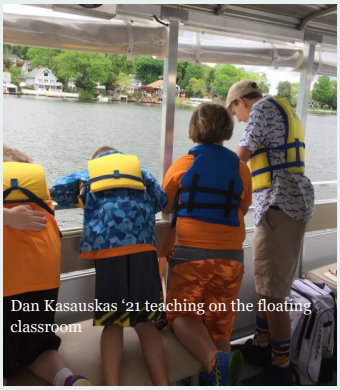
Jefferson Township Public Schools
Science Department

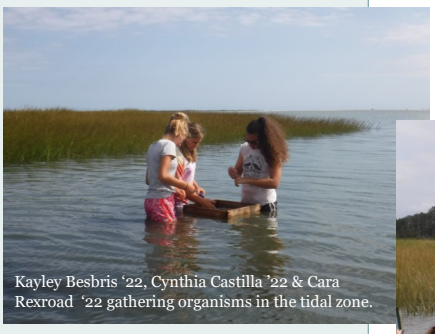
PERFECT PARTNER

The **Lake Hopatcong Foundation** introduced their floating classroom, *The Study Hull,* to the waters of Lake Hopatcong in the Spring 2018.

Students from the Academy for Environmental Science got to experience the floating classroom while helping out with the foundations fourth grade field trips. We look forward to helping again in the Spring of 2019!



Dan Kasauskas '21 teaching on the floating classroom

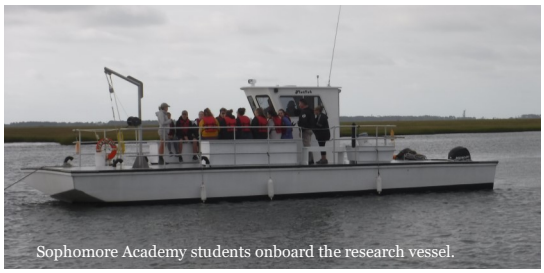


Kayley Besbris '22, Cynthia Castilla '22 & Cara Rexroad '22 gathering organisms in the tidal zone.

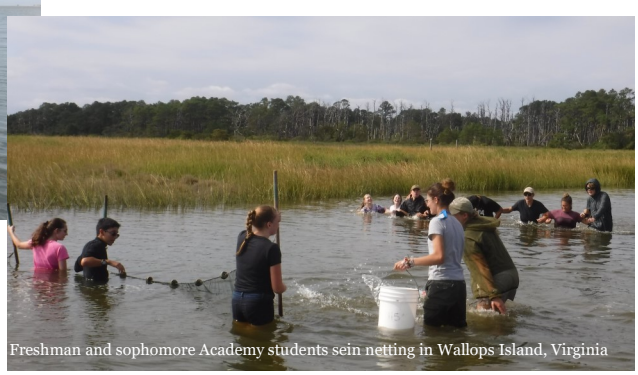
ON THE ROAD WITH THE ACADEMY FOR ENVIRONMENTAL SCIENCE

Destination: Chincoteague Bay Field Station, Wallops Island Virginia

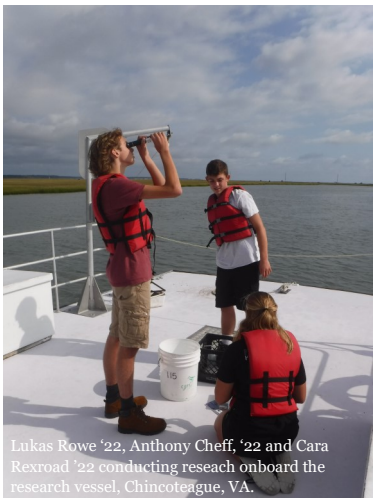
For three days and two nights freshman and sophomore Environmental Science Academy students participated in coastal ecological research at the Chincoteague Bay Field Station in Virginia. The trip provided the students with multi-disciplinary, educational and research opportunities that highlighted the rich natural, cultural, and economic resources of the mid-Atlantic Coast. Students participated in field-based and hands-on learning in areas of coastal ecology, marine invertebrate biology and even participated in a citizen science project. Students conducted chemical and biological assessments while onboard the field station's research vessel, netted organisms in the marsh and seined for organisms in the tidal zone. The students collected, cared for and worked with the organism in the lab each evening, truly gaining hands-on experience in the field of marine research.



Sophomore Academy students onboard the research vessel.



