



The Tree of Life

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Honors Physics 2013-2014



Inspiration

● It all started at **P**art **O**f **T**he **S**olution

○ *mission: “To be a loving community in the Bronx that nourishes the basic needs and hungers of all”*



Social Issue: Hunger

Hunger: the physical state of discomfort because of lack of food





Hunger Solution

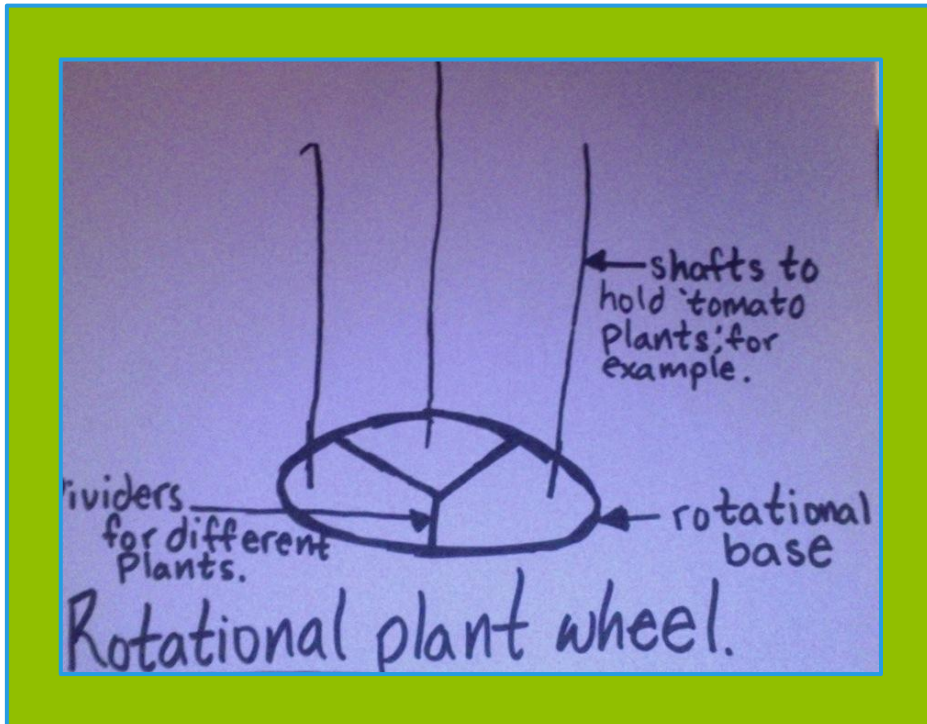
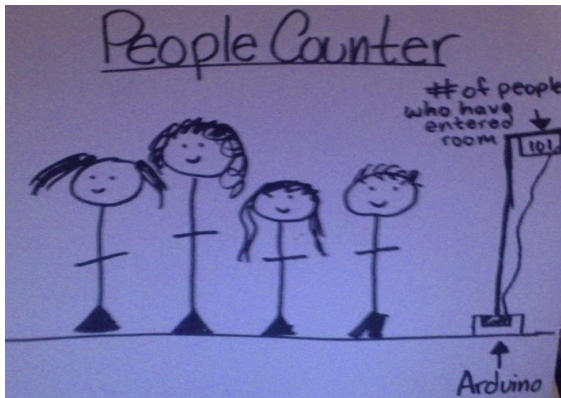
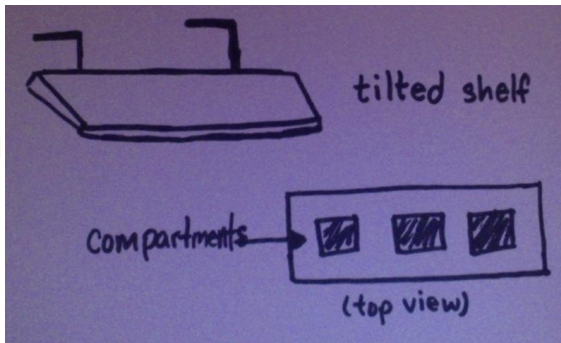
Our design will benefit the welfare of communities and help to solve the hunger problem by providing people with a small place to grow their own cheap food.

Hunger Solution cntd.

