

# **Evergreen Energy-Solar Powered Sprinkler System for an indoor garden**

## **A 4rd grade project at Hlgh Point Academy SFW Fort Worth, TX**

### **Advisor Shelly Vierkant**

**4th grade wanted to continue lessons we learned about renewable energy from our NEED resources last year. With everything changing we wanted to do something with renewable energy and benefit our community. We decided that we wanted to learn more about how to grow our own food. If we could grow our own food then we would always have something to eat. Our challenge was we didn't know if we would always be in the classroom to water and watch our garden grow. We knew, from our project last year, about renewable energy and decided that Solar Power would be the best way to help our garden grow.**

**We reached out to the community and we had a local nursery donate starter plants, dirt and seeds, another family donated the containers, and we had a donor purchase what we needed to make our solar powered sprinkler system.**

# Goal 1: What plants will grow indoors and how do we keep them alive if we can't be at school?

We spent some time researching our two problems. Half of the group researched what would grow best in an indoor windowsill garden. The other half of our group researched different types of sprinklers.

We found plants that we thought would grow and thrive in a window garden.

Next we had to figure out a watering system that would work even if we could not be at school for days or weeks in a row. We found the solar powered irrigation system.

# Hawks how does your garden grow



We found a sprinkler kit and a donor ordered it for us. We picked out what we wanted to grow. We thought herbs would be best to start from seeds. We didn't just want to wait and start from scratch so we got small starter plants as well.

## Goal 2: Plant our garden

COVID-19 taught us many things like how to do school work at home and what a zoom meeting was, but for our school and classmates it taught us that not everyone has enough to eat everyday. If we could learn to grow food in a small space then we would always have something to eat no matter where we lived.

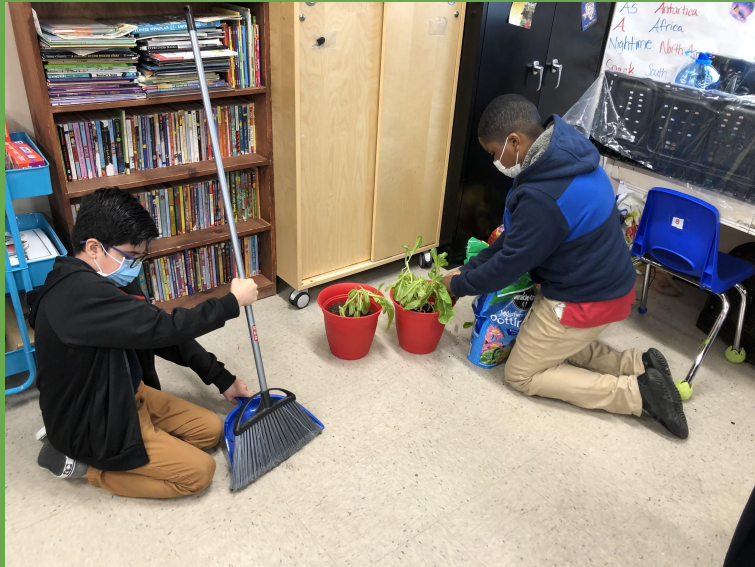




We planted our first starter plants and seeds to grow herbs.



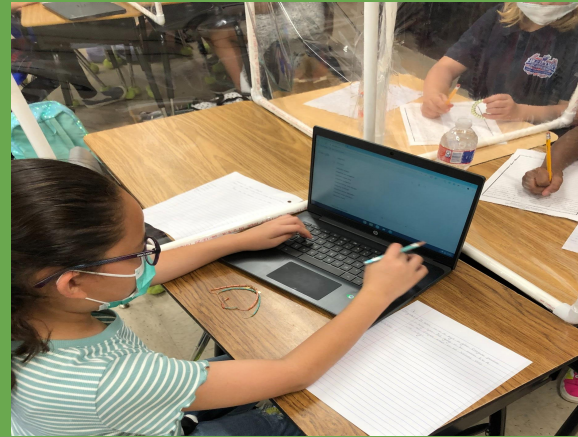
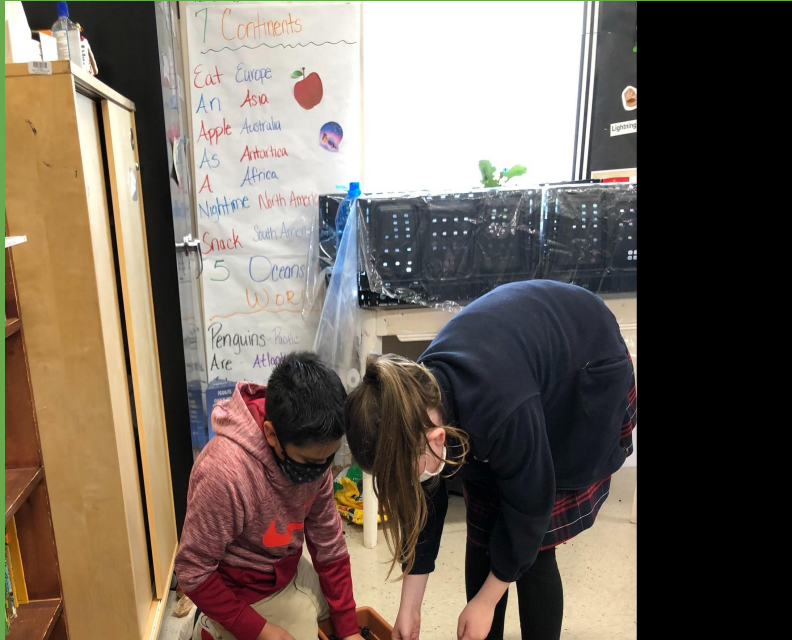
Getting our hands dirty planting our garden.





