



**BE THE CHANGE**



**WEST WARWICK HIGH  
SCHOOL**



# WEST WARWICK HIGH SCHOOL: BE THE CHANGE

SCHOOL NAME **WEST WARWICK HIGH SCHOOL**

PROJECT TITLE **BE THE CHANGE WEST WARWICK!**

Advisor: **Mr. Mark Grover**



- ▶ **When you find where you belong you have the ability to learn more and accomplish bigger things. We are three high school students in West Warwick, Rhode Island that know about problems that face us and our community. We put ourselves in the best possible position to do something about what matters most - the planet and its future. Being part of NEED gives us the opportunity to feel like we matter and can make a difference in the world. The fact that we are contributing to make the world a better place is what keeps us striving toward an undeniably healthy and green future. Before this year, NEED was only an eighth grade club in our district. All three of us felt as though we had something great going that needed to become even better, which lead us to start our own high school club. We also began advising the middle school club, which we were previously a part of, and did projects such as a Trash to Treasure night, recycling electronics, and getting recycling bins in our school, to name a few. The three of us spend a majority of our time on multiple projects that collectively add up to over 1,800 hours.**

# ADVISING MIDDLE SCHOOL NEED CLUB

▶ We decided that our focus during group meetings should be the younger groups of kids. We spend countless hours educating our younger students because we know that they are our future, and we believe that if we can influence a community, then we can one day influence the entire world too. This extensive project was one that we are most proud of. We dedicated our own time educating the younger students on NEED, and advising their club. We felt that this would not only benefit us, but the future of our community as well, because they are our future, and they can truly impact the the world in a way that nobody else can, as well as allowing us to grow.

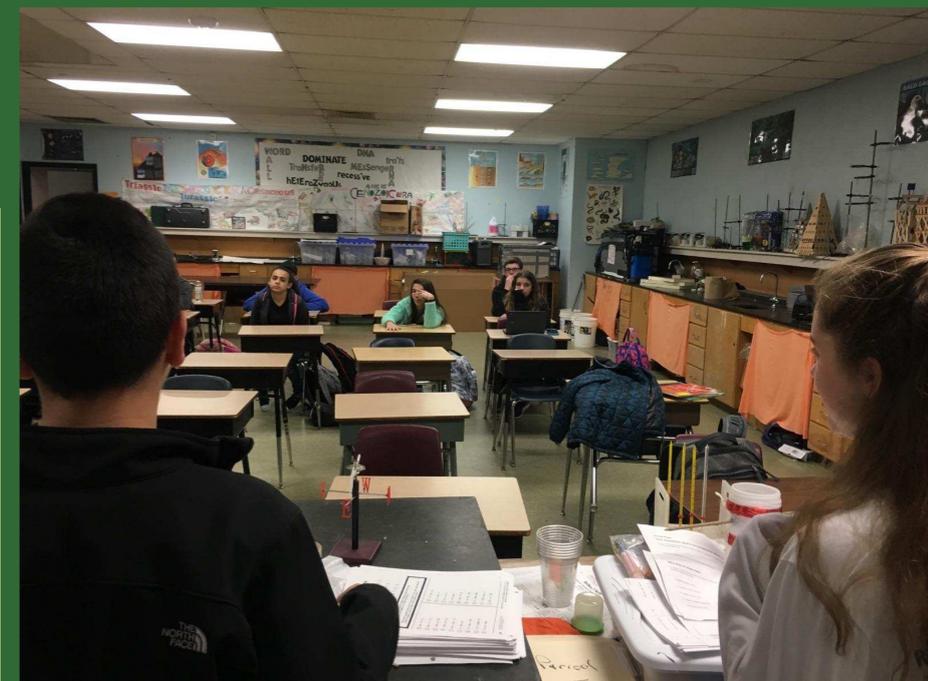
**GOAL #1:** Advise the middle level NEED Club, allowing us to teach them about successes we have had, ones we want to have, and failures we want to become something great.

**Tasks:** Advising is truly a sensation which allows us to see things come together piece by piece. Activities that include preparing miniature, simplistic lessons on understanding energy and the environment, overseeing their progress towards projects we have completed in the past such as creating a thriving trout ecosystem.

