



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 the 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