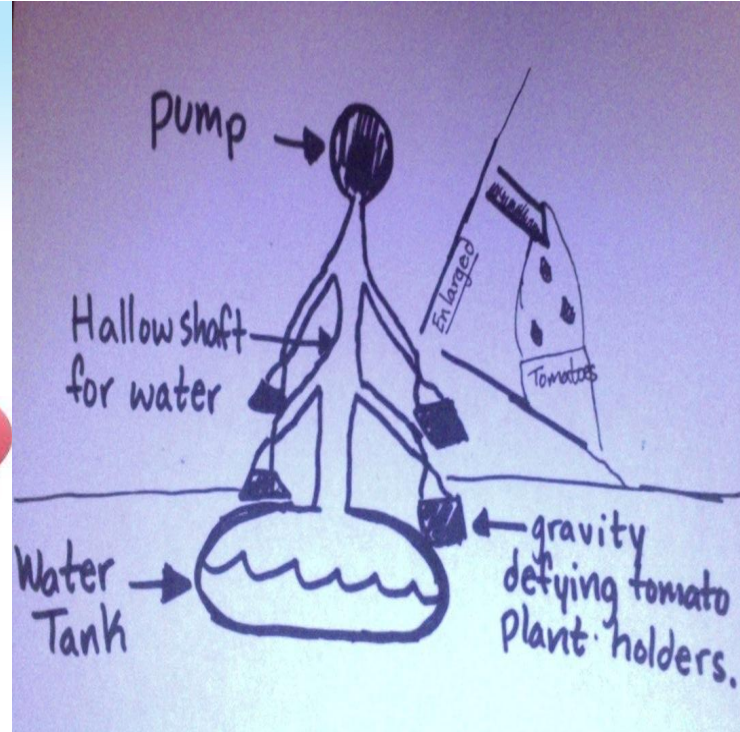
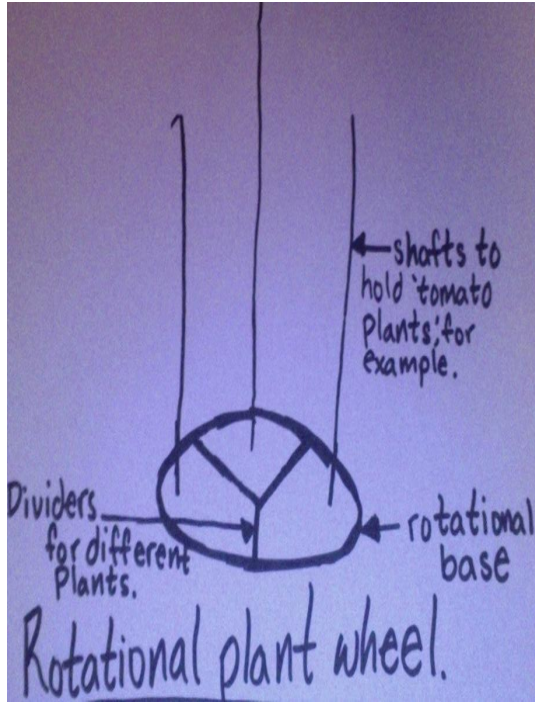
- In African cities, agriculture as source of income for many *our design minimizes the amount of space and labor needed to grow produce*



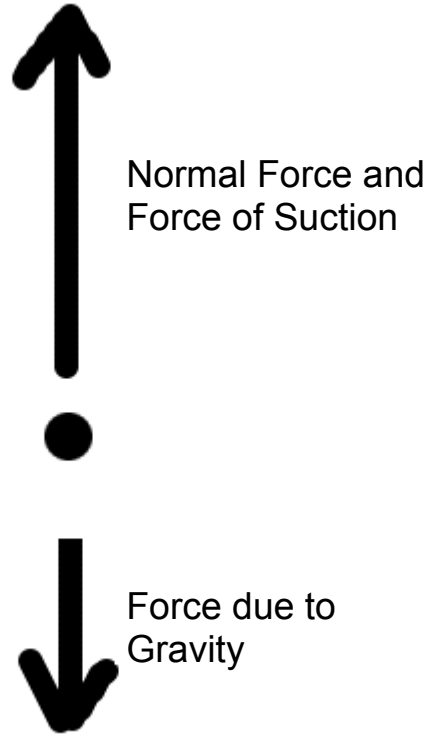
Original Design Ideas



Evolution of Our Idea



Physics in the Tree of Life



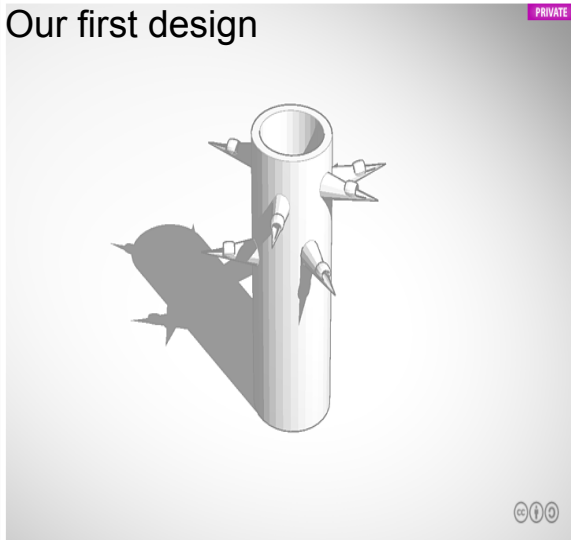
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$$\Sigma F_y: -mg + F_n$$

