

How Does Science on Seneca meet New York State Science Standards?

In this section you will find selected state standards for math, science and technology at the commencement level that are addressed most directly through participation in the Science on Seneca program. Using the pre-visit power point presentation contained in this website - teachers can enhance the students knowledge base of these standards. Please note that these do not include all of the content standards that may be addressed during your class's investigation.

New York State Learning Standards MST: Commencement

Standard 1 - Scientific Inquiry

1. The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process. **Students hone ideas through discussion with others, including experts.**
3. Observations made while testing proposed explanations, when analyzed using conventional and invented methods, provide new insights into phenomena. Students interpret the organized data to answer the research question or hypothesis and gain insight into the problem.

Standard 2 - Information Systems

1. Information technology is used to retrieve, process, and communicate information and as a tool to enhance learning. **Students access, select, collate, and analyze information obtained from a wide range of sources such as research databases, foundations, organizations.**

Standard 4 - Physical Setting

2. Many of the phenomena that we observe on earth involve the interactions among components of air, water, and land. **Students learn that glaciers formed much of the Finger Lakes and will observe first-hand the sediments that contain clues of the Finger Lake's history.**
5. Energy and matter interact through forces that result in changes in motion. **Students explain and predict different patterns of motion of objects (wave motions and current).**

Standard 4 - The Living Environment

1. Living things are both similar to and different from each other and nonliving things. **Students explain how diversity of populations within ecosystems relates to the stability of ecosystems.**
3. Individual organisms and species change over time. **Students explore how different characteristics of the species give it a selective advantage.**
6. Plants and animals depend on each other and their physical environment. **Students investigate a local ecosystem to understand factors that limit the growth of individuals and population. Students understand how the living and nonliving environments change over time and respond to disturbances. (zebra mussels and quagga mussels).**
7. Human decisions and activities have had a profound impact on the physical and living environment. **Students will learn and be able to describe the range of interrelationships of humans with the living and nonliving environment. (Land use impacts on water quality, introduction of invasive species to the Finger Lakes)**

Standard 5 - Impacts of Technology

6. Technology can have positive and negative impacts on individuals, society, and the environment and humans have the capacity and responsibility to constrain or promote technological development. **Students identify technologies that impact the environment negatively and discuss technological improvements. (Sewage treatment and agricultural landuse).**