

TEAM JOURNAL

Meeting 1

Members Present: All

Duration: 3:30-5:00

Topics Discussed:

- Got all members caught up w/ project, expectations etc.
- Ate cookies
- Brainstorming for project
 - Xeriscaping
 - Eutrophication
 - Waste Water
 - Sustainable Agriculture
 - Bioswale
 - Rainwater Collection
 - Water Safety- life jacket ring, drowning alarm

School: Wilson High School

Team Name: Team Aqua

Team Members:

Michael DeSimone
Sasha Leamy
Aiden Nelson
Jessica Peterson
Samuel Behrens

Meeting 2 - 1/27

Members present: All

Duration: 3:30 -

Snack: Fruit snacks and cheddar bunnies

Topics discussed:

- Fieldwork strategy worksheet
 - outside resources
 - contacts i.e. water bureau employee
 - writeup
- new ideas:
 - architectural rainwater collection
 - improved rain barrel shed
 - flower shape roof
 - charcoal or ceramic filter
 - runoff goes into channels for plants or water feature
 - 200 gal barrel in center
 - more global use maybe
 - used in places where water is scarce
 - may be used for contaminated water like india
 - sustainability is a main theme
- split up into groups to do writeup
- pros and cons
 - Drowning alarm - Aiden, Sam, Sasha
 - pros
 - unique
 - PSA
 - parental fear

- can be used across ages
 - human impact
 - cons
 - not about sustainability
 - not taken seriously?
- Water Quality sensor - Harriet
 - pros
 - relevant (Flint, Michigan)
 - most techie
 - human impact
 - sweet lab
 - cons
 - couldn't actually build one
 - existing products
- Improved Rain Barrel - Michael
 - pros
 - catch-all
 - local and international
 - cons
 - complicated by geography

Meeting 3, 1st of February, 2016

Members present: All, lost one member;

Duration = 1.2hrs;

Snack = fruit snacks;

Topics discussed{

- Feedback on proposals;
- Trying to decide topic to pursue;
- Discussing possible proposal for drowning alarm;
 - Maybe being booted;
 - Starting small scale could work;
 - Who is the demographic?;
 - Kids in a pool?;
 - Target audience{
 - Paranoid Parents;
 - Kids;
 - Drunk people;}
 - Look up drowning demographics;
 - Has water quality sensor in it;
 - Loud sound with strobe light;
- Water Quality Sensor;
 - How would it be installed?;
 - Plumber or just on sink;
 - Uploads data to app;
 - App has premium and light version;
 - Business gets discount on sensor;
 - Flint Michigan;
 - Probably won't win Tech;

- Quicker results;
- Funding might be a problem;
- Have one sensor for tons of stuff;
- Water Tank;
 - What exactly are we solving with this?;
 - Might this be able to be used to ensure water when the big quake happens?;
 - Rain barrel that can be easily packed with emergency gear;
 - Either boot it or change it;
- What do we want to focus on?;

```

    }
Jobs{
    Michael = Statistics on drowning research;
    Sam = Stuff on the current market research;
    Aiden = Design;
    Jessica = Research more stats and/or tech;
    Sasha = Design;
}

```

Meeting 4

Members present: Sasha, Jessica, Aiden, Michael

Duration: 70 minutes

Today's Goals:

- narrow down the design of the device

Alarm Design:

- No button because kids will press it
- Heart rate/blood pressure sensor
- GPS
- Releases a beacon attached to a string
- Beacon shines and makes a loud alarm

Ideas that were mentioned today:

- Maybe use Prezi for our presentation
- Survey
- Camera to sense drowning
- How do we power it? (batteries, rechargeable batteries, steam, gas, coal)
- How can we waterproof it?
- How compact can we make it?
- During presentation ask "How many people have a watch on right now?"
- Talk to community members.
- sell in bulk to pools.

Survey Questions:

- How old are you?
- Sex?
- Ethnicity?
- Would you buy this?
- What is the most you would pay for this?
- Where would you use this? (pool, river, lake, ocean, bathtub, slip 'n slide)
- Where do you swim most often?

Group member assigned tasks:

Aiden-

Sasha- "Good Job Aiden."

Michael-

Jessica-

Sam-

Fieldwork

Meeting with electrical Engineer

Members present: Aiden, Sasha, Michael, Jessica, Sam

- Write out use cases- circumstances and reasons that someone would use the product or the result of someone using
- Radio waves and other waves cannot travel underwater, so scrap that unless the source is on the buoy...
- As for water proofing, look at NEMA rated boxes and hydroponic filters to go over the speaker
- Make minimal viable product (MVP) first and use as prototype for competition
 - An arduino with an accelerometer inside of a box that is triggered by some signal to release a buoy
 - For the release mechanism on the arduino use a servo and a wave spring
- A heart rate sensor will not work in the project.
- Two alternative sensors for when not conscious:
 - blood oxygen level
 - Saturated percent O2

Meeting 5

Members present: Aiden, Sasha, Michael, Jessica

Duration: 80 min

*We devoted this meeting to designing the project proposal. Aiden addressed question 2,
*Micheal addressed question 1, Jessica answered question 4, Sasha addressed question 3,
then we all worked together to answer question 5.

*We decided on the team name Team Aqua.

- What will you present?
- How are you going to divide up the presentation?
- Do you have an outline of the presentation?
- Will you have a prototype?
- Poster?
- What questions do you anticipate from the judges/audiences?
- What challenges did you face?
- What issues could not be solved?
- What additional field work would help?
- What do you think are the next steps?

Meeting 6

Members present: Aiden, Micheal, Sam, Sasha, Jessica

Duration: 90 minutes

*Need to start drafting the poster, presentation, prototype.

*Four more meetings before presentation.

*Presentation should be like a Ted Talk. -Michael

*Need to make a survey with questions about the product.

*Need to come up a name for the project. Ideas: Water Worries Super Saver, Aqua watch

Group assigned tasks:

Survey - Aiden

Poster - Sasha & Sam

Presentation - Michael & Jessica

* This meeting we made some progress on the survey, poster and presentation

Meeting 7

Members present={ Aiden, Sam, Sasha, Jessica};

Duration = 60 minutes;

Snack = 0;

Topics Discussed{

- Presentation prep;
- Planning on building prototypes;
- Sampling scew;
 - Convenience sample;
- Statistics;

}

Meeting 8

Members present: Aiden, Sam, Sasha, Micheal, Jessica

Duration: 60 minutes

Snack: No snacks

Topics discussed: Survey, Poster, Presentation, Deadlines

*Today we worked on the final parts of the poster and also brainstormed the presentation.