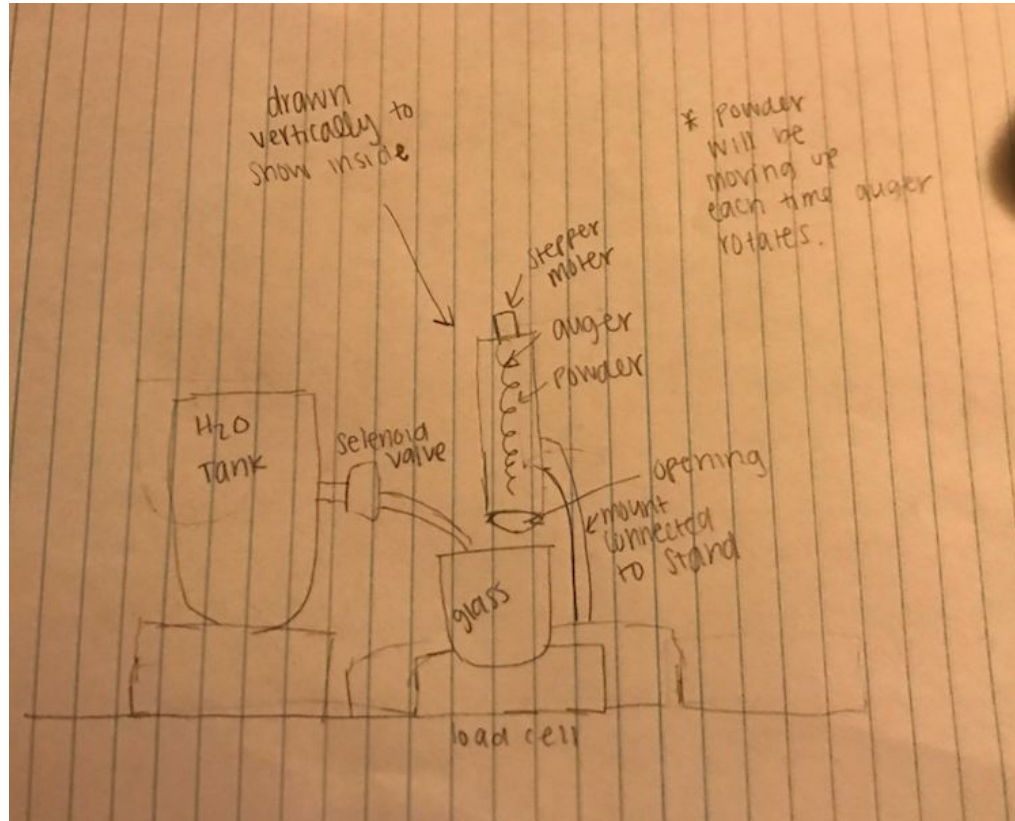# Gatorade Maker

By: Fazeela Kazmi and Jacob Pinter
TA: Natalie Ng

Our plan

— — —

This project aims at creating a system that pours powder and water to make a Gatorade mix. The user will choose between 3 preset amounts of Gatorade as well as 3 preset powder to liquid ratios. This will allow the user to decide how much and how sweet of gatorade they want. The system will dispense the powder and water in an appropriate amount in the glass. This will allow you to be worry-free about the accuracy of the water and powder you will have in your drink.

What will the system look like?

Budget

- Tubing $7.99
- Buttons $4.95
- Stepper Motor $17.50
- Auger- 3D Print
- Tank for Water $21
- T Shaped PVC Pipe (Holds Auger) $2.23
- Arduino Uno Rev- given
- Solenoid Valve $9.95
- Solderless Bread Board $6.95
- TIP120 Darlington Transistor $.95
- 1k Ohm Resistor $1.00
- Diode $.15
- Hookup Wires $6.95
- Load Sensor 5 kg $9.95
- A4988 Stepper Driver $1.88
- 12V 2A Adapter $4.29

Gantt Chart

	week 4 10/6	week 5 10/13	week 6 10/20	week 7 10/27	week 8 11/3	week 9 11/10	week 10 11/17	week 11 11/24	week 12 12/1
proposal due	▉								
order supplies	▉								
come up with initial design	▉								
draw intial design	▉								
learn 3D printing	▉								
preliminary stepper motor code		▉							
preliminary valve code		▉							
preliminary load cell code		▉							
code valve for water system to release water			▉						
use valve and load cell to dispense specfic amount of water			▉						
preliminary code for LCD screen				▉					
preliminary code for buttons				▉					
mechanical attachement of stepper mottor to auger (print)					▉				
design attachment of motor/auger for top of powder container					▉				
design attachment for dispensal of powder at bottom of powder container					▉				
make sure stepper motor can rotate the auger as desired						▉			
implement attachments for the powder container and use stepper motor to dispense powder						▉			
use stepper motor and load cell to dispense specific amount of powder							▉		
make poster							▉		
demo									▉
integrate complete system/work out bugs								▉	

Fazeela
Jacob
Both