S.2.3	Understand the Total Energy in the Universe is Constant	No objectives at this grade level.		No objectives at this grade level.

Standard 2: Physical Science - Students compare and contrast elements, compounds and mixtures. Students explore the effects of force and energy on objects.

Extended Standard 2: Students compare the properties of elements, compounds and mixtures. Students identify effects of force and energy on objects.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
Physical Science	6.S.2.4	Understand the Structure of Atoms	No objectives at this grade level.		No objectives at this grade level.

Standard 2: Physical Science - Students compare and contrast elements, compounds and mixtures. Students explore the effects of force and energy on objects.

Extended Standard 2: Students compare the properties of elements, compounds and mixtures. Students identify effects of force and energy on objects.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
Physical Science	6.S.2.5	Understand Chemical Reactions	No objectives at this grade level.		No objectives at this grade level.

Standard 3: Biology - Students understand the building blocks of organisms.

Extended Standard 3: Students identify basic differences in organisms.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
Biology	6.S.3.1	Understand the Theory of Biological Evolution	No objectives at this grade level.		No objectives at this grade level.

Standard 3: Biology
Students understand the building blocks of organisms.

Extended Standard 3: Students identify basic differences in organisms.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
Biology	6.S.3.2	Understand the Relationship between Matter and Energy in Living Systems	No objectives at this grade level.		No objectives at this grade level.

Standard 3: Biology

Students understand the building blocks of organisms.

Extended Standard 3: Students identify basic differences in organisms.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
Biology	6.S.3.3	Understand the Cell is the Basis of Form and Function for All Living Things	6.S.3.3.1 Identify the different structural levels of which an organism is comprised (cells, tissues, organs, organ systems, and organisms). (621.01.a)		6.S.3.3.1.A Identify the difference between cells, organs, organ systems and organism.
			6.S.3.3.2 Analyze the structural differences between plant and animal cells. (621.01.b)		6.S.3.3.2.A Compare the structural differences between plant and animal cells.
			6.S.3.3.3 Describe how traits are passed from parents to offspring. (621.01.c)		6.S.3.3.3.A Identify traits that are passed from parents to offspring.

Standard 4: Earth and Space Systems – Students describe and explain simple interactions between the solid earth, oceans, atmosphere, and organisms. Students understand the relationship between systems and the Earth.

Extended Standard 4: Students describe simple interactions between the solid earth, oceans, atmosphere, and organisms and how they are connected.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
Earth and Space Systems	6.S.4.1	Understand Scientific Theories of Origin and Subsequent Changes in the Universe and Earth Systems	6.S.4.1.1 Explain the interactions among the solid earth, oceans, atmosphere, and organisms. (624.01.a)		6.S.4.1.1.A Identify interactions among the solid earth, oceans, atmosphere, and organisms that are connected.
			6.S.4.1.2 Explain the water cycle and its relationship to weather and climate. (624.01.b)		6.S.4.1.2.A Illustrate the water cycle and its relationship to weather and climate.
			6.S.4.1.3 Identify cumulus, cirrus, and stratus clouds and how they relate to weather changes. (624.01.c)		6.S.4.1.3.A Discuss how clouds relate to weather changes.

Standard 4: Earth and Space Systems – Students describe and explain simple interactions between the solid earth, oceans, atmosphere, and organisms. Students understand the relationship between systems and the Earth.

Extended Standard 4: Students describe simple interactions between the solid earth, oceans, atmosphere, and organisms and how they are connected.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
Earth and Space Systems	6.S.4.2	Understand Geo-chemical Cycles and Energy in the Earth System	No objectives at this grade level.		No objectives at this grade level.

Standard 5: Personal and Social Perspectives; Technology – Students identify issues for environmental studies and understand the difference between renewable and nonrenewable resources.

Extended Standard 5: Students identify renewable and nonrenewable resources and issues for environmental studies.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
Environmental Science	6.S.5.1	Understand Common Environmental Quality Issues, Both Natural and Human Induced	6.S.5.1.1 Identify issues for environmental studies. (626.01.a)		6.S.5.1.1.A Identify issues for environmental studies.

Standard 5: Personal and Social Perspectives; Technology - Students identify issues for environmental studies and understand the difference between renewable and nonrenewable resources.

Extended Standard 5: Students identify renewable and nonrenewable resources and issues for environmental studies.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
Technology	6.S.5.2	Understand the Relationship between Science and Technology	6.S.5.2.1 Describe how science and technology are part of our society. (625.01.a)		6.S.5.2.1.A Identify how science and technology are part of our society.
			6.S.5.2.2 Describe how science and technology are interrelated. (625.01.b)		6.S.5.2.2.A Identify when science and technology are interrelated.

Standard 5: Personal and Social Perspectives; Technology - Students identify issues for environmental studies and understand the difference between renewable and nonrenewable resources.

Extended Standard 5: Students identify renewable and nonrenewable resources and issues for environmental studies.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
Natural Resources	6.S.5.3	Understand the Importance of Natural Resources and the Need to Manage and Conserve Them	6.S.5.3.1 Explain the difference between renewable and nonrenewable resources. (626.03.a)		6.S.5.3.1.A Identifies between renewable and nonrenewable resources.