

CARLISLE AREA SCHOOL DISTRICT
Carlisle, PA 17013

ELEMENTARY SCIENCE

GRADE 1

Date of Board Approval: May 21, 2009

Revised Date: January 19, 2012

CARLISLE AREA SCHOOL DISTRICT PLANNED INSTRUCTION COVER PAGE

Title of Course: Science Subject Area: Science Grade Level: First

Course Length: (Semester/Year): Year Duration: _____ Frequency: _____

Prerequisites: Not Applicable Credit: Not Applicable Level: Not Applicable

Course Description/Objectives: The district shall provide for attainment of the academic standards per Chapter 4, Section 4.12. Each student shall demonstrate proficiency in the following areas: unifying themes; inquiry and design; biological sciences; physical science, chemistry and physics; earth sciences; technology education; science, technology and human endeavors; watersheds and wetlands, renewable and non-renewable resources; environmental health; agriculture and society; integrated pest management; ecosystems and their interactions; threatened, endangered and extinct species; humans and the environment; and, environmental always and regulations.

Major Text(s)/Resources:

Curriculum Writing Committee: Cindy Birdwell Bonnie Mehls Deb Them Traci Brunner
Michelle Nye Heather Luckenbaugh Yvette Reidy Megan Baitzel Allison Shughart
D. Bailor Karen Lyter Rachel Placek Sherry Mann Kim Walters

Unit: States of Matter/Scientific Method	Subject Area: Science	Grade: 1
PA Academic Standards	Performance Indicators	
3.1E Recognize change in natural and physical systems.	<ul style="list-style-type: none"> Describe the change to objects caused by temperature. 	
3.2A Identify and use the nature of scientific and technological knowledge.	<ul style="list-style-type: none"> Distinguish between a scientific fact and prediction. Describe observations and explain results. 	
3.2B Describe objects in the world using the five senses.	<ul style="list-style-type: none"> Use observations to develop a descriptive vocabulary. 	
3.2C. Recognize and use the elements of scientific inquiry to solve problems.	<ul style="list-style-type: none"> Respond to questions related to objects or organisms that can be explained through use of scientific investigations. 	
3.2C. Recognize and use the elements of scientific inquiry to solve problems.	<ul style="list-style-type: none"> Conduct a class experiment and record observations and state conclusions. 	

Unit: States of Matter	Subject Area: Science	Grade: 1
PA Academic Standards	Performance Indicators	
<p>3.4A Recognize basic concepts about the structure and properties of matter.</p>	<ul style="list-style-type: none"> • Identify states of matter as liquid, solid or gas. • Classify materials as liquid, solid, or gas. 	

Unit: Magnets	Subject Area: Science	Grade: 1
PA Academic Standards	Performance Indicators	
<p>3.1B Know models as useful simplifications of objects or processes.</p>	<ul style="list-style-type: none"> • Demonstrate the polarity and attraction of magnets. • Apply appropriate simple modeling tools and techniques. • Identify poles of magnet. 	
<p>3.4C Observe and describe different types of force and motion.</p>	<ul style="list-style-type: none"> • Recognize forces that attract or repel other objects and demonstrate them. • Understand that magnets attract or repel objects. 	

Unit: Living/Nonliving	Subject Area: Science	Grade: 1
PA Academic Standards	Performance Indicators	
4.3A Know that plants, animals, and humans are dependent on air and water.	<ul style="list-style-type: none"> • Know and explain that all living things need air, food, shelter and water to survive. 	
4.6C Understand that living things are dependent on nonliving things in the environment for survival.	<ul style="list-style-type: none"> • Identify, classify and categorize living and nonliving things. • Give examples of living and nonliving things. 	
4.6C Understand that living things are dependent on nonliving things in the environment for survival.	<ul style="list-style-type: none"> • Explain why living things are dependent upon nonliving things. 	

Unit: Biomes	Subject Area: Science	Grade: 1
PA Academic Standards	Performance Indicators	Assessments
3.1A Know that natural and human-made objects are made up of parts.	<ul style="list-style-type: none"> Identify and describe the plants, animals and climate that make up a particular biome. 	
3.1B Know models as useful simplifications of objects or processes.	<ul style="list-style-type: none"> Use maps and globes to identify biomes. Construct a diorama showing one of the six biomes to include animals, plants and climate. 	
3.1C Illustrate patterns that regularly occur and reoccur in nature.	<ul style="list-style-type: none"> Distinguish observable growth patterns in plants and climate changes in various biomes. 	
3.1C Illustrate patterns that regularly occur and reoccur in nature.	<ul style="list-style-type: none"> Use knowledge of natural patterns to predict seasonal changes and how they affect the growth of plants or animals. 	
3.3A Know the similarities and differences of living things.	<ul style="list-style-type: none"> Give an example and explain how, in order to survive, living things adapt to changes in their environment. Describe basic needs of plants and animals within each biome. 	

