

Reading our Rivers

PLACE-BASED EDUCATION UNDER SAIL ON *PISCATAQUA*

High School - Adult

The rivers of the Piscataqua Region are central to the dynamic history of the people and ecosystems of this area. Our advanced history program 'Reading Our Rivers' explores the historical influence of the river on human history and the impact of human history on the land and the river itself. While onboard our traditional replica of a Gundalow, students step back in time to set the sail, steer the boat and become the most recent humans in history to travel down the river by Gundalow.

Our Gundalow serves as a powerful platform to engage students in conversations and hands-on learning about the history of our region. During our 'Reading the River' program, the crew leads the students through a series of discussions and hands-on activities that explore the interactions between humans and nature throughout history by literally reading the landscape through which we sail. During each discussion, we use landmarks and points of interest along the river to peel back the layers of history and see the shoreline from a new perspective. Primary sources and other artifacts are used to deepen student connection to events from the past.

Starting with the last glacial period, we begin by discussing the Native Americans followed by the early arrival of the explorers. From there our story takes us through the early settlement of the region and the subsequent extraction of resources in the forests and rivers. The period of gradual settlement is followed by the rapid expansion of the mill industry. Finally, we end our group discussions by talking about the changing use of energy over time from human power, up through modern computer technology.

In addition to group discussions, students are broken into small groups to discuss the historical importance of the Gundalow and shipbuilding, do a plankton tow and talk about the resources that were extracted from the rivers, and look closely at several maps and charts to gain a geographic sense of the region.

The program is designed to engage students at their level and challenge them to rethink their own assumptions about history and the Piscataqua Region. As with all our programs we work closely with teachers to modify the program to fit the classroom curriculum and meet State frameworks.

Frameworks, Standards and Principles

NH FRAMEWORKS: SOCIAL STUDIES

SS:GE:2: Places and Regions Students will demonstrate an understanding of the physical and human geographic features that define places and regions as well as how culture and experience influence people's perceptions of places and regions.

- SS:GE:12:2.2: Investigate how relationships between humans and the physical environment lead to the formation of ‘place,’
- SS:GE:12:2.4: Utilize regions to analyze geographic issues

SS:GE:3: Physical Systems: Students will demonstrate an understanding of the physical processes that shape the patterns of Earth's surface and the characteristics and spatial distribution of ecosystems.

- SS:GE:12:3.4: Compare the carrying capacity of different ecosystems in relation to land use
- SS:GE:12:3.5: Recognize the importance of ecosystems in people's understanding of environmental issues

SS:GE:4: Human Systems: Students will demonstrate an understanding of human migration; the complexity of cultural mosaics; economic interdependence; human settlement patterns; and the forces of cooperation and conflict among peoples.

- SS:GE:12:4.2: Distinguish how culture traits shape the character of a region

SS:GE:5: Environment and Society: Students will demonstrate an understanding of the connections and consequences of the interactions between Earth's physical and human systems.

- SS:GE:12:5.1: Appraise the significance of the global impact of human modification of the physical environment
- SS:GE:12:5.4: Examine how the spatial distribution of resources affects patterns of human settlement
- SS:GE:12:5.5: Explore how the use and development of natural resources use change over time, SS:GE:12:5.6: Evaluate the management and use of renewable, non-renewable, flow and potential resources, e

SS:HI:4: Economic Systems & Technology: Students will demonstrate an understanding of the changing forms of production, distribution and consumption of goods and services over time.

- SS:HI:12:4.2: Evaluate the impact of major developments and changes in American economic productivity
- SS:HI:12:4.3: Explain how the development of technology has both simplified and complicated work

SS:WH:4: Economic Systems & Technology: Students will demonstrate their understanding of the changing forms of production, distribution and consumption of goods and services over time.

- SS:WH:12:4.2: Analyze the impact of the Industrial Revolution around the world

NEXT GENERATION SCIENCE STANDARDS

- **HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.**

ESTUARY LITERACY

- **Principle 5:** Humans, even those living far from the coast, rely on goods and services supplied by estuaries
- **Principle 6:** Human activities can impact estuaries by degrading water quality or altering habitats; therefore, we are responsible for making decisions to protect and maintain the health of estuaries.

OCEAN LITERACY

- Principle 5: The ocean supports a great diversity of life and ecosystems.
- Principle 6: The ocean and humans are inextricably interconnected.