**Resources:** Educational websites, experience and evaluation, and [NEED.org](http://NEED.org) educational tools.

**Student Leadership:** From the very start to now, the advising has been entirely student led. Each of us put in countless hours of our own time to push our students in the right direction.

**Evaluation:** Overall, we feel as though the influence we put toward the middle level club was more than we had hoped for. Although, there are some improvements intended to be made going forward. Now that we experienced what went right and what went wrong we plan on generating a stronger connection with the younger students, and putting a stronger focus on ensuring that they understand the material in terms of the science behind the projects. They are our future and we believe strongly in influencing them positively.



# IMPLEMENTING RECYCLING BINS INTO WEST WARWICK HIGH SCHOOL

## **GOAL #1: Increase the amount of recycling executed around the school.**

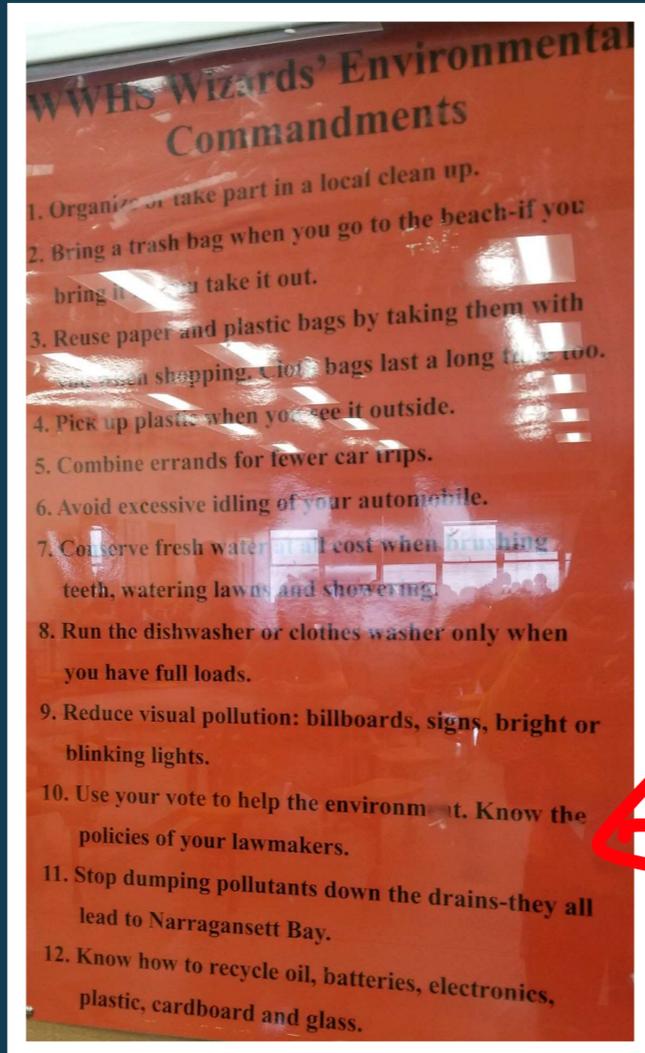
**Tasks:** Gather data to determine the level of the recycling which students partake in normally. We then contacted our local Resource Center (Rhode Island Resource Recovery Corporation) to get full-size recycling bins for our school lunches, where we felt recycling would be most beneficial. Before we were able to attack the procedure we had to get approval from the administration. Therefore, we composed a formal letter addressing the problem, and our solution. Consequently, it was approved, which put our plan in gear. To incorporate different forms of recycling, we also included a plastic bag recycling center as part of our implementation where students, and faculty can take their unused plastic bags where they will be properly recycled.

**Resources:** Rhode Island Resource and Recovery Center website gave us statistics and information about recycling facts, to share around the community. We were able to gather the disposal materials for our implementations by interacting with employees at the RIRCC. Research from a variety of sites on the web was also used to gather facts to engage and interest outsiders.

**Student Leadership:** As students, we acquired the bins by ourselves and implemented them into our lunches seamlessly. Contacting suppliers of the materials needed such as the plastic bag bin was an idea directly from a student leader, shared with the whole group, and was acquired by students contacting them. Also, we are responsible for making sure that the recycling implementations are used efficiently and that potential users are aware that they are there and how to use them the right way.

