



Instructional Grant Program - Innovative

Submission Deadline: 9/19/2013

Name: Betsy McAllister

Schools: Andrews, Armstrong, Asbury, Barron, Bassette, Booker, Burbank, Cary, Cooper, Kraft, Langley, Machen, Phenix, Phillips, Smith, Tyler

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Position & Title: Gifted Resource Teacher/Gifted Instructional Leader

Project Title: Saving the Bay the Fourth-Grade Way!

This project is designed for: Elementary

Target Grade Level(s): 4th Grade **Subject Areas/Discipline:** Science, Social Studies, Language Arts

Complete the following:

1. Describe the grade level target population, subject or subjects being taught, overall curriculum goals and SOLS being addressed by the project.

Target Population/Subjects Taught:

Fourth-grade gifted resource students from elementary schools throughout the division (Andrews, Armstrong, Asbury, Barron, Bassette, Booker, Burbank, Cary, Cooper, Kraft, Langley, Machen, Phenix, Phillips, Smith, and Tyler) will utilize a multidisciplinary approach (science, social studies, and language arts) to learn first-hand about the geography, historical/economic significance, geology, and ecosystem interactions that make the Chesapeake Bay one of the world's premier natural resources.

Project/Curriculum Goal:

The goal of this project is to create environmentally literate citizens who understand the complex physical, biological, and human interactions that affect the Chesapeake Bay ecosystem and who can make informed decisions to ensure the health of this natural resource.

Project Standards of Learning:

Students will use the Chesapeake Bay as an organizing topic to weave together Standards of Learning (SOLs) in science, social studies, and language arts classes. Preliminary study will be conducted at the individual schools through the gifted resource classes. This will include maintaining a Chesapeake Bay aquarium at each school that houses specimens being investigated. The field trip to Grandview with Chesapeake Experience (a non-profit organization dedicated to providing environmental education on the Chesapeake Bay) will serve as the culmination of the unit.

Due to the numbers of students and schools involved, three trips will need to be taken to accommodate all 95 fourth-grade gifted resource students. Students will spend 4 hours at Grandview beach collecting physical data using appropriate scientific equipment (salinity, turbidity, pH, dissolved oxygen, and temperature), as well as sampling and studying benthic, planktonic, and nektonic organisms. Analysis of data and observation of Bay organisms will ensure that students have a comprehensive understanding of the dynamic nature of the Chesapeake Bay ecosystem. Hampton City Schools' budding scientists would benefit greatly from the opportunity to conduct real-world research in the field. The primary SOLs covered in this unit of instruction will include:

Science

- 4.1 (Scientific Investigation):** The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which: e) predictions and inferences are made, and conclusions are drawn based on data from a variety of sources; and i) data are collected, recorded, analyzed, and displayed using bar and basic line graphs.
- 4.5 (Living Systems):** The student will investigate and understand how plants and animals, including humans, in an ecosystem interact with one another and with the nonliving components in the ecosystem. Key concepts include: a) plant and animal adaptations; b) organization of populations, communities, and ecosystems and how they interrelate; c) flow of energy through food webs; d) habitats and niches; f) influences of human activity on ecosystems.
- 4.9 (Earth Resources):** The student will investigate and understand important Virginia natural resources. Key concepts include: a) watersheds and water resources; and b) animals and plants.

Social Studies

- VS.1 (Skills):** The student will demonstrate skills for historical and geographical analysis and responsible citizenship, including the ability to: c) compare and contrast historical events; e) make connections between past and present; f) sequence events in Virginia history; and j) analyze and interpret maps to explain relationships among landforms, water features, climatic characteristics, and historical events.
- VS.2 (Virginia: Physical Geography):** The student will demonstrate knowledge of the physical geography of Virginia by: a) locating Virginia and its bordering states on maps of the United States; and c) locating and identifying water features important to the early history of Virginia (Atlantic Ocean, Chesapeake Bay, James River, York River, Potomac River, Rappahannock River).
- VS.3 (Colonization and Conflict):** The student will demonstrate knowledge of the first permanent English settlement in America by: b) describing how geography influenced the decision to settle at Jamestown.

