



Mini Environmental Education

River by river and stream by stream, Pre-K-12 environmental education projects are helping to raise public awareness about the health of streams, rivers, and the Chesapeake and Coastal Bays and about the steps that can be taken to restore and protect them. Through this program, the Trust seeks to increase student awareness and involvement in the restoration and protection of the Bay its local streams and rivers through increasing student access to programs that provide meaningful outdoor learning experiences.



Gilpin Manor Student Stewards of the Watershed

Fair Hill Nature Center worked with Gilpin Manor Elementary 5th graders to complete 2 Meaningful Watershed Educational Experiences (6 hours total) over two visits; one field trip to the Nature Center and one visit at their school. In the spring of 2016, FHNC and the students completed the installation of rain barrels on campus.

In the fall of 2015, Gilpin Manor 5th graders came to visit the Fair Hill Nature Center and completed a Watershed Analysis on the Big Elk Creek. The Big Elk Creek is the same river that runs through their schoolyard and is the source of drinking water for most of Elkton's residences. In small groups, students collected physical, chemical and biological data. This data was uploaded to National Geographic's FieldScope. This was a 3.5 hour Outdoor Field Experience.

All 3 Gilpin Manor 5th grade teachers completed Professional Development related to MWEE's and water testing. This was a 4 hour PD session.

In the early spring of 2016, a representative from the Friends of the Bohemia Watershed Association came to speak with all of the Gilpin Manor 5th graders about water quality, drinking water, waste water and rain barrels. This was a 30 minute presentation for each class.

In the spring of 2016, 2 Environmental Educators from the FHNC, visited Gilpin Manor 5th graders to complete a Schoolyard Assessment, Impervious Surface exercise and chemical water testing of the Big Elk Creek water in Gilpin Manor's schoolyard. This was a 2 hour Outdoor Field Experience.

In the late spring of 2016, 2 Environmental Educators from FHNC and a representative from the Friends of the Bohemia painted 6 rain barrels with all of the 5th graders. These rain barrels were later installed around Gilpin Manor's portable classrooms. This was a 5 hour Action Project.



75 students participated

6 rain barrels installed

10 workshops held

75 workshop attendees

2 publications produced



Essential Elements

Issue Definition: *What can I do to make the drinking water from the Big Elk Creek healthier for my school, my family and myself?* This question helped students make the connection that their drinking water doesn't just come from the faucet, but that it comes from their environment.

Outdoor Field Experiences: MWEE 1: FHNC Water Quality Assessment (4 hours): Physical (water depth, temperature, turbidity), chemical (pH, conductivity, dissolved oxygen) and biological (macro and micro-invertebrates). The data was entered into Fieldscope where it can be accessed by anyone.

MWEE 2: Gilpin Manor Water Quality Assessment & Project Discussion (2 hours): The same water quality data was collected from Gilpin Manor's campus. The data was also entered into FieldScope. FHNC and GM teachers led a classroom discussion about the differences in data from the 2 locations on the Big Elk Creek. Students described what they found, and developed theories for the reasons behind the results of the data.

Student-led Action Projects: Students decided to paint and install rain barrels on campus in order to control the amount of runoff into Big Elk Creek. This allows students to find a greater sense of ownership and pride over a project that they planned themselves, and can showcase to their community. By thoroughly facilitating the students' ability to grasp the concepts through repeat exposure, students gained a deeper understanding of watershed quality, and recognized that the river provides *their* drinking water and that *they* can help protect it.

Synthesis & Conclusions: As a group the 5th grade students developed a presentable display for their work, which was exhibited at the Gilpin Manor Earth Day Event in 2016. This display was available to the community and the students of Gilpin Manor. Some of the students were offered an opportunity to present about this project. Finally, students shared lessons gained from the MWEEs, their increase in environmental awareness, and scientific practices and procedures learned.

CBT Funds Awarded:	\$4,997
FHNC:	\$3,977
Total:	\$8,974

Project Partners:

