Effective Date: 2007-08

Hamburg Area School District

Name of Course: Science 6
Department: Science

Grade Level: 6
Instructional Time:
- **Length of Course: 180 days**
- **Period Per Cycle: 6**
- **Length of Period: 54 minutes**

Texts and Resources:
- **The Trumpet of Swan**
- **Science Textbook**
- **Videos/DVD**
- **Supplemental Material**
- **Science News**
- **Lab Equipment**

Assessments:
- **Tests**
- **Quizzes**
- **Projects**
- **Homework**
- **Lab**
- **Classwork**

Hamburg Area School District
Curriculum

Course Name: 6th Grade
Unit: Physical and Chemistry Science, Physics **Time Line: Quarter 1& 2**

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors	Evidence of Student Understanding - Performance Tasks Assessments
What is science and why is it important?	Students will examine the different parts of the scientific method.	3.2.7.A 3.2.7.B	Activity 1
What is lab safety?	Students understand the importance of lab safety and use proper procedures when using the lab equipment.	3.7.7.A	Activity 1A
What are the properties of matter?	Students will identify and compare the measurable physical properties of matter. Students will be able to use a ruler and read a thermometer.	3.4.7.A	Activity 1B
What are chemical changes?	Students will study a chemical change and physical change. Students will recognize the different parts of a chemical reaction	3.4.7.A	Activity 2
How does matter change into other forms?	Students will explain the differences among elements, compounds, and mixtures.	S8.C.1.1	Activity 3
How does energy affect our daily lives?	Students will identify the different forms of energy.	3.4.7.B	Activity 1
How does energy change from one form to another?	Students will compare changes in energy.	3.4.7.B	Activity 1A
What happens to heat energy that makes water evaporate?	Students will investigate energy and the water cycle.	3.5.12C	Activity 1, 2
What is the energy supply in a hurricane?	Students will discover that certain weather conditions precede changes in the weather.	3.5.10B	Activity 3
How does a hurricane develop?	Students will investigate extreme weather phenomena such as hurricanes.		Activity 4
What is electricity?	Students will examine the different parts of an electrical circuit and understand how electricity flows.	3.4.7.B	Activity 1
What are the different parts of an electrical circuit?	Students will compare a series circuit to a parallel circuit and identify the parts.	3.4.7.B	Activity 2
How does energy affect our daily lives?	Students will examine energy and understand the relationship between the different types of energy.	3.4.7.B	Activity 3
How electricity gets to our homes and explore ways to conserve	Students will understand how resources are used to generate energy and explore the different power plants in PA.	3.6.7.C	Activity 4

Hamburg Area School District
Curriculum
Science

Course Name: 6th Grade Science
Unit: Earth Sciences **Time Line: Quarter 3**

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors	Evidence of Student Understanding - Performance Tasks Assessments
How are problems solved using science? What is an experiment?	Students will design conduct a science fair project that has an independent and dependent variable ?	S8.A.2.1.3 S8.A.2.1.4	Activity 1 Activity 2 Activity 3 Activity 4
What is weathering and how does if affect our lives past and present?	Students will understand the different layers of the Earth.	3.5.7.C	Activity 1
What is the rock cycle?	Students will examine the different types of rocks and understand that a cycle is continuous.	3.5.7.A	Activity 2
What are the common rocks found in Pennsylvania. and how did they affect the formation of the land?	Students will study and examine rocks from PA.	3.5.7.A	Activity 3
What is weathering? How does weathering impact us?	Students will investigate weathering by surveying their homes and school for different signs of weathering.	3.2.7.A 3.5.7.A	Activity 4
Students will interpret data and formulate solutions by writing to inform .	Students will interpret data, and produce solutions	3.2.7.B.	Activity 4

Hamburg Area School District
Curriculum

Course Name: 6th Grade Science
Unit: Life Sciences **Time Line: Quarter 4**

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors	Evidence of Student Understanding - Performance Tasks Assessments
Students will describe the cell as the basic structural and functional unit of living things.	Students will describe the similarities and differences that characterize diverse living things that help them function in unique ways	3.2.7.B.	Activity 1
Students will write a hypothesis and interpret data.	Students will describe relationships by making inferences and predictions. Apply process knowledge to make and interpret observations.	3.2.7.B.	Activity 1
Students will interpret data and formulate a conclusion.	Students will interpret data, formulate models, design models, and produce solutions	3.2.7.B. •	Activity 1 2 3 4
Students understand the importance of adaptations.	Students will identify types of adaptations.	4.6.7.A 4.6.7.B 3.7.7.A 3.7.7.B	Activity 3
Students will explain basic concepts of natural selection?	Students will interpret data and understand why some living embryos fail to hatch or thrive.	3.3.7.D.	Activity 4

Hamburg Area School District
Curriculum

Course Name: 6th Grade Science
Unit: Universe **Time Line: Quarter 4**

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors	Evidence of Student Understanding - Performance Tasks Assessments
What are tools that scientists use in space	Students will identify tools used to explore space.	3.4.7.D 3.4.10.D	Activity 1
What is a galaxy?	Students will draw and label the three types of galaxies.	3.4.7.D 3.4.10.D	Activity 2
What is a star?	Students will map the life cycle of a star .	3.4.7.D 3.4.10.D 1.6.8.A 1.6.8.C 1.6.8.D	Activity 3
What is a constellation	Students will identify the main constellations.	3.4.7.D 3.4.10.D	Activity 4
What is the solar system?	Students will explain the importance of the sun and gravity.	3.4.7.D 3.4.10.D	Activity 5
What is the space travel?	Students will design a space station.	3.4.7.D 3.8.7.A	Activity 6