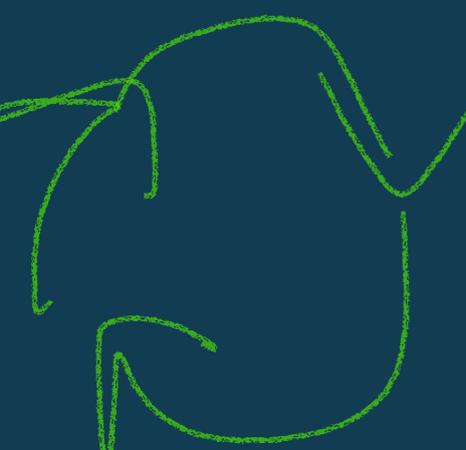
**Evaluation:** Observation gathered from the brief amount of time our recycling improvements have been running have shown things that must be changed in the future. A major change we were in the process of making is moving the location of the recycling bins in the cafeteria from the very front to the middle to make it the most convenient, producing the most recyclable items, instead of the trash cans.

# PHOTOS



BIN Project Proposal to Principle

ONE OF THE CAFETERIA BINS



WW COMMANDMENTS

## West Warwick High School N.E.D

ATTN: Mr. Philip Solomon  
NEED Recycling Proposal  
Advisor: Mr. Mark Grover

Mr. Solomon,

The WWHS NEED Program proposes that recycling bins be introduced into the cafeteria during all four lunches. This would provide students the opportunity to recycle their recyclable items, whilst also helping save our environment. The students have already become accustomed to utilizing recycling bins in their classroom, so introducing them in the cafeteria will be a welcome change that will definitely be utilized. About 80% of school lunch waste items are recyclable. Hundreds of recyclable items are thrown away each day! Recycling is on average 36% less expensive than trash collection. This results in exorbitant amounts of money being lost. The money that is saved can be put directly back into the school. With all statistics aside, school is where lifelong habits can begin. Recycling is the future; without implementing strong habits during school the future of the environment is jeopardized. This program being enforced would start the beginning of an easy step to make a big difference in our community.

The WWHS NEED participants competed in the 2017 National Youth Awards Conference. This was a nationwide conference that met in Washington D.C and included representatives from each state in the country. The participants spent months preparing a presentation on how to conserve energy. This project crowned them #1 in Rhode Island and runner-up in the entire United States. We are determined to further improve and continue where we left off.

It would be greatly appreciated if you approved the matter of recycling during lunch, as it would be greatly beneficial to our school and community as a whole.

Regards,  
Tvler Tavares and Meehan Janicki

# COMMUNITY COLLECTION AND RECYCLING OF ELECTRONICS

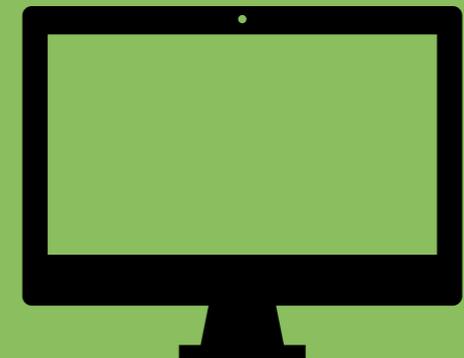
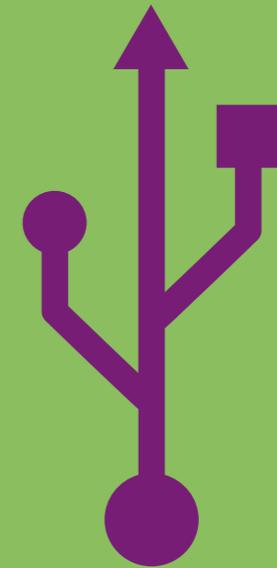
► **Goal:** To collect as many discarded electronics around our community as possible to be put to a good use.

**Tasks:** Create a procedure that allows residents of the community to recycle their electronics that do not work or are no longer being used so that they can later be sold on the global market as individual assemblies.

