



Natural Resources Program of Study

Proficiencies Needed to be Successful in Natural Resources:

Math:

Modeling

- Use numerical phenomena or quantities to model a situation.
- Use geometric shapes and their properties to model physical objects.

Numbers and Quantity

- Compute fluently with multi-digit numbers and find common factors and multiples.

Functions

- Understand ratio concepts and use ratio reasoning to solve problems.
- Analyze proportional relationships and use them to solve real-world and mathematical problems.

Geometry

- Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.
- Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.
- Statistics and Probability
- Draw informal comparative inferences about two populations.

English Language Arts:

Reading

- Determine the central ideas of the text and provide an objective summary.
- Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.

Writing

- Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection organization, and analysis of content.
- Use technology to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Speaking & Listening

- Refer to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
- Develop a clear line of reasoning.

Language

- Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Science:

Life Sciences: Growth, Development, and Reproduction of Organism, Natural Selection and Adaptations

- Construct an explanation based on evidence for how natural selection leads to adaptation of populations.
- Evaluate the evidence supporting claims that changes in environmental conditions may result in increases in the number of individuals of some species, the emergence of new species over time, or the extinction of other species.

Earth and Space Sciences: Earth, Space and the Universe

- Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.

Earth and Space Sciences: Earth Systems

- Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.
- Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.

Geographic Representation: Spatial Views of the World

- Use maps, satellite images, photographs, and other representations to explain and analyze relationships between the locations of places and regions and their political, cultural, and economic dynamics (e.g., population density, air quality).

Social Studies:

Constructing compelling questions

- Generate and use a variety of questions about a topic of study to further inquiry.
- Explain how a question reflects an enduring issue in the field.

Exchange & Markets

- Evaluate the extent to which competition among sellers and buyers exists, and describe the consequences of competition in specific markets.

Global Interconnections: Changing Spatial Patterns

- Evaluate how changes in the environmental and cultural characteristics of a place or region influence spatial patterns of trade and land use.

Education and Career Pathways out of Natural Resources:

Post-Secondary Education:

Colleges/universities attended by Natural Resources students in recent years:

- | | |
|--------------------------------------|------------------------|
| • SUNY Cobleskill | • Maine Maritime |
| • University of Vermont | • Paul Smith's College |
| • Vermont Technical College | • Unity College |
| • Community College of Vermont | |
| • Community College of New Hampshire | |
| • University of New Hampshire | |

Apprenticeships:

Students participate in Cooperative Education and Job Shadow placements at numerous Upper Valley businesses and organizations.

Employability:

Many Natural Resources students have expressed interest in pursuing careers in the following areas:

- | | |
|---|-----------------|
| • Wildlife Management | • Forestry |
| • Recreation Management | • Conservation |
| • Property Management | • Water Quality |
| • Heavy Equipment | • And more! |
| • Municipal and State job opportunities | |

Certifications:

- CPR/AED and First Aid
- Game of Logging
- WorkKeys National Career Readiness Certification (NCRC)