New Bedford’s GNBVT, Cuttyhunk STEAM Wind Energy collaborative unveils innovative educational initiative

“Greater New Bedford Regional Vocational Technical High School and Cuttyhunk STEAM (Science, Technology, Engineering, Arts, and Mathematics) Academy proudly announced the launch of a groundbreaking collaborative initiative focused on wind energy education on the island of Cuttyhunk. This pioneering program aimed to engage students in hands-on learning experiences to explore renewable energy sources and their potential impact on the local environment.

On Friday, March 22, 2024, delayed one day ironically due to gale force winds, 37 Engineering and 6 Media Technology students from GNB Voc-Tech embarked on a comprehensive educational journey throughout various locations on Cuttyhunk, delving into the intricate world of wind energy. The day commenced with an introduction to the diverse forms and sources of energy in Massachusetts, shedding light on the state’s capacity and usage of electrical energy.

One of the highlights of the day was an opportunity for students to utilize binoculars to observe an offshore wind farm, gaining valuable insights into the practical application of wind energy technology. Following this, students participated in a mini-lesson on cardinal directions and wind direction, essential knowledge for understanding the dynamics of wind energy.

Greater New Bedford Regional Vocational Technical High School photo.

The exploration continued as students investigated multiple potential wind turbine sites across different island locations, including public and private properties: Lookout Point, BBC Trail, Berry, Wigwam Hill, DiMare, BBC Bayberry Hill Trail, Hart, Bunker Hill, Solar Farm Area, and Spaulding properties. At each site, students analyzed various factors such as longitude and latitude, elevation, wind speed and direction, as well as potential natural or physical obstacles above and below ground.

Moreover, students engaged in the study of local flora and fauna to assess potential impacts on ecosystems and evaluate the topography and geology of the landscape. These hands-on activities culminated in a data-sharing session where students compared site data and shared their findings. Furthermore, students delved deeper into the mechanics of wind energy, exploring prevailing winds, and directionality.

Returning to the GNB Voc-Tech instructional lab, students will explore the physics and engineering side of wind turbines with the construction of tabletop wind turbines, and will also install a backyard wind turbine on the school’s rooftop to extend the real-world application study. Analyzing the site location data students collected on Cuttyhunk will lead to further field studies during an overnight program back on Cuttyhunk Island later this spring.

The partnership between GNB Voc-Tech and Cuttyhunk STEAM Academy marked a substantial stride in instilling sustainability and environmental consciousness in young minds. Media Technology students captured the event through photography and videography, showcasing the collaboration between engineering students and Cuttyhunk STEAM. By cultivating knowledge of renewable energy technologies, students were equipped to emerge as tomorrow's champions in combating climate change.

Funds for this project were made available through a grant from the SouthCoast Wind Fund via the SouthCoast Community Foundation."-Greater New Bedford Regional Vocational Technical High School.

Greater New Bedford Regional Vocational Technical High School photo.