► **Resources:** Resources for this project include research done by internet sources identifying the process of recycling electronics, communication with town leaders to organize this event, and our advisor giving us contacts to those that can help in making the event successful.

**Student Leadership:** This event has been and will continue to be student lead. While discussing plans for potential projects this idea was derived. We all agreed that it was something that will be extremely beneficial in many areas, and we worked hard to get it to the point as an event planned for June 9th in our town.

**Evaluation:** We have begun to spread the word about how we as a community can benefit from recycling electronics. The collection is looking out to be a major event in our town that we look forward to. Next time we do this, we would like to get a bin in the school, and in other places around the community to increase the amount of recyclable electronics relieved.



# COMMUNITY COLLECTION AND RECYCLING OF PLASTIC BAGS

- ▶ **Goal:** Establish a way for students and faculty to conveniently recycle their plastic bags that otherwise may end up in landfills, waterways and oceans causing catastrophic problems, such as water contamination, and ecosystem disruption.

**Tasks:** Gather resources that can allow us to implement the plan including the materials and exporting procedure. From there we were able to get a plastic bag collection bin from the great people at the Rhode Island Resource and Recovery Center. To make the best use of the bin a location was strategically chosen. Also, a video announcement was made to the entire school via our youtube channel. The interest was exponential, and in a short amount of time the bin was full and we have the responsibility of emptying the bin by bringing them to Lowes, where they have direct collection.

- ▶ **Evaluation:** Being rookies and the first in our district to start a plastic bag recycling system, it was a success. With next year approaching, we plan on adding a bin to all schools and town buildings. In addition, entering the Trex Decking competition to collect the most bags in the nation.

**Student Leadership:** We were the ones that came up with the idea to do this project. Also, contacting to get the bin, setting the bin up, and disposing of the contents are all responsibilities we have.

- ▶ **Resources:** The Rhode Island Resource and Recovery Center generously donated a plastic bag recycling collection bin. From online sites we were educated on the terrible effects plastic bags can have when they are not disposed of properly.





# RHODE ISLAND RESOURCE AND RECOVERY CENTER FIELD TRIP



**Goal:** To be educated on the matter of what goes into our landfills and how we can help positively affect our environment make.



► **Tasks:** Gather data to determine the level of the recycling which students partake in normally. We then contacted our local Resource Center (Rhode Island Resource Recovery Corporation) to get full-size recycling bins for our school lunches, where we felt recycling would be most beneficial. Before we were able to attack the procedure we had to get approval from the administration. Therefore, we composed a formal letter addressing the problem, and our solution. Consequently, it was approved, which put our plan in gear. To incorporate different forms of recycling, we also included a plastic bag recycling center as part of our implementation where students, and faculty can take their unused plastic bags where they will be properly recycled.



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► **Student Leadership:** As students, we acquired the bins by ourselves and implemented them into our lunches seamlessly. Contacting suppliers of the materials needed such as the plastic bag bin was an idea directly from a student leader, shared with the whole group, and was acquired by students contacting them. Also, we are responsible for making sure that the recycling implementations are used efficiently and that potential users are aware that they are there and how to use them the right way.



**Evaluation:** Observation gathered from the brief amount of time our recycling improvements have been running have shown things that must be changed in the future. A major change we were in the process of making is moving the location of the recycling bins in the cafeteria from the very front to the middle to make it the most convenient, producing the most recyclable items, instead of the trash cans.

# RI Resource and Recovery Center Field Trip Photo Documentation

**WORKERS SORTING  
RECYCLABLE ITEMS FROM  
NON-RECYCLABLE ONES**



**TRASH IS BROUGHT  
ON TRUCKS THEN  
DUMPED HERE**

**PHOTO OF STATION  
EXPLAINING THE  
LAYERING PROCESS**

# EFFICIENT HOUSE ENGINEERING



**Goal:** Apply what we have learned about energy efficiency by aiding in the design of a home.



**Tasks:** We first contacted the homeowner of one of the students in our group. We then proposed that for the holiday season, we install energy efficient Christmas lights around the property. We calculated the amount of energy and money the homeowner was saving. We carried through with installing the lights, which got many compliments from neighbors and friends alike.



