

Idaho Partners - Science Standards for Grade 1

**The Idaho GLOBE Partnership
October 2003**

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This publication was produced by the Idaho GLOBE Partnership. Funds for the project were provided by a grant from the Idaho Space Grant Consortium.

42. SCIENCE STANDARDS - GRADE 1, SECTIONS 543 THROUGH 553.

The samples associated with the content standards are meant to illustrate meaning and to represent possible areas of applications. They are not intended to be an exhaustive list, but are samples of applications that would demonstrate learning.

43. UNIFYING CONCEPTS OF SCIENCE.

Standard - The student will:	Content Knowledge and Skills:	Samples of Applications:
1. Understand concepts and processes of evidence, models, and explanation.	1. Explore the concepts of observation and data collection.	1. Daily weather graph. <ul style="list-style-type: none">• Predict• Observe• Record 1. Observe metamorphosis of insects and record observations. 2. Seasons Investigation

		3. Macro Invertebrates investigation
	1. Explore and use various models.	1. Use GLOBE website to learn geography. 2. Learn about the parts of macro invertebrates
1. Understand constancy, change, and measurement.	1. Understand that changes occur and can be measured.	1. Measure a plant's growth on Landover site and discuss its changes each semester. 2. Observe the three states of matter (ice cube, water, water vapor). 3. Seasons Investigation
	1. Measure in both standard and non-standard units.	1. Metrics. 2. Cloud cover Estimation. 3. Use a balance scale to weigh different objects. 4. Use a melting snow to measure time. 5. Using different containers, find out how many scoops are needed to fill each container.
1. Understand the theory that evolution is a process that relates to the gradual changes in the universe	1. Understand the concepts of past, present, and future.	1. Seasons Investigation 2. Hydrology Investigation

and of equilibrium as a physical state.		
1. Understand concepts of form and function.	1. Identify shape and use of objects.	<ol style="list-style-type: none"> 1. Play an invertebrate matching game. <ul style="list-style-type: none"> • Match mouths to diet • Match feet to habitat • Match body type to land, air, and water 1. Match GLOBE Scientific instrument to its use. 2. GLOBE Bird Classification

44. CONCEPTS OF SCIENTIFIC INQUIRY.

Standard - The student will:	Content Knowledge and Skills:	Samples of Applications:
1. Understand scientific inquiry and develop critical thinking skills.	1. Brainstorm questions that can be investigated.	<ol style="list-style-type: none"> 1. Where does the color of the water in the stream come from? 2. Why do leaves fall? 3. Cloud Estimation activity.
	1. Make observations.	<ol style="list-style-type: none"> 1. Seasons Investigation 2. Hydro Investigation 3. Soil investigation 4. Atmosphere Investigation 5. Use five senses to observe

	1. Use various tools to gather information.	1. Given an assortment of GLOBE tools, students will choose the appropriate tool(s) to measure an object.
	1. Explore information and evidence.	1. Share ideas through class discussion. 2. Graph information to note change or compare and contrast.
	1. Use observations to make guesses.	1. Use observations to make predictions about tomorrow's weather.
	1. Communicate observations.	1. Use GLOBE website, logs, journals, pictures, and/or oral discussions to communicate observations.

45. CONCEPTS OF PHYSICAL SCIENCE.

Standard - The student will:	Content Knowledge and Skills:	Samples of Applications:
1. Understand the structure and function of matter and molecules and their interactions.	1. Know that objects have combinations of properties.	1. Water Detectives
	1. Recognize and classify matter as a solid, liquid, or gas.	1. Solid and Liquid Precipitation protocols

	1. Recognize that matter can change states (solid, liquid, gas).	1. Seasons Investigation. 2. Melt Solid precipitation to measure ml of liquid.
1. Understand concepts of motion and forces.	1. Explore the position and motion of objects.	1. n/a
	1. Explore different kinds of energy.	1. n/a

46. CELLULAR AND MOLECULAR CONCEPTS.

Cellular and Molecular Concepts standards do not apply at this grade level.

47. INTERDEPENDENCE OF ORGANISMS AND BIOLOGICAL CHANGE.

Standard - The student will:	Content Knowledge and Skills:	Samples of Applications:
1. Understand the theory of biological evolution.	1. Observe and explore the life cycles of plants and animals and their basic needs.	1. GLOBE Monarch Butterfly Activities 2. GLOBE Phenology.
	1. Recognize that animals live in different habitats for which they are suited.	1. Macro invertebrate Investigation 2. GLOBE Bird Investigation.