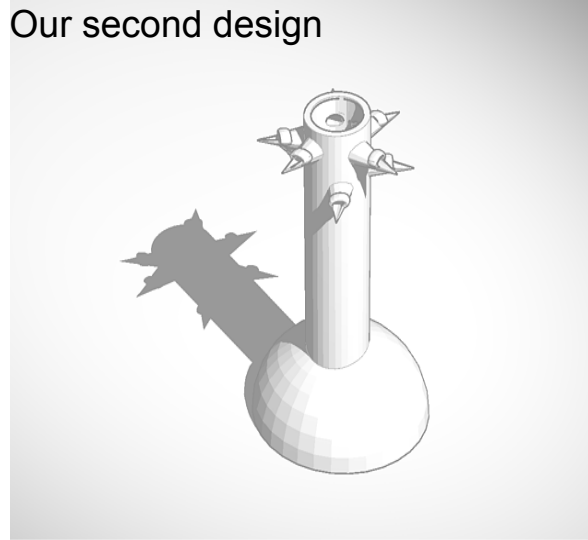
Where the sum of the normal force and the force of suction is greater than force due to gravity, so the water can move up the tube.

Evolution of Our Design cntd.

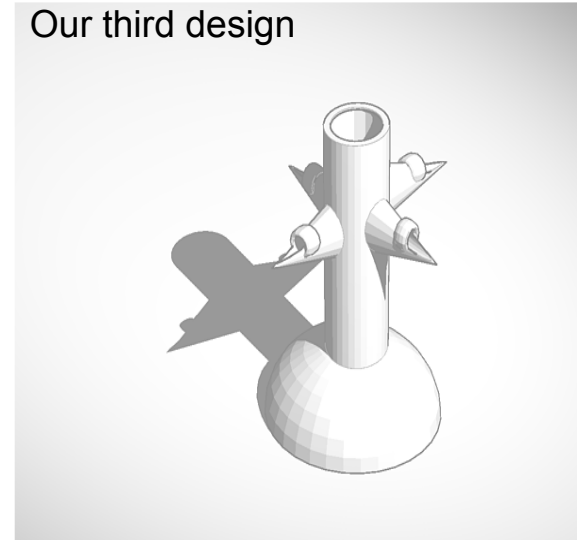
Our first design



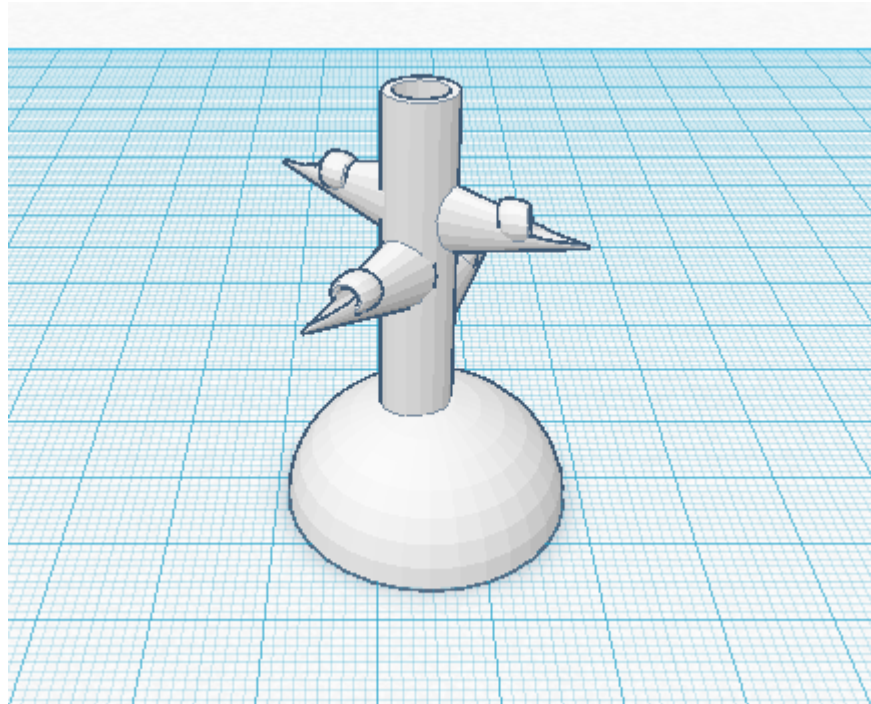
Our second design



Our third design



The Final Product



Thank you!