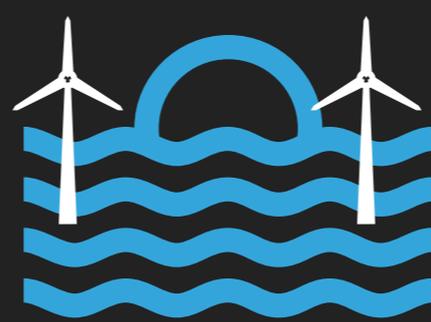
**Resources:** Important resources such as calculations, the physical house, and research on the best LED lights were all factors that contributed greatly to our experiment.



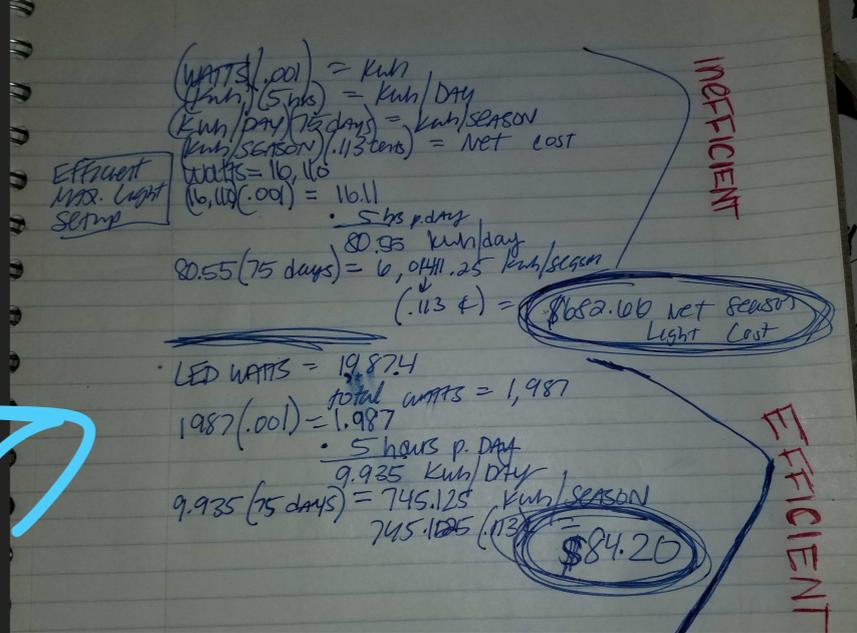
**Student Leadership:** This project was led by the students completely. We gathered data and information to show how efficient the lights were, installed the lights, and made a conclusion about how efficient the lights were.

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- ▶ **Evaluation:** Next year, we are planning to hold a fundraiser where our club installs energy efficient LED holiday lights for homeowners who want them. This year, installing the lights on a single house allowed us to gather data about how much energy and money a single house saves when going LED for their holiday lights!





greens growth



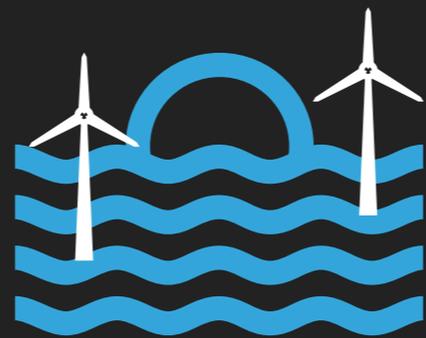
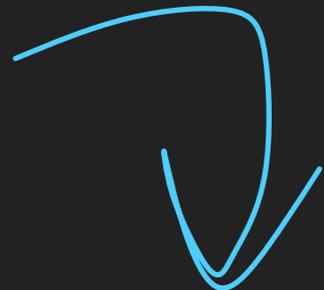
calculate

efficient Christmas Decor



# PROJECT PHOTOGRAPHY

side view



# TRASH TO TREASURE



## Trash To Treasure Recycling Night!

Let's join together as a community to recycle items and turn them into treasure! Stop by our school to see what we can do with the things we throw away! Don't be a disgrace and throw your things to waste!

