On February 4th and 5th, educator Jaclyn Miller, from the Chesapeake Bay National Estuarine Research Reserve in VA, visited all of Mrs. Buckley’s 7th grade science classes to instruct the students about the Chesapeake Bay watershed. Students spent time learning about the human impacts on the Chesapeake Bay watershed and how climate change could affect organisms living in the bay. Students participated in a variety of demonstrations and hands-on activities to better understand the concepts taught.

Students constructed paper watersheds to see how run off reacts during a rain event. A watershed is an area of land where all of the water drains to a common body of water. Students were able to explain how the marker on the paper could represent fertilizers and pollutants that we as humans add to the watershed, which consequently can end up in the Chesapeake Bay.

A run-off race was used to demonstrate how run-off behaves throughout different terrains of the watershed. Students compared a permeable surface to an impermeable surface. Students observed that the grassy, healthy habitat was able to absorb water and trap sediment, where as the wooden
board, representative of roadways, sidewalks, etc, did not trap sediment or absorb any water. As a result, the water in the tray was dirtier from the runoff of the wooden board. Students then studied the Chesapeake Bay Report Card from 2012. They brainstormed what factors could be causing the grades, and in what ways humans could improve the scores on the report card. While we do have negative effects on the bay, we can all make changes to have a more positive impact on the Chesapeake Bay.

To conclude the lesson, students played a game to see how fish may be affected by Climate Change. Climate Change could lead to warmer sea temperatures, sea level rise, and ocean acidification. During the game, as sea temperature rose, fish had to migrate north or south to adapt to the changing climate. Students also learned how climate change could affect organisms with shells made of calcium carbonate. To demonstrate how an acid reacts with this material students dropped a piece of chalk into vinegar.
We would like to thank Mrs. Buckley’s 7th grade students from Queens Lake Middle School for their participation in the Chesapeake Studies program! All of the students completed the program for the year which included two classroom visits from the Chesapeake Bay National Estuarine Research Reserve educators and a field experience trip to the Virginia Institute of Marine Science! Thank you students and staff members of Queens Lake for all of your participation and for your positive impact on the Chesapeake Bay! We would also like to thank you for “Tweeting” what you have learned throughout the year! A story has been made to share your tweets!

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