

**Date: August 2008**

## **Hamburg Area School District**

**Name of Course: 1<sup>st</sup> 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:**

| <b>Essential Content/ Essential Questions</b>  | <b>Performance Objectives</b>  | <b>Standards/Anchors</b> |
|--|--|--------------------------|
| Parts of a plant/What are the parts of a plant?<br><br>What are the functions of the parts of the plant? | Identify the basic parts of plants and their functions.<br><br>Roots, stems, leaves, flowers,              | K.3.3.G                  |
| Plant Growth/How do plants grow?   | Identify the basic parts of the seed.<br>Recognize that a seed grows into a plant through experimentation. | K.3.3.K<br>K.3.3.J       |
| What do plants need?   | Identify that plants need light, air,soil, and water.<br>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:**

| <b>Essential Content/ Essential Questions</b> | <b>Performance Objectives</b>  | <b>Standards/Anchors</b> |
|---|--|--------------------------|
| How do my senses help me learn?               | Identify the five senses.<br>Explain how the five senses help us learn.  |                          |
| What are living and nonliving things?         | Distinguish between living organisms and nonliving objects.<br>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:**

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

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

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

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

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

**Time Line:**

| <b>Essential Content/ Essential Questions</b> | <b>Performance Objectives</b>   | <b>Standards/Anchors</b> |
|---|---|--------------------------|
| What can we observe about rocks?              | Observe and describe differences in rocks based on characteristics.<br>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.<br>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.<br>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 .<br>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:**

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

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

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

| <b>Essential Content/ Essential Questions</b> | <b>Performance Objectives</b>   | <b>Standards/Anchors</b>                 |
|---|---|--|
| What can we observe about solids?             | Recognize that everything around us is matter.<br>Observe and describe the properties of solids.  | K.3.4.A<br>K.3.4.B<br>K.3.4.C<br>K.3.4.E |
| What can we observe about liquids?            | Recognize that liquid is matter that flows.<br>Observe and describe the properties of liquids.  | K.3.4.A<br>K.3.4.B<br>K.3.4.C<br>K.3.4.E |
| What objects sink or float?                   | Recognize that some objects sink and some float in water.<br>Recognize that objects can be described in terms of their floating and sinking properties. | K.3.4.A<br>K.3.4.B<br>K.3.4.C<br>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.<br>Observe and describe the properties of gases.                 | K.3.4.A<br>K.3.4.B<br>K.3.4.C<br>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:**

| <b>Essential Content/ Essential Questions</b> | <b>Performance Objectives</b>   | <b>Standards/Anchors</b> |
|---|---|--------------------------|
| What is heat?                                 | Observe that the sun is a source of heat that warms Earth's land, air, and water.<br>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.<br>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.<br>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.<br>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:**

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

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

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

**Time Line:**

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

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