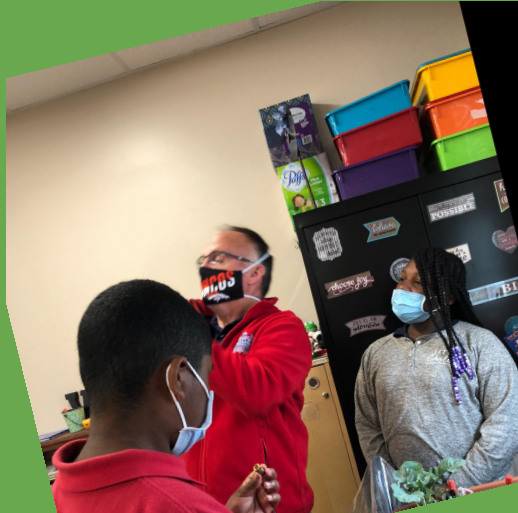
# Goal 3: Set up and run Solar Powered Garden

We had been waiting for this day since we decided on our project. We finally were able to set up our Solar Powered sprinkler system and plant our plants.



# Putting together and testing our sprinkler

We tested out the timing system to make sure water would move through the tube. We even got help from our school maintenance man.





We hooked up the sprinkler tubes.



Our sprinkler worked!!!



# Glad we picked the project we did.

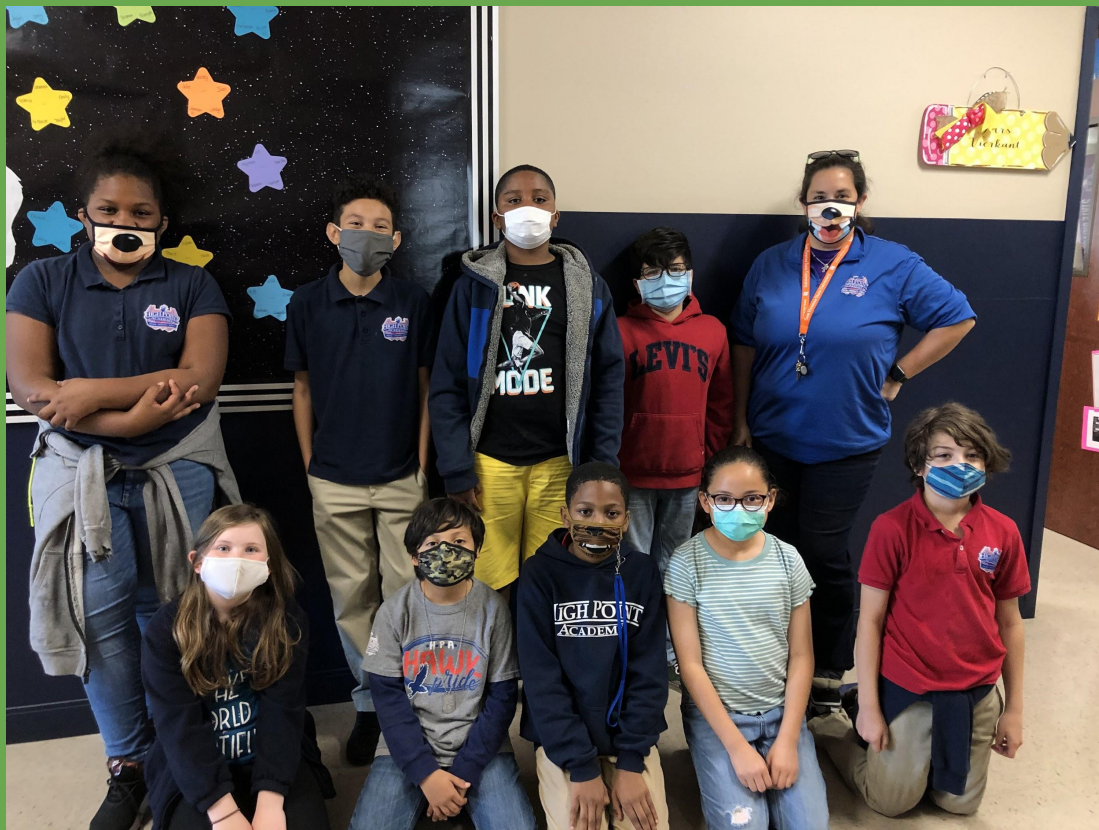
Little did we know that we picked the right project for this school year. Our whole grade was quarantined more than once, each homeroom was quarantined at one time during the year and Texas experienced winter weather like it had never seen. Our garden survived all thanks to renewable resources like the sun and water. As long as there was water in the bucket and sun in the sky our little plants were able to live and grow.



# We found the plants a good home for the end of the year.

Our dance teacher has a garden at home so we asked her if she would take care of our plants once school ends. She said she would love to. We know a years worth of effort won't go to waste and our plants will have the opportunity to grow just like us.





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