Robert C. Parker School
Science Curriculum
Grades 6,7, 8

As children explore the world around them, they gain a deeper understanding and appreciation for the interconnections in nature and science. They begin to learn about conservation and activism. Our seventy-seven acres of meadows, woodlands, wetlands, and creeks are a natural workshop for science observation and discovery. Science studies are supported with field trips to museums and local nature sites, including an annual trip to Camp Chingachgook on Lake George. Cornell Cooperative Extension's Demonstration Gardens on our property provide an accessible resource. Students practice conservation through a recycling program coordinated by middle school students, and by collecting data from our solar panels. Students and teachers use our student-built greenhouse and raised-bed vegetable gardens.

Sixth and Seventh Grade

Areas of Focus:

- Lab performance. Safety, scientific method, science lab journals and performance.
- Science investigation. What kind of questions can be answered using science?
- Science and technology relationship. Science laws can be applied and build complex structures using simple machines.

Year 1: Biology/Ecology

Units

- Forest Ecology: Creating a Wildlife Guide of the Grounds at Parker
- Evolution: How do we classify living things? A study of how scientist through the ages have developed taxonomy
- Classification: Kingdom, Phylum, Class, Order, Family, Genus, Species
- Research and comparison of types of energy

Year 2: Physics/Chemistry

Essential Question: What are the properties and principles of matter and energy and how is energy related with force and movement?

Units

- Energy: Nature of light, sound and electromagnetic waves; Heat and Temperature
- Force and Motion: Simple machines; Concepts of Motion
- Matter: States of matter; Atoms and the Periodic Table of the Elements

Grade 8

Earth Science

Essential Question: How the structures and physical changes of Earth's systems and different components are related with each other and with us?

Guiding Concepts:

- The Earth system is a Complex Adaptive System. How has the Earth changed over time?
- How do humans and the environment impact each other?
- To understand time and the scale of space, models and maps are necessary. What makes a good model?

Units:

- Measuring Earth;
- Rocks and Minerals Measuring Earth;
- Groundwater and Surface Processes;
- Earth History and Plate Tectonics;
- Meteorology and Climate;
- Astronomy