

Grade 12 Expedition Syllabus: Our Place by The Sea

Instructor	Content
Jeff Johnson History jjohnson@thegreeneschool.org	Students will examine the failed industrial practices of the past through case studies of the whaling industry and the development of the blackstone river. We take these Rhode Island experiences and compare them with what it means to be sustainable in today's Rhode Island. Students will do this work by examining stakeholders of the past and future as well keeping a critical eye on the 3 pillars of sustainability which define the ability of developments to last.
Safia Diaz English sdiaz@thegreeneschool.org	Students will research and analyze energy sources in collaboration with the Block Island Wind Farm Outreach Partnership to educate the public about the first offshore wind farm and sustainable energy choices.
Nicholas Pasterino Environmental Science npasterino@thegreeneschool.org	Students will investigate the geologic origins of Block Island with respect to Earth's Changing Climate and Glacial Activity
Cindy Tanzer Statistics ctanzer@thegreeneschool.org	Students will to work with authentic data throughout the semester-long class. Students will look at how windmills impact electricity, and how the windmills impact the citizens. The culmination event will be surveying Block Islanders and being able to make conclusions about their opinions.
Michael Engelbrecht Calculus and PreCalculus mengelbrecht@thegreeneschool.org	Students will examine the expected vs actual cost of electricity, in terms of environmental, social, and financial costs. Students will analyze the cost impact of SAMP

Description: Our Place by the Sea

Our Place by the Sea involves a year-long curriculum on sustainable development that examines threats to key marine species through the study of historical patterns and ocean development planning. The expedition introduces students to GIS/GPS science and mapping, engages students in fieldwork visiting current restoration projects and involvement with the agencies that lead them.

Cross-Curricular Case Studies:

- **Exploitation of Natural Resources :** Students explore the world of whaling and the development of the Blackstone River under the lens of the three pillars of sustainability. How did the industry's practices and improvements drive the whale population to near extinction? How did that affect the culture and economies of those people reliant on that industry? How does the development of industry in Rhode Island mirror that of something so different as whaling. What social changes occurred due to exploitation of the social pillar of sustainability.
- **Whaling and Wind Turbine Energy:** Students will evaluate whaling as an energy source through analysis of the novel *In the Heart of the Sea* by Nathaniel Philbrick and various informational texts. Students will research wind turbine energy and the Block Island Wind Farm interacting with involved parties to develop educational and outreach content for the Youth-to-Youth Block Island Wind Farm Outreach Partnership.
- **Geological features of Block Island:** Students will investigate the geologic history of Block Island focusing on identifying evidence of glacial activity to better understand how Earth's climate has changed in the past and how Earth's climate continues to change.

This resource was created by The Greene School and shared through Teaching Our Cities, a project of Common Ground. To learn more, visit <http://www.teachcity.org/schools/greene-school>. If you choose to adopt or adapt this resource, please acknowledge The Greene School and Teaching Our Cities as sources. Teaching Our Cities is funded in part by the U.S. Environmental Protection Agency under assistance agreement number 00A00115 to Common Ground High School. However, it may not necessarily reflect the views of the Agency and no official endorsement should be inferred.

- **Impact study of Block Island residents:** Students will survey local citizens of Block Island to gather data on how the Wind Farm has/will impact citizens. Students will bring back the data to analyze and form conclusions about how citizens view the Wind Farm. Finally, the data will be a part of the final product: it will be viewable, reliable data for the public.

Field Work: All dates tentative until confirmed.

Wednesday-Friday Sept 14-16th - Overnight	Block Island Immersion Experience
Cost: \$20.00	

Learning Targets:

- I can engage in a meaningful wilderness experience(crew) I can examine Block Island’s identity as it relates to it’s place by the sea.

Guiding Questions:

- What can the history of Block Island teach about the challenges and opportunities of sustainable development?

Overview: Using Les Sirkin’s *Block Island Geology: History Processes & Field Excursions* as a guide students will visit Block Island to photodocument evidence of glacial activity on block island. Each photograph should document specific features of the block island landscape that can be traced to glacial activity. Students will access GPS technology through the use of their cell phone to associate each photograph with a specific location on Block Island. This content will be developed during later class meetings for inclusion in the final product (see description below).

Monday Oct. 17th	New Bedford Whaling Museum and Whale Watch
Cost: Cost not to exceed \$5.00*	
Learning Targets: • I can examine the whaling industry as a historical example of failed sustainable practice. Guiding Questions: • What practices led to the decline of the whaling Industry? • How can we not repeat the lessons of the past when it comes unsustainable practice? • What is sustainability and how is it measurable? Overview: Students spend the first two weeks of class developing an intimate knowledge of the development and importance of whaling as an industry in New England (at on point 50% of all money was derived from whale oil in New England). By examining this history students develop an understanding of boom and bust economies, tragedy of the commons and how all sustainability can be measured and quantified utilizing the three pillars of sustainability as a lens. The trips to New Bedford give a comprehensive view of whaling’s history while juxtaposing the beauty of whales in the wild while participating in the whale watch.	

Monday Nov. 21st	Return Trip to Block Island
Cost: Cost not to exceed \$5.00*	

Learning Targets:

- I can examine the role of stakeholders in relation to sustainable development.

Guiding Questions:

- What and who are the stakeholders of deep water wind?
- What does it take to become sustainable in today’s day and age and arrive at consensus?
- How do you take a large scale project from start to finish when faced with opposing viewpoints

Overview: Students will conduct interview with island residents and SAMP stakeholders.They will use this interview material to formulate a documentary movie and lesson plans around those stakeholders.

***Costs for these trips are subsidised by grant funds provided by the Island Foundation**

Final Product Description:

Students will be creating a website that will host a variety of digital content intended for peer/youth audiences including digital story maps, podcasts, and videos about the lessons about sustainable development to be used in public schools and other forums. Students will also create curriculum kits developed for elementary and/or middle schools that would contain lesson plans, Kid-Wind kits (www.kidwind.org) and printed texts, images, and other resources. This work will culminate with an Energy Symposium where students will present to teachers and students from other Rhode Island and regional schools, stakeholders, and the general public. Partners and stakeholders will be invited to display and discuss their own work during a poster session or coffee break in an exhibit space.

What lessons can be learned through an exploration the history of New England coastal communities, through the lens of sustainable development?