2014

Before the Water Runs Out- Educating Children

Zachary Estrella  
*Worcester Polytechnic Institute*

Evelyn Grainger  
*Worcester Polytechnic Institute*

Lenna Quackenbush  
*Worcester Polytechnic Institute*

Peter John Smith  
*Worcester Polytechnic Institute*

Follow this and additional works at: [http://digitalcommons.wpi.edu/gps-posters](http://digitalcommons.wpi.edu/gps-posters)

Part of the Architecture Commons, Arts and Humanities Commons, Business Commons, Education Commons, Engineering Commons, Life Sciences Commons, Medicine and Health Sciences Commons, and the Social and Behavioral Sciences Commons

Recommended Citation
Estrella, Zachary; Grainger, Evelyn; Quackenbush, Lenna; and Smith, Peter John, "Before the Water Runs Out- Educating Children" (2014). Great Problems Seminar Posters (All Posters, All Years). 296.  
[http://digitalcommons.wpi.edu/gps-posters/296](http://digitalcommons.wpi.edu/gps-posters/296)

This Text is brought to you for free and open access by the Great Problems Seminar at DigitalCommons@WPI. It has been accepted for inclusion in Great Problems Seminar Posters (All Posters, All Years) by an authorized administrator of DigitalCommons@WPI. For more information, please contact akgold@wpi.edu.
# Before the Water Runs Out: Educating Children

**Zachary Estrella (AE), Evelyn Grainger (CE)**
**Lenna Quackenbush (CHE) Peter John Smith (ECE/PH)**

**Advisors:** Professor Derren Rosbach (CEE/SSPS), Professor Elisabeth Stoddard (SSPS)

## Project Goals
- Develop a curriculum to educate students on water sustainability and engineering solutions
- Develop method for evaluating effectiveness of curriculum
- Fundraise for a rainwater harvesting system at Tatnuck Magnet School

## Accomplishments

- Applied for and received a $4,000 grant to build rainwater harvesting system
- Wrote seven lesson plans and taught three of them to sixth grade classes
- Assessed students’ growth using pre and post evaluation surveys
- Created a website to share our lesson plans. Visit us using this QR Code or at: users.wpi.edu/~psmith2

## Future Goals
- Implement last four lessons at Tatnuck Magnet School
- Collaborate with Engineers Without Borders-USA WPI to build a rainwater harvesting system
- Improve garden and build rainwater harvesting system

## Water Scarcity

By 2025, 40% of the world’s population will be living with water scarcity. Today’s children will be responsible for solving the water problems of the future.

![World Map showing water scarcity](http://www.denvillerotary.org/wp-content/uploads/2014/04/RactTransparent.png)

## Can you do a better job conserving water?

<table>
<thead>
<tr>
<th>Student Response in %</th>
<th>Pre Evaluation</th>
<th>Post Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>25</td>
<td>78</td>
</tr>
<tr>
<td>No</td>
<td>75</td>
<td>22</td>
</tr>
</tbody>
</table>

## References