When: April 25th from 5:30-7:00

Where: Deering Middle School Cafeteria

**GOAL:** PLAN A NIGHT FOR THE WHOLE COMMUNITY TO COME TOGETHER AND EXPLORE ASTONISHING CREATIONS MADE FROM TRASH.

**TASKS:** FIRST WE PLANNED THE LOGISTICS OF THE EVENT SUCH AS WHEN AND WHERE. THEN WE MAPPED OUT WHAT PROJECTS EACH OF US WILL COMPLETE. A PICTURE OF ONE OF OUR PROJECTS SHOWS A BUILDING MADE OUT OF COMPLETELY RECYCLABLE TRASH AND DESIGNED FOR EFFICIENCY. TO MAKE AN INFLUENCE ON ALL THAT ATTEND ANOTHER PORTION OF THIS EVENT WILL CONTAIN KNOWLEDGE LEARNED ABOUT OUR STATE FROM THE RIRRC INCLUDING ITS POTENTIAL CLOSING AROUND THE YEAR 2038.

**RESOURCES:** RECYCLABLES, SCHOOL CAFETERIA, RIRRC

**STUDENT LEADERSHIP:** AS STUDENTS WE ARE LEADING THIS EVENT BY CREATING INTERESTING ITEMS FROM TRASH TO SHARE WITH THE COMMUNITY. THIS WAS DERIVED FROM STUDENTS REALIZING THAT SOME DECKING IS COMPOSED OF RECYCLED PLASTIC BAGS AND HOW TRASH BECAME TREASURE.

**EVALUATION:** AS SEEN IN THE ADVERTISEMENT ABOVE, THIS EVENT IS PLANNED FOR APRIL 25, 2018. THOUGH IT HAS NOT OCCURRED YET, WE LOOK FORWARD TO COMPLETING A SUCCESSFUL NIGHT AND PROVIDING A SERVICE TO THE COMMUNITY.



# SOCIAL MEDIA AWARENESS CAMPAIGN



► **Goals:** To spread awareness about the NEED Program and show what we do to benefit the community.



**Tasks:** We first created both an Instagram and Social Media account where we could post images taken during our meetings. We used these platforms to spread the word about energy efficiency, even posting about ways to be energy efficient on holidays! We have worked up our account to where it has many followers that enjoy our posts regularly.

► **Resources:** Resources included both the Instagram and Facebook social media platforms.

**Student Leadership:** The accounts that have been created are run completely by students. We post what we feel is most beneficial and impactful towards our audience.

► **Evaluation:** To date, our accounts continuously gain popularity within our community. It is something that we are extremely proud of because we show our community what we do behind the scenes in NEED.



# TEACHING ELEMENTARY SCHOOL STUDENTS

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- ▶ **GOAL:** Present a lesson to elementary students in a hands-on manner to introduce them to energy and how they can help our environment.
  - ▶ **Tasks:** We first reached out to the principal of Wakefield Hills Elementary School, who gladly directed us to a teacher who she thought would love to see our presentation. We then contacted the teacher, who was also our past elementary school teacher, and presented him with the proposal of doing a lesson on energy and doing an experiment with the second grade students. Then, we gathered materials to conduct an experiment where students would use different types of metal and fruits to see who could get the highest readout of voltage. The students absolutely loved and enjoyed the presentation. The faculty have even requested that we come to their classroom next!



▶ **Resources:** We created our procedure using our own prior knowledge of how fruit contains acids that act as a battery. We also reached out to numerous school administrators to coordinate the event. Our advisor helped us in gathering the needed materials.

▶ **Student Leadership:** This lesson delivered to the second grade students was entirely student led. From coordinating the event, to creating the lesson, to presenting the lesson, we as students led the event completely on our own. We engaged them in the beginning by planning a pre-activity which allowed them to understand the experiment. In fact, the superintendent, principal, and faculty all complimented us on our ability to pass our knowledge on to the students and expressed how proud they were of us.



▶ **Evaluation:** This presentation went extremely well for both the second graders and us high schoolers. They were introduced to the basics of energy and had lots of fun whilst doing so, and we were able to take note of how we can present energy in a fun, interesting way. The students understood how a the difference between renewable and non renewable energy and how they could be energy efficient in their everyday lives.





Testing  
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Pre Activity  
Intro Lesson  
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Group  
Photo  
@School  
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Documentation

