

Hampton City Schools Partners with TOGA

Ezeriah, a fourth grader at Kilgore Gifted Center said, “Oysters make reefs. They filter the Bay. But now there aren’t a lot of them.” His classmate Zoey excitedly reported that “I found three baby blue crabs and one worm!” Ezeriah and Zoey are two of many Hampton City School students who are currently benefiting from a collaboration with the Tidewater Oyster Gardeners Association.

Hampton City Schools has had a history of oyster restoration. In 2015, the Science Department was awarded a NOAA Bay Watershed Education and Training (BWET) grant that enabled us to begin our oyster restoration efforts. We trained our first cohort of teachers and provided them with Taylor floats and spat. Between 2015 and 2019 when the grant funding ended, HCS teachers and their students placed approximately 96,000 oysters on local reefs – one in the Hampton River working with Claire Neubert and the Elizabeth Lake Neighborhood Association and one on a reef our Albert W. Patrick Elementary (formerly Booker Elementary) 5th graders established in the Back River with the help of CBF and Joint Base Langley-Eustis.

After grant funding ended, COVID further handicapped efforts to continue. Fast forward to the summer of 2021 when I contacted TOGA and began conversations with Vic Spain. I reached out to all teachers in our district who had previously raised oysters and found 3 high school, 4 middle school, and 2 elementary school educators who were eager to continue. On Saturday, September 4th, teachers met Vic Spain in the parking lot of Sandy Bottom Nature Park to pick up replacement equipment (which included 7 mesh bags and 5 tidal tumblers) and 4,000 spat, courtesy of very generous donations by TOGA. Teachers listened intently to Vic’s instructions and soaked up his tips garnered from years of experience. Teachers also received habitat cubes with spat on shell from CBF. By noon, all spat were safely settled in their new homes.





In addition to us doing our part to replenish the number of oysters in the Bay and improve water quality, our work with oysters helps our educators address required concepts outlined in the 2018 Science Standards of Learning (SOLs) in a way that is both real-world and relevant. It also meets the 2014 Chesapeake Bay Watershed Agreement's educational mandate that every Virginia student have a minimum of one Meaningful Watershed Educational Experience (MWEE) in elementary, middle, and high school.



Teachers bring their oysters into the classroom on a regular basis (they aim for 1 time per month). Students are introduced to both the economic and ecological importance of Virginia's native shellfish. The oysters are used in several different lessons that help students better understand the nature of science. For example, teachers have students participate in an

activity that illustrates the importance of random sampling and how non-random sampling can lead to the collection of faulty data. Students practice their measurement skills and apply mathematics in calculating the mean, median and mode with respect to oyster size. This data is recorded in science journals each time the oysters are measured and is plotted on a line graph to show growth of the oysters over time. Because the oysters are placed in various locations, teachers can compare the growth of their oysters to others growing in a different location.



Inevitably, students discover other organisms coexisting with their oysters, which leads to the discussion of oyster reefs as habitat. Students use a dichotomous key to identify the organisms and learn how each is adapted for survival on the oyster reef. Discussion of oysters as natural filters serves as a springboard to discuss water quality. Students learn about such parameters as dissolved oxygen, pH, turbidity, salinity, nitrates, and phosphates and take measurements of each. Teachers use the EnviroScape model to illustrate how our everyday actions impact sediment, toxin, and nutrient pollution in our waterways.



When we in Hampton City Schools count our blessings this Thanksgiving, many of us will include TOGA for its generosity that has made this valuable experience available to our teachers and students.