Freshman and sophomore Academy students sein netting in Wallops Island, Virginia

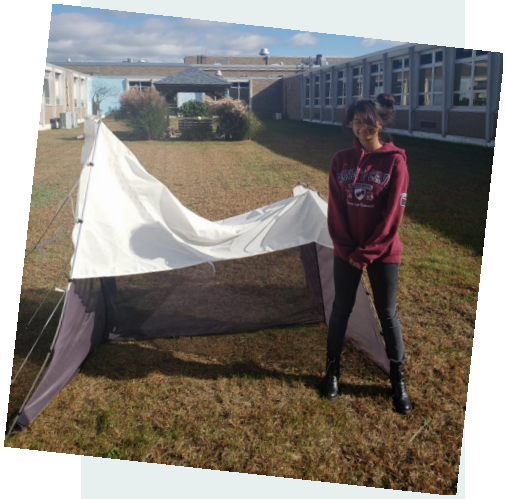


Lukas Rowe '22, Anthony Cheff, '22 and Cara Rexroad '22 conducting reseach onboard the research vessel, Chincoteague, VA.

STUDENT SPOLIGHT

WHAT 'S BUGGING YOU?

Junior, **Alysza Sookraj** has been trying to find out! Her research is based on a study conducted by Caspar Hallmann from Radboud University, The Netherlands, which indicated the biomass of flying insects has decreased by more than 75% in the areas they have been studying for close to the last 30 years. Alysza is using the same insect trap used in Hallmann's study, known as a Malaise insect trap, to gather baseline data on the flying insect mass found on the school's campus. She will be sharing and collaborating with the **New Jersey School on Conservation**, one of our Academy partners, who is also conducting the study to compare results. Alysza has been collecting results since last spring and tries to identify as many of the insects as possible as well as keep track of the biomass. She looks forward to training a younger Academy participant to keep the study going after she graduates next year.



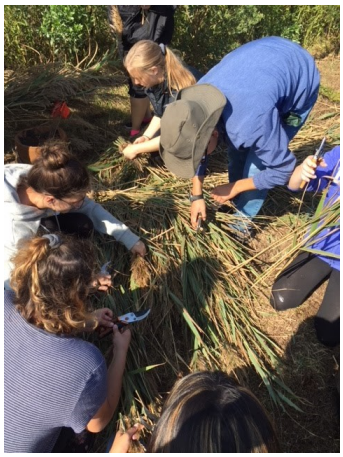
Alysza Sookraj '20 with her Malaise Insect trap.

""In every walk with nature one receives far more than he seeks." ~Muir

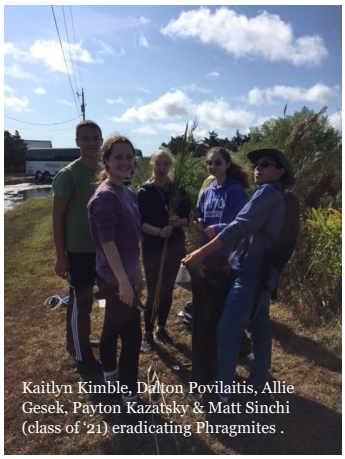
CITIZEN SCIENCE

INVASE ERASE

While at the Chincoteague Bay Field Station in September students participated in Phragmites (*Phragmites australis)* extraction project.



The students first learned about the biology of this invasive plants: Invasive non-native Phragmites is a perennial wetland plant that has quickly spread through marshes and wetland areas, robbing the fish, plants and wildlife of nutrients and space. It blocks access to the water for swimming, fishing and other recreation endeavors; and can even be a fire hazard.



Kaitlyn Kimble, Dalton Povilaitis, Allie Gesek, Payton Kazatsky & Matt Sinchi (class of '21) eradicating Phragmites .

It can grow to be over 15 feet tall and crowds out other plants, creating dense areas of the plant. It is able to adjust its growing based on environmental conditions and can even survive stagnant, oxygen poor or salty conditions. One way 'phrag' can spread is through windblown seeds so students carefully cut the seed heads and bundled the stalks to be burned.

WORKING FOR OUR ENVIRONMENT

Lake Stewards:

Tyler Hontz, **Helena Kateris** and **Alysza Sookraj** (Class of '20) have worked the past two summers as Lake Stewards on Lake Hopatcong. Their job is to survey boaters about Invasive Aquatic species and educate them on how to best protect the lake from these invaders!