48. MATTER, ENERGY, AND ORGANIZATION IN LIVING SYSTEMS.

Standard - The student will:	Content Knowledge and Skills:	Samples of Applications:
<p>1. Understand the relationship between matter, energy, and organization to trace matter as it cycles and energy as it flows through living systems and between living systems and the environment.</p>	<p>1.</p> <p>1.</p> <p>1. Understand that living things need food to survive.</p>	<p>1. Learn about different systems that keep a tree alive ("Project Learning Tree," Tree Factory).</p> <p>2. Identify the components of a habitat and the basic need for them ("Project Wild," Habitat Lap Sit Activity).</p> <p>3. Choose an animal in your hydrology site and create a diorama or mobile of that animal in their habitat keeping in mind their needs.</p>

48. EARTH AND SPACE SYSTEMS.

Standard - The student will:	Content Knowledge and Skills:	Samples of Applications:
<p>1. Understand scientific theories of origin and subsequent changes in the universe and earth systems.</p>	<p>1. Identify the four seasons and their characteristics.</p>	<p>1. Study the cycle of a tree through the four seasons (Phenology).</p> <p>2. Draw a picture of a tree depicting its appearance through all four seasons.</p>

		<ul style="list-style-type: none"> 3. As a yearlong bulletin board display, decorate a deciduous tree according to the season. 4. Seasons Investigations
	<ul style="list-style-type: none"> 1. Understand the characteristics of different weather conditions. 	<ul style="list-style-type: none"> 1. As you are graphing your weather, discuss the different characteristics of the weather. 2. Seasons Investigation 3. Atmosphere Investigation

50. TECHNOLOGY.

Standard - The student will:	Content Knowledge and Skills:	Samples of Applications:
<ul style="list-style-type: none"> 1. Understand the relationship between science and technology and develop the abilities of technological design and application. 	<ul style="list-style-type: none"> 1. Distinguish between natural objects and objects made by humans. 	<ul style="list-style-type: none"> 1. Tree versus computer.
	<ul style="list-style-type: none"> 1. Recognize that people have invented tools for everyday life and for scientific investigations. 	<ul style="list-style-type: none"> 1. Use and experience tools.

	<ol style="list-style-type: none"> 1. Create a tool to perform a specific function. 	<ol style="list-style-type: none"> i. Build densimeters and clinometers
	<ul style="list-style-type: none"> • Use available and appropriate technology. 	<ol style="list-style-type: none"> 1. Use computers and calculators. 2. Use the GLOBE website

51. PERSONAL AND SOCIAL PERSPECTIVES.

Standards - The student will:	Content Knowledge and Skills:	Samples of Applications:
<ol style="list-style-type: none"> 1. Understand common environmental quality issues, both natural and human induced. 	<ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> 1. Identify the characteristics of the local environment. 	<ol style="list-style-type: none"> 1. Take a walk outside and observe the physical characteristics of surrounding environment. (GLOBE Site Seen) 2. Draw picture of Land cover site.
<ol style="list-style-type: none"> 1. Understand the importance of natural resources and the need to manage and conserve them. 	<ol style="list-style-type: none"> 1. Understand the concept of recycling. 	<ol style="list-style-type: none"> 1. Participate in a recycling program. 2. Create a recycled art project. 3. Create a compost tub using worms. 4. Bury garbage that includes organic and inorganic materials. Dig up and check weekly.

	<ol style="list-style-type: none"> 1. Understand the conservation of natural resources. 	<ol style="list-style-type: none"> 1. Plant trees. 2. Make posters to remind people to conserve the natural resources. 3. Learn about GLOBAL change
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52. HISTORY OF SCIENCE.

Standards - The student will:	Content Knowledge and Skills:	Samples of Applications:
<ol style="list-style-type: none"> 1. Understand the significance of major scientific milestones. 	<ol style="list-style-type: none"> 1. Understand major contributions of various scientists and researchers. 	I. GLOBE Scientists corner

53. INTERDISCIPLINARY CONCEPTS.

Standards - The student will:	Content Knowledge and Skills:	Samples of Applications:
01. Understand that interpersonal relationships are important in scientific endeavors.	a. Learn appropriate cooperation and interaction skills.	i. Learn to cooperate to conduct protocols.
02. Understand technical communication.	a. Understand and follow instructions.	i. Follow GLOBE Protocols.

554. -- 556. (RESERVED).

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October 2003