Unit: Biomes	Subject Area: Science	Grade: 1
PA Academic Standards	Performance Indicators	Assessments
3.3A Know the similarities and differences of living things.	<ul style="list-style-type: none"> Discuss that some organisms have similar external characteristics (e.g., anatomical characteristics; appendages, type of covering, body segments) and that similarities and differences are related to environmental habitat. 	
3.3B Know that characteristics are inherited and, thus, offspring closely resemble their parents.	<ul style="list-style-type: none"> Identify characteristics of animals and plants that enable them to survive in different climates (Rain forest, temperate forest, savannah, desert, polar region, ponds/wetland). 	
3.5C Know basic weather elements.	<ul style="list-style-type: none"> Compare and contrast climates in various biomes. 	
3.6A Know that biotechnology relate to propagating, growing, maintain, adapting, treating and converting.	<ul style="list-style-type: none"> Name agricultural products produced in a biome. 	
4.1A Identify various types of water environments.	<ul style="list-style-type: none"> Identify a swamp, a bog and marsh as wetlands. 	

Unit: Biomes	Subject Area: Science	Grade: 1
PA Academic Standards	Performance Indicators	
4.1D Identify a wetland and the plants and animals found there.	<ul style="list-style-type: none"> • Distinguish between different kinds of wetlands. • Identify plants and animals found in wetlands. • Explain wetlands as habitats for plants and animals. 	
4.2A Identify needs of people.	<ul style="list-style-type: none"> • Recognize how the biome environment provides for the needs of people. 	
4.2B Identify products derived from natural resources.	<ul style="list-style-type: none"> • Identify the plant products of various biomes. 	
4.6A Understand that living things are dependent on nonliving things in the environment for survival.	<ul style="list-style-type: none"> • Describe the basic needs of a plant and animal. • Identify basic needs of a plant and an animal and explain how their needs are met. 	
4.6A Understand that living things are dependent on nonliving things in the environment for survival.	<ul style="list-style-type: none"> • Identify plants and animals with their habitat and food sources. • Identify environmental variables that affect plant growth. 	

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PA Academic Standards	Performance Indicators	
4.6A Understand that living things are dependent on nonliving things in the environment for survival.	<ul style="list-style-type: none"> • Describe how animals interact with plants to meet their needs for shelter. 	
4.6A Understand that living things are dependent on nonliving things in the environment for survival.	<ul style="list-style-type: none"> • Name the components of a food chain. • Identify a local ecosystem and its living and nonliving components. 	
4.6A Understand that living things are dependent on nonliving things in the environment for survival.	<ul style="list-style-type: none"> • Identify and construct a simple ecosystem and its living and nonliving components. 	
4.7A Identify differences in living things.	<ul style="list-style-type: none"> • Explain how plants and animals use camouflage to survive in their habitat. 	
4.7A Identify differences in living things.	<ul style="list-style-type: none"> • Explain why each of the four elements (water, shelter, food, space) in a habitat is essential for survival. • Identify local plants or animals and describe their habitat. 	

Unit: Biomes	Subject Area: Science	Grade: 1
PA Academic Standards	Performance Indicators	
4.7A Identify differences in living things.	<ul style="list-style-type: none"> • Explain how specific adaptations can help a living organism to survive. • Explain what happens to a living thing when its food, water, shelter or space is changed. 	
4.8C Explain how human activities may change the environment.	<ul style="list-style-type: none"> • State everyday human activities and how they affect the environment. 	
4.8D Know the importance of natural resources in daily life.	<ul style="list-style-type: none"> • Explain ways to conserve our natural resources. 	

Adaptations/Modifications for Students with I.E.P.s

Adaptations or modifications to this planned course will allow exceptional students to earn credits toward graduation or develop skills necessary to make a transition from the school environment to community life and employment. The I.E.P. team has determined that modifications to this planned course will meet the student's I.E.P. needs.

Adaptations/Modifications may include but are not limited to:

INSTRUCTION CONTENT

- Modification of instructional content and/or instructional approaches
- Modification or deletion of some of the essential elements

SETTING

- Preferential seating

METHODS

- Additional clarification of content
- Occasional need for one to one instruction
- Minor adjustments or pacing according to the student's rate of mastery
- Written work is difficult, use verbal/oral approaches
- Modifications of assignments/testing
- Reasonable extensions of time for task/project completion
- Assignment sheet/notebook
- Modified/adjusted mastery rates
- Modified/adjusted grading criteria
- Retesting opportunities

MATERIALS

- Supplemental texts and materials
- Large print materials for visually impaired students
- Outlines and/or study sheets
- Carbonless notebook paper
- Manipulative learning materials
- Alternatives to writing (tape recorder/calculator)