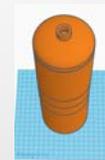
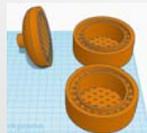


ANNORBOTS

TECH FILTER

TO-GO



TEAM #18098

PROBLEM IDENTIFICATION

The problem is that some homes, villages and disaster town areas do not have access to clean drinking water. We want to provide them a way of getting clean water at their homes. We are trying to make something that turns the dirty water into clean water.



PROBLEM ANALYSIS

- IT SHOULD TO BE A SMALL DESIGN, BUT IT HAS A LOT TO IT.
- **IT SHOULD PURIFY WATER IN MINUTES WITHOUT BIG MACHINERY.**
- **IT SHOULD HAVE A SUCTION/PUMP THAT CAN SUCK IN WATER.**
- IT SHOULD HAVE A TECHNOLOGY TO REMOVE:
 - **BIG PARTICLES IN WATER**
 - **SMALL PARTICLES AND DIRT**
 - **BAD SMELL**
 - **COLOR**
- **IT SHOULD ALSO KILL THE BACTERIA SO THEY DON'T END UP IN YOUR DRINK.**
- IT SHOULD HAVE A STORAGE AREA AT THE BOTTOM TO STORE THE CLEAN WATER.
- **YOU SHOULD BE ABLE TO POUR IT INTO YOUR SPECIAL CUP, OR AN ORDINARY CUP. ENJOY!!**

TEAM SOLUTION

**Our team solution
is to design a
“Tech Filter ToGo”
to make water
clean for
ANYBODY who
don’t have access
to clean water.**

INNOVATION

- **It will have a suction/pump to easily get water from streams if needed.**
- **It can be powered by batteries if needed.... To be stored around the in the filter container.**
- **The suction tube will have a mesh/filter mechanism to remove small particles and dirt.**

SOLUTION DEVELOPMENT

Main Filtration Steps Identified

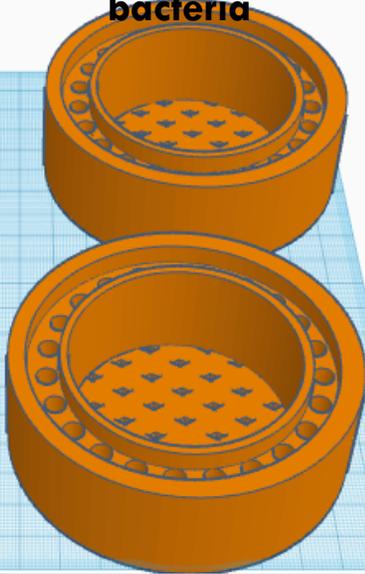
- TOP MOST SECTION USED FOR WATER INTAKE. CAN BE DONE THROUGH SUCTION TUBE FROM A STREAM/RIVER OR DIRECTLY POURED INTO IT.
- THE SECOND PART OF “*TECH FILTER TOGO*” WILL HAVE IN ORDER OF ARRANGEMENT:
 - ACTIVATED CARBON TO REMOVE COLOR, BAD SMELL AND ...
 - FINE SAND
 - COURSE SAND
 - SMALL STONES
 - LARGE STONES
 - COFFEE FILTER (SUGGESTED BY EXPECT AT TENN AMER WATER)
- THE NEXT SEGMENT OF THE FILTER WILL REMOVE GERMS AND BACTERIA USING SMALL AMOUNTS OF CHLORINE OR ANY ALTERNATIVES.
- THEN MINERALS WILL BE ADDED FOR TASTE.
- THE LAST PART OF THE FILTER SEGMENT WILL STORE THE CLEAN WATER.

SOLUTION DEVELOPMENT

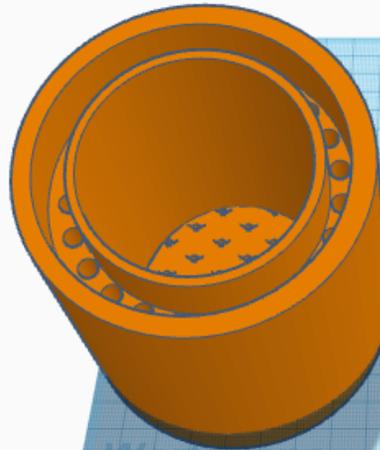
Using Tinkercad for 3D Drawings Prototype

Top

Segment to remove
bacteria

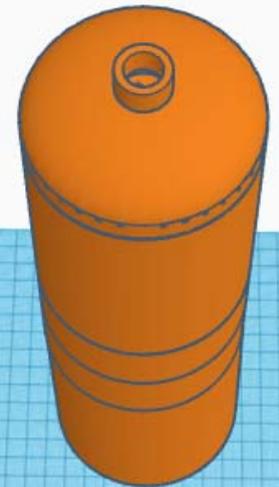


Segment to refresh
the water by adding
minerals



Segment will have
layers of activated
carbon, sand, gravel
and stones

Storage area for
filtered and fresh
water



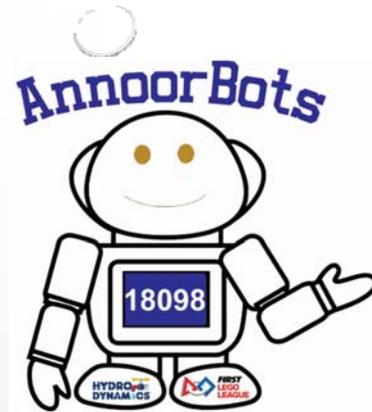
SHARING

- *Tennessee American Water Facility Tour*
- *Annoor Academy School*

SOURCES OF INFORMATION

- [*marswaterfiltration.weebly.com*](http://marswaterfiltration.weebly.com)
- [*Tennessee American Water Facility Tour*](#)
- [*Tinkercad.com*](http://Tinkercad.com)
- [*Google.com*](http://Google.com)
- [*https://thewaterproject.org/water-crisis/water-in-crisis-rural-urban-africa*](https://thewaterproject.org/water-crisis/water-in-crisis-rural-urban-africa)
- [*http://www.weather.gov/crp/hurricane harvey*](http://www.weather.gov/crp/hurricane_harvey)

THE TEAM ...



TEAM MEMBERS

Haneen Ahmed - 4th Grade

Mohamed Alymany 4th Grade

Idris Muretcehajic - 5th Grade

Begad Alymany - 6th Grade

Ahmed Ofoli - 6th Grade

Riley Kephart - 6th Grade

Minna Ahmed - 6th Grade

Hila Barmada - 6th Grade

Maryam Arafat - 6th Grade

Mckenzie Roberts - 7th Grade