

Date: August 2008

Hamburg Area School District

Name of Course: 1st Grade Science

Department: Science

Grade Level: 1

Instructional Time: 1 year

Length of Course:

Period Per Cycle:

Length of Period:

Texts and Resources: Science, Harcourt 2000

Assessments: Observation/Rubrics

**Hamburg Area School District
Course Plan
Grade 1 Science**

**Course Name: First Grade
Unit: Plants/Life Science**

Time Line:

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
Parts of a plant/What are the parts of a plant? What are the functions of the parts of the plant?	Identify the basic parts of plants and their functions. Roots, stems, leaves, flowers,	K.3.3.G
Plant Growth/How do plants grow?	Identify the basic parts of the seed. Recognize that a seed grows into a plant through experimentation.	K.3.3.K K.3.3.J
What do plants need?	Identify that plants need light, air,soil, and water. Communicate observation about growth.	K.3.3.E

**Hamburg Area School District
Course Plan
Grade 1 Science**

Course Name: First Grade

Unit: Plants and Animals/ Life Science

Time Line:

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
How do my senses help me learn?	Identify the five senses. Explain how the five senses help us learn.	
What are living and nonliving things?	Distinguish between living organisms and nonliving objects. Compare living organisms and nonliving objects.	

**Hamburg Area School District
Course Plan
Grade 1 Science**

**Course Name: First Grade
Unit: Animals/Life Science**

Time Line:

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
What do animals need?	Observe that animals need food, water, air and a place to live to survive. Identify characteristics of living organisms that allow their basic needs to be met.	K.3.3.B K.4.3.A K.3.3.L
What are some kinds of animals?	Identify different ways to group animals. Recognize that animals can be sorted according to their characteristics and parts.	K.3.3.C K.3.3.G
What are insects?	Recognize the parts of an insect. Identify the characteristics of an insect that allow its basic needs to be met.	K.3.3.M K.3.3.G
How do animals grow?	Observe and record changes in the life cycles of mammals and birds. Compare the ways young mammals and birds depend on their parents for basic needs.	K.3.3.B K.3.3.J

**Hamburg Area School District
Course Plan
Grade 1 Science**

Course Name:First Grade

Unit: Animals/Life Science- con't

Time Line:

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
How does a butterfly grow?	Observe and record changes in the life cycle of a butterfly. Identify the characteristics of a butterfly that allow its basic needs to be met.	K.3.3.A K.3.3.B K.3.3.J K.3.3.K
How does a frog grow?	Observe and record changes in the life cycle of a frog. Identify characteristics of a frog that allow its basic needs to be met.	K.3.3.A K.3.3.B K.3.3.J K.3.3.K

**Hamburg Area School District
Course Plan
Grade 1 Science**

**Course Name: First Grade
Unit: Plants and Animals/Life Science**

Time Line:

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
How do animals need plants?	Give examples of ways animals depend on plants for basic needs. Identify characteristics of animals that allow their basic needs to be met.	K.3.3.A K.3.3.L
How do animals help plants?	Identify characteristics of plants and animals that allow that allow them to meet their needs. Compare ways that plants depend on animals to help meet their needs.	K.3.3.L K.3.3.A
How do we needs plants and animals?	Give examples of ways people depend on plants and animals for their basic needs. Sort plant and animal products according to whether they come from plants or animals.	K.3.3.A K.3.3.L

Hamburg Area School District
Course Plan
Grade 1 Science

Course Name: First Grade
Unit: Earth Resources/Earth Science

Time Line:

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
What can we observe about rocks?	Observe and describe differences in rocks based on characteristics. Use a hand lens to collect information about rocks, and classify them.	K.3.5.B
What is soil?	Observe soil using a hand lens to find out what it is made of. Identify ways soil is used by plants and animals.	K.3.5.B
How do different soils compare?	Observe and describe differences in soil samples. Collect information about soil using a hand lens.	K.3.5.B
Where is air on earth?	Recognize the earth's surface is surrounded by air . Conduct simple investigations to observe air and what it can do.	

**Hamburg Area School District
Course Plan
Grade 1 Science**

Course Name: First Grade

Unit: Earth's Resources/Life Science con't

Time Line:

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
Where is fresh water found?	Identify a variety of natural sources of fresh water. Observe that fresh water can be made from salt water.	K.3.5.I K.3.5.J
Where is salt water on earth?	Identify oceans as a source of water on earth. Conduct simple investigations to observe salt and salt water.	K.3.5.I K.3.5.J

**Hamburg Area School District
Course Plan
Grade 1 Science**

Course Name: First Grade

Unit: Earth's Resources/Earth Science

Time Line:

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
What is weather?	Recognize that weather is the condition of the air outside. Observe and record weather changes from day to day.	K.3.5.C K.3.5.D K.3.5.G
What is temperature?	Use a thermometer to collect and record information about weather. Identify patterns in temperature changes related to weather.	K.3.5.C K.3.5.F K.3.5.G
What is wind?	Recognize that wind is moving air. Observe changes in wind direction and speed.	K.3.5.C K.3.5.G
What makes clouds and rain?	Recognize that clouds form when warm air meets cooler air. Recognize that rain forms from water drops in clouds.	K.3.5.C K.3.5.D K.3.5.G K.3.5.G