Language Arts

- 4.1 (Communication: Speaking, Listening, Media Literacy):** The student will use effective oral communication skills in a variety of settings: b) contribute to group discussions across content areas; d) use evidence to support opinions; f) communicate new ideas to others; and g) demonstrate the ability to collaborate with diverse teams.
- 4.6 (Reading):** The student will read and demonstrate comprehension of nonfiction texts.
- 4.7 (Writing):** The student will write cohesively for a variety of purposes.
- 4.9 (Research):** The student will demonstrate comprehension of information resources to research a topic: b) collect information from multiple resources including online, print, and media; and c) use technology as a tool to organize, evaluate, and communicate information.

2. Provide a comprehensive overview of the project to include, project objectives, explanation of innovative learning experiences, expected student outcomes and assessment practices for the project. Include plans for dissemination of the project after it is completed.

Project Overview

| Project/Curriculum Objectives | Project Activity/Innovative Learning Experiences | Completion Timeline | Expected Student Outcomes/Assessment |
|--|--|----------------------------|---|
| Demonstrate a current and historical understanding of the Chesapeake Bay. | Students utilize newspapers, the internet, interviews with scientists, books, digital media, and other resources to learn about the Chesapeake Bay and its watershed. | September-November | creation of a report, newspaper, play, cartoon book, puppet show, public service announcement, educational game or activity, poem, or narrative that demonstrates an understanding of the Chesapeake Bay ecosystem (student choice) |
| | Students participate in a spring field trip to Grandview Beach with the Chesapeake Experience organization. | April-May | |
| Analyze the geography of the Chesapeake Bay and how the surrounding states/waterways influence the Bay. | Students investigate the geography of the Chesapeake Bay using standard and navigational maps and Google Earth. | September-November | creation of maps/models of the Chesapeake Bay watershed; response to/discussion of/reflection about watershed activity through science journals/blogs |
| | Students participate in watershed lab experiences. | | |
| Analyze and evaluate conflicting uses of the Bay for commerce, recreation, transportation, seafood industry, and habitat for wildlife. | Students participate in a Chesapeake Bay simulation where they assume the roles of stakeholders within the Bay's watershed. | September-November | response to/reflection on simulation; review of student journals/blogs |
| Investigate and understand public policy decisions related to the management and preservation of the Chesapeake Bay. | Students utilize newspapers, the internet, interviews with scientists, books, digital media, and other resources to learn about past and current policies for management of the Bay ecosystem. | September-November | creation of a cost/benefit analysis of one Chesapeake Bay conservation policy |
| Evaluate the geological, physical, and biological interactions that affect the Chesapeake Bay ecosystem. | Students participate in lab experiences (dissolved oxygen, turbidity, salinity, temperature, pH) where water quality data is collected and analyzed. | April-May | write-up of laboratory experiences; analysis and conclusions drawn from data; science journal/blogs; creation of food chains/webs from salt marsh, shallow water, piers/pilings |
| | Students create Bay food chains/webs. | September-November | |
| | Students participate in a spring field trip to Grandview Beach with the Chesapeake Experience organization. | April-May | |
| | Students study adaptations and interactions of organisms through collection and observation in the classroom (aquaria) and in the field. | September-May | |
| Apply concepts learned to make informed decisions and educate others about the Chesapeake Bay. | Students select and complete a culminating product that demonstrates their understanding of the Chesapeake Bay ecosystem. | November-May | video, scrapbook, simulation, prospectus, or activity to teach others about the Bay; organize/conduct/evaluate a community service project or educational fair focused on the Chesapeake Bay |

3. Provide a timeline outlining the preparation and events of the project. **Note that funded projects must be implemented within the school year and a project report must be completed. (See Hampton Education Foundation website for Project Report form)**

Please see matrix above.

Budget:

| Item | Quantity | Cost |
|--|---------------------------|-----------|
| Chesapeake Experience Field Trips to Grandview Beach | 3 @ \$250.00 | \$750.00 |
| aquarium (5 gallon) | 6 @ \$49.95 | \$299.70 |
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| | Total Expenditures | \$1049.70 |
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| | | |

Total Requested: \$1000.00

Betsy McAllister
Applicant Signature

9/18/13
Date

McNeill
Principal Signature

9/18/13
Date

**Submit a typed original and 3 copies to:
Ann Bane, SAC, 1 Franklin Street, Hampton, VA 23669**

Application should be signed and dated by the teacher submitting the Grant Proposal and by the principal of the school. Applications not signed by the principal will not be considered. A committee of Foundation Board Members will review Grant Applications.