Newburyport Public Schools The Port Where Tradition and Innovation Converge



Newburyport Science Curriculum Framework Guide - Grade 5

Focus Areas

In Grade 5 the focus on student learning in Science is on the following areas:

- 1. Earth's Systems
- 2. Earth and Human Activity
- 3. Earth's Place in the Universe
- 4. Motion and Stability: Forces and Interactions
- 5. Technological Systems
- 6. From Molecules to Organisms: Structures and Processes
- 7. Ecosystems: Interactions, Energy, and Dynamics
- 8. Matter and Its Interactions
- 9. Energy

Guiding Principles for Grade 5 Science

Earth and Space Science

- Constructing an argument about the sun's appearance
- •Using models to explain Earth's relationship to the sun, moon and stars
- •Using a model to explain the cycling of water on Earth
- •Graphing the locations and relative amounts of fresh and saltwater
- •Obtaining information about human's impact on the environment
- •Testing, and proposing a change to, a water filter design

Life Science

- •Asking scientific questions about how plants obtain materials to live and grow
- Developing a model to describe movement of matter in the environment
- •Comparing the effectiveness of composter designs

Physical Science

- •Using a model of matter to explain phase changes
- •Measuring conservation of matter •Observing and measuring substances to describe characteristic properties
- •Experimenting to see if mixing substances creates a new substance
- •Supporting an argument that gravity is directed towards Earth's center
- •Describing that the food animals digest provides energy and nutrients for life processes

Technology/Engineering

- •Using drawings to show the relationships between parts of a device
- •Communicating about changes to improve technologies and he development of new technologies that fulfill a want or need

Science and Engineering Practices:

- 1. Ask Questions and Define Problems
- 2. Develop and Use Models
- 3. Plan and Carry Out Investigations
- 4. Analyze and Interpret Data 5. Use Mathematical and Computational Thinking
- 6. Construct Explanations and Design Solutions
- 7. Engage in Argument from Evidence
- 8. Obtain, Evaluate, and Communicate Information