

Instructional Plan: Field to Forest Succession

The overlying objective of the Nassau BOCES Field to Forest Program is to provide specific content aligned to each grades' science curriculum while also providing real world applications for NYS ELA and Math Common Core Standards. Alignments are on reverse side of this document.

Vocabulary (teacher may add to list or request emphasis)

Deciduous	Coniferous	Community
Canopy	Habitat	Shrub Layer
Niche	Dicot	Monocot
Decomposition		Transpiration
Photosynthesis		Population
Succession		Understory

Program Logistics:

- Group Size: 15 students/naturalist
- 1 adult chaperone/student group
- 1.5-2 hr program and is typically combined with another program.
- The program takes place at Caumsett State Historic Park. The Program is also possible at a location near your school.

Call for pricing and to schedule:

516-396-2264

See us online:

www.nassauboces.org/outdoors



We are more than just a field trip... we provide a learning environment for your students!

The Beech Tree Field at Caumsett.

Lesson Objectives

Students will be able to...

Explain how a field becomes a forest by gradual changes

- Pioneer plants
- Food Chains
- Food Webs
- Decomposition
- Stages of Succession

Identify Forest layers

- Canopy
- Understory
- Shrub Layer
- Ground Layer

Describe the difference between monocots and dicots

Describe the different ways that seeds are dispersed

Describe seasonal changes

Activities (can include but not limited to):

- Using the senses to observe the processes of nature
- Observing properties of natural materials (color, shape, size, texture)
- Observing, collecting, and sorting leaves and seeds
- Doing a transect study to identify and count plants to determine populations
- Using field guides to identify plants.
- Playing games to illustrate population dynamics and predator prey relationships

Assessment

- The program will end with a summative "Q & A."
- The teacher may elect to have students complete data sheets and/or writing activities back in the classroom.

Standard Alignments for Field Forest Program for grades 3, 4 and 5

Standards Type	Key Standards or Code	Standard Description	Instructional Activities
NYS Science Core Curriculum	Standard 1: Analysis, Inquiry and Design Scientific Inquiry	Key Idea 1: To develop explanations of natural phenomena in a continuing creative process. Key Idea 3: The observations made while testing proposed explanations provide new insights into phenomena	The whole session is inquiry and discovery based. Students will observe and compare the diversity and types of plants in a field as compared to a forest.
	Standard 4 Living Environment	Key Idea 1: Living things are both similar to and different from each other and nonliving things. Key Idea 3: Individual organisms and species change over time. Key Idea 4: The continuity of life is sustained through reproduction and development. Key Idea 5: Organisms maintain a dynamic equilibrium that sustains life. Key Idea 6: Plants and animals depend on each other and their physical environment. Key Idea 7: Human decisions and activities have had a profound impact on the physical and living environment	The Key ideas for Standard 4 are addressed throughout the program. Observations and discussions include seasonal changes, life cycles; complete and incomplete metamorphosis; nutrient cycles; a web of life game to demonstrate inter-relationships, plant and animal adaptations. Students will observe how human intervention has changed the habitat and how the plants will move back into areas disturbed by humans.
NYS Common Core	Supporting Standards	Description	Instructional Activities
Math	Measurement and Data:	Grade 3.MD.4 Generate measurement data by measuring using rulers. 3. MD.5 Recognize area as an attribute of plane figures; understand concepts of area measurement. 3.MD.8 Solve real world and mathematical problems involving perimeters of polygons Grade 4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems Grade 5: Represent and interpret data.	The transect study will quantify the plants that exist in the habitat by using square foot quadrants and a transect line measured in feet. After collecting data students use simple multiplication and division to determine the plant populations. Data collected may be used in the classroom for further interpretation.
ELA Anchor Standards Grades K-5	Comprehension & Collaboration	1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.	Students will participate in conversations related to their observations and data collection.
	Presentation of Knowledge and Ideas	4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.	Students will participate in a group wrap up activity where they will discuss the lessons of the day and predict the future of the habitat.
	Vocabulary Acquisition and Use	4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.	Students will use content-driven vocabulary throughout the program and practice the use of root words, prefixes and suffixes to determine meaning (example: macro, micro)