Newburyport Public Schools
The Port Where Tradition and Innovation Converge

Newburyport Science Curriculum Framework Guide -Grade 6

Focus Areas

In Grade 6 the focus on student learning in Science is on the following areas:

1. Earth's Systems
2. Earth's Place in the Universe
3. Matter and Its Interactions
4. Motion and Stability: Forces and Interactions
5. Waves and their Applications in Technologies for Information Transfer
6. Engineering Design
7. Materials, Tools, and Manufacturing

Guiding Principles for Grade 6 Science

Earth and Space Science

•Developing and using a model to explain the causes of lunar phases
•Analyzing rock layers and fossils to determine relative ages
•Illustrating that the Earth and solar system are parts of the Milky Way
•Interpreting maps to provide evidence of Earth's plate movement

Life Science

•Providing evidence that organisms are made of cells
•Developing a model to show how parts of cells contribute to functions
•Providing evidence to explain that body systems interact for life functioning
•Using fossils to infer patterns of environmental change
•Constructing an argument of evolutionary relationships among fossilized and modern organisms

Physical Science

•Experimenting with chemical reactions and thermal energy
•Using a particulate model of matter to explain density
•Experimenting with mixtures
•Making claims about gravity
•Using diagrams to explain waves
•Showing that waves are reflected, absorbed, or transmitted
•Supporting the claim that digitized signals can transmit information

Technology/Engineering

•Defining a problem with precision
•Visually representing solutions and applying scale and proportion •Communicating a design solution •Analyzing and comparing properties of different materials •Selecting appropriate material for a design task •Choosing and safely using appropriate tools for a prototype

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