

Meeting Minutes

October 5, 2019

Intro

Name, Year, Hobby

What is clean water?

Regulations: Safe Drinking Water Act, Clean Water Drinking Act

- pH

$$\log[H^+] \frac{mol}{L}$$

$$7 < \text{pH} < 7.5$$

- Turbidity

turbidimeter

cloudiness

- DO

dissolved oxygen

DO meter

want 100%

- EC (electroconductivity)

Want low #'s

Measured in micro

- Volume

Dependent of design

Discuss competition parameters of design

Brainstorming

Present Ideas

Team 1: 4 gallon bucket with pebbles in bottom held by shamwow; Underneath, 4 gallon bucket with 5 lbs sand held by shamwow cloth; Underneath, 20 gallon bucket to catch filtered water (\$48.05)

Team 2: Through 4" pipe---Heaviest particle on top (taking care of big chunks) and bottom for finer particles; coffee filter on bottom; Layers from top to bottom: lava rock, window screen, pebbles, window screen
**for added protection within layers, commercial sand, window screen, coffee filter; 10 gallon tote on bottom (\$24.88)

Team 3: Bucket atop trash can with water clarifier, baking soda and activates; burlap atop the first bucket secured with bolts; inside first bucket is sand with weed fabric on bottom (diatomaceous earth on bottom for filter) (\$65)

Overview of Past Designs

- alum and pickling lime caused coagulation
- 2018: \$32
- 2017: \$32
- 2016: \$70

Issues of Brainstorming Design

- Desalination
- Figuring out how everyone will actually construct apparatus

Expectations

- chemistry – lab (test to find the “best way”)
- design – hands on experience and how to interpret tests