Engaging High School Community in Rain Garden Experience

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Community Partner: Lalena McMillian

1) Bloomfield High School ; 2) Donald F. Harris Sr. Agriscience & Technology Center

Purpose of Rain Gardens
A rain garden is a permanent design to hold and soak in rain water runoff that flows from impervious surfaces like rooftops, driveways, and patios.

Planning & Preparing the Rain Garden
- Meetings were held with the BHS principal to organize and discuss the location and cost of the rain garden
- Location was chosen based on added aesthetic to the school, proximity to a storm drain, and impervious surfaces that surround the BHS courtyard space
- UConn’s NEMO Rain Garden app was used to calculate the garden’s size
- Equipment and materials used were low maintenance plants, mulch, shovels, rope, rocks, gravel, barrel, mattock, and a rototiller
- Visited One Site Landscaping Supply to obtain plants

Why are Rain Gardens Beneficial?
Before constructing our rain garden, we were only aware of rainwater management impacts. Other benefits include:
1. Absorption of stormwater runoff underground, diverting it from nearby streams or rivers due to impervious surfaces.
2. Replenishment of aquifers as well due to their impact in the water cycle.

Involving People in the Rain Garden Experience
- Between Oct and Nov 2018, Six Classmates learned about the importance of rain gardens and worked together to install the garden
- Dirt in the area had to be removed and a rototiller and mattock were used to break up soil
- Native trees and plants were planted, and mulch was put down to keep in moisture and prevent weeds
- Stone work installed was needed for water percolation & drainage

Outcome
The outcome of this project was a completed rain garden that added an educational component and an environmental impact for the Bloomfield community.
- Involved students were educated on the water cycle and rain gardens
- Learned about native and low maintenance plants at One Site Landscaping Supply company
- Soil compaction was managed and rocks were broken
- Completed rain garden adds beauty to BHS’s courtyard aesthetic

Conclusions
The impact a rain garden can bring to a community is powerful, and managing storm water runoff in a more environmentally friendly way is key to resolving some water cycle issues. More policies should be created in municipalities to install rain gardens. These efforts could help limit pollution into streams due to storm water runoff from impervious surfaces.

Rain gardens provide ecosystem services while adding aesthetically to nature

(Photos courtesy of: Hillsborough County
https://www.hillsboroughcounty.org/46A0AF7AEB84946-VA54946
http://www.prairietownship.org/269/Rain
https://www.hillsboroughcounty.org/46A0AF7AEB84946-VA54946

References
1) UConn Rain Garden App

Acknowledgements
I would like to thank the students that were involved in construction of rain garden, the Bloomfield Board of Education and Bloomfield Conservation Energy and Environment Committee that helped in funding, One Site Landscaping Company, principal Dan Moleit, Anne Burrows, and of course community partner and teacher Lalena McMillian.

Our Goal
The goal of this project is to investigate the affects of rain gardens, and learn about the best way to construct one on our school campus. This project will leave an environmental and educational impact at Bloomfield High School (BHS) for years to come.

List of Native Plants Used in the BHS Rain Garden

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
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</thead>
<tbody>
<tr>
<td>Cornus Sericea</td>
<td>Red Oster Dogwood</td>
</tr>
<tr>
<td>Rhusbeakia Hirta</td>
<td>Blacked-eyed Susan</td>
</tr>
<tr>
<td>Symphytichromum</td>
<td>American Asters</td>
</tr>
<tr>
<td>Hosta Spp.</td>
<td>Plantain Lilies</td>
</tr>
<tr>
<td>Hemerocallis Spp.</td>
<td>Daylily</td>
</tr>
</tbody>
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Finished Rain Garden!