

Brandywine Heights Area School District
200 West Weis Street, Tipton, PA
Course Syllabus for 6th Grade Science

Overview:

Students will receive instruction in many areas of science, making this a general science curriculum. Hands-on activities are designed to provide familiarity and competency in investigative scientific procedures and lab materials as well as the higher order thinking skills needed for analytical problem solving. Chemistry, astronomy, physics, nutrition, and an environmental unit provide the core for these investigations.

Textbook(s) and Other Resources used:

The Nature of Science and Technology: Prentice Hall Copyright, 2009

Motion, Forces, and Energy: Prentice Hall Copyright, 2009

Astronomy: Prentice Hall Copyright, 2009

Weather and Climate: Prentice Hall Copyright, 2009

Hands-on modules: Variables, and Food Chemistry.

Microscope Explorations, Variables, Food Chemistry, Astronomy, and Climate and Weather also have teacher-made handouts that accompany them.

Outline of Content:

First Quarter

The Nature of Science and Technology

- What is Science?
- The work of Scientists
- Technology and Engineering

Variables

- Pendulums
- Boats
- Planes
- Catapults
- Graphing Data
- Drawing Conclusions and Problem Solving

Projects, Papers, and Tests: Labs and accompanying written activities, Variables presentation, Formal assessments (test and quizzes)

Second Quarter

Motion, Forces, and Energy

- Motion
- Forces
- Forces in Fluids
- Work and Machines
- Energy
- Thermal Energy and Heat

Food Chemistry

- Starch

- Glucose
- Carbohydrates
- Fats
- Proteins
- Vitamins and Minerals
- Comparing Food Labels

Projects, Papers, and Tests: Labs and accompanying written activities, Study guide, Nutrition record, Formal Assessments (tests and quizzes)

Third Quarter

Astronomy

- Earth, Moon, and Sun
- Ancient Models of the World
- Exploring Space
- The Solar System
- Stars Galaxies and the Universe

Microscope Explorations

- Up Close Lab
- Money Lab
- Fingerprint Lab
- Parts of a Microscope
- Wet/Dry Mount Slides

Projects, papers, and Tests: Labs and accompanying written activities, Moon Observation, Presentation of Early Civilizations Myth, Parts of a Microscope Demonstration, Formal Assessments (tests and quizzes)

Fourth Quarter

Weather and Climate

- The Atmosphere
- Weather Factors
- Weather Patterns
- Climate and Climate Change

Science Review

- Scientific Method
- Key Concepts Learned
- Scientific Tools

Projects, Papers, and Tests: Labs and accompanying written activities, Environmental Web Quest, Role Playing, Formal Assessments (tests and quizzes)