**Hamburg Area School District
Course Plan
Grade 1 Science**

Course Name: First Grade
Unit: Earth's Resources/Earth Science

Time Line:

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
What is spring?	Recognize that spring is the season that follows winter. Observe and record changes in weather from winter to spring.	K.3.5.H K.3.5.C
What is summer?	Recognize that summer is the season that follows spring. Observe and record changes in weather from spring to summer.	K.3.5.H K.3.5.C
What is fall?	Recognize that fall is the season that follows summer. Observe and record changes in weather from summer to fall.	K.3.5.H K.3.5.C
What is winter?	Recognize that winter is the season that follows fall. Observe and record changes in weather from fall to winter.	K.3.5.C K.3.5.H

Hamburg Area School District
Course Plan
Grade 1 Science

Course Name: First Grade

Unit: Matter and Energy/Physical Science

Time Line:

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
What can we observe about solids?	Recognize that everything around us is matter. Observe and describe the properties of solids.	K.3.4.A K.3.4.B K.3.4.C K.3.4.E
What can we observe about liquids?	Recognize that liquid is matter that flows. Observe and describe the properties of liquids.	K.3.4.A K.3.4.B K.3.4.C K.3.4.E
What objects sink or float?	Recognize that some objects sink and some float in water. Recognize that objects can be described in terms of their floating and sinking properties.	K.3.4.A K.3.4.B K.3.4.C K.3.4.E
What can we observe about gases?	Recognize that gas is matter that fills and takes the shape of the container it is in. Observe and describe the properties of gases.	K.3.4.A K.3.4.B K.3.4.C K.3.4.E

**Hamburg Area School District
Course Plan
Grade 1 Science**

**Course Name: First Grade
Unit: Heat and Light/Physical Science**

Time Line:

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
What is heat?	Observe that the sun is a source of heat that warms Earth's land, air, and water. Recognize that other sources of heat include fire and rubbing two things together.	K.3.4.F
How does heat change matter?	Observe and record what heat can do to water. Identify ways that heat causes changes in solids, liquids, and gases.	K.3.4.F
What is light?	Recognize that the sun, fire, and electricity bulbs are sources of light. Use a prism to observe the colors in light.	K.3.4.F
What can light do?	Recognize that light move in a straight line. Observe and record what happens when light reflects (bounces) and refracts (bends).	K.3.4.F

**Hamburg Area School District
Course Plan
Grade 1 Science**

Course Name: First Grade

Unit: Energy and Forces/Physical Science

Time Line:

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
What makes things move?	Recognize that a force is a push or a pull. Observe and describe what pushes and pulls can do.	K.3.4.F K.3.4.H
What are some ways things move?	Recognize that objects move in different ways. Observe and describe different kinds of movement.	K.3.4.F K.3.4.H
Why do things move the way they do?	Recognize that motion involves moving from one place to another. Recognize that the size of a change of motion is related to the strength of the push or the pull.	K.3.4.F K.3.4.H

**Hamburg Area School District
Course Plan
Grade 1 Science**

**Course Name: First Grade
Unit: Magnets/Physical Science**

Time Line:

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
What are magnets?	Recognize that a magnet is a piece of iron that attracts objects with iron in them. Observe how the magnetic force works and its different uses.	3.4.4.C 3.6.4C 3.2.4.B
What are the poles of a magnet?	Observe that a magnet has two different poles. Recognize that a magnet's pulling force is strongest at the poles.	3.4.4.C 3.6.4C 3.2.4.B
What can a magnet pull through?	Recognize that magnetic force can pass through some things to attract iron objects. Observe that magnetic force gets weaker as distance increases from the magnet.	3.4.4.C 3.6.4C 3.2.4.B
How can you make a magnet?	Recognize that a magnet can magnetize things it attracts. Compare the strength of different magnets.	3.4.4.C 3.6.4C 3.2.4.B

Hamburg Area School District
Course Plan
Grade 1 Science

Course Name: First Grade
Unit: A Place to Live/Life Science

Time Line:

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
What lives in a forest?	Describe how plants and animals that live in a forest find what they need to survive. Recognize that plants and animals have characteristics that help them live in a forest.	K.3.3.A K.3.3.C K.3.3.D
What lives in the desert?	Recognize that plants and animals that live in a desert find the conditions they need to survive. Give examples of the characteristics that help plants and animals live in a desert.	K.3.3.A K.3.3.C K.3.3.D
What lives in a rain forest?	Recognize that plants and animals that live in a rain forest find what they need to survive. Identify characteristics of plants and animals that help them live in a rain forest.	K.3.3.A K.3.3.C K.3.3.D
What lives in an ocean?	Recognize that plants and animals that live in the ocean find the conditions they need to survive. Identify the features that plants and animals have that help them live in the ocean.	K.3.3.A K.3.3.C K.3.3.D