17th March 2015

17 March 2015
All present except Liam

Last week: mostly just discussed what we still had to do, assigned "homework" (write a paragraph or two on assigned section of poster), meeting ended early because we all had a lot of work to do for the end of the trimester.

This week:
We are all frantically working on the poster, very few people actually did the "Homework". We are each writing two paragraphs on each section. We collectively discussed the goals so that we can put them in their own section of the poster.

We've all lost it.

Posted 17th March 2015 by Peaceful Penguins

03.03.2015
Parker, Htet Htet, Liam, Nick, Tucker, Jonathan

Announcements:
- New lab at PSU - interconnected device lab, tour tomorrow from 4:00-6:00
- 2-3 weeks to spring break, poster and journal due after break (03 April)

Had a quick discussion about what we decided last week - We decided to focus our project on water - recycling, purifying, reducing
We decided that we should use powerpoint for a presentation, not google or prezi or whatever.

Today's objective: figure out exactly what we want our project to be.

Info on algae filter that we already have: there is non-photosynthetic algae that can purify water, among algae non-photosynthetic is optimal, algae doesn't require electricity/energy, compostable but not reusable, We need to do research on that.

Info we already have on turbine: how much electricity would that provide?, initial cost?,

A thing that collects grey water then goes through a turbine and into an algae filter!

Design a water system for a small apartment unit, focus on water but also include other systems like green roof and solar energy.

What will people ask questions about?: We should know completely useless info that we don't put into presentation. Say "We don't know currently, but we can look into that" instead of "We're not sure".

Nice thing about non-photosynthetic: can be underground!

We designated jobs and decided what we each have to do before next week's meeting.

We decide to meet Thursday at lunch too, to work on the poster. We will finish the poster next Tuesday, and work on the prototypes.

Posted 3rd March 2015 by Peaceful Penguins

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24th February 2015

24.02.2015
Parker, Htet Htet, Nick, Adrik, Jonathan, Tucker, Liam
We got a new member of the team. Liam Beckett.

Today we checked and discussed feedback for our project proposal. Discussed refining our ideas for our project. We ruled out solar panels from our more specific project.

**Parker:** "We can always do more with water, make it cleaner/more efficient, as human population grows we will produce more waste and need to recycle more. Water might be most ideal, and we already have several concepts for water."

**Most agree.**

**Tucker:** "The thing that you attach to a drainpipe and water goes down and spins it, we could build a working model."

**Nick:** "Giant bioswales with water treatment inside of them!"

**Jonathan:** I'm typing. I agree with stuff said so far.

Consider how we should go about researching specifics and then creating and presenting our project.

- Is 2 several, or does several have to be more than 2?

**We all agree that we should do a working prototype**

Concern: Time constraints

Should we decide specific project now, or wait until we can do a little more field research? Research questions?

- Who's tree is better? Htet Htet's.

**Start a big brainstorm sheet labeled: Water**

How are you guys recycling your water? What are more ways that people can do this? How many ways are there to recycle water? How many ways are practical for the average home? How many use biotechnology? Specifically, what do you know about purifying water with algae, and how practical is it? What type of algae, and to what degree? How expensive is a consumer-grade generic water recycling system and how much space does it take up? What variations (how big is the scale) from low-grade to high-grade? What types of bacteria and pollutants need to be filtered out to make water safe? In an urban area vs in a rural area? What uses are there for unfiltered grey water (NOT black water)? How long does each kind of water filter take, and how much water can it filter at one time? What is the difference between industrial-grade and consumer-grade water recycling systems? What (opinion) is the best way of cleaning and filtering water? How long have consumer-grade water recycling systems been around? Are aqueducts green or water recycling in any way? What are
optimal conditions for having a water recycling system? Does this kind of technology have other uses/greater implications? What ways is city water used to generate energy? How easy is it to add a water recycling system to an existing house?

We made a google doc when we will keep links to any research websites that any of us find, for future reference.

Posted 24th February 2015 by Peaceful Penguins

20th February 2015

PSU Innovation Challenge
Peaceful Penguins - MLC Team
Parker Swensen, Adrik Gurganus, Tucker Johnson,
Htet Htet Soe, Nick Vautravers, Jonathan Baird

PSU INNOVATION CHALLENGE PROJECT PROPOSAL

Problem -
Reduce amount of grey water runoff, help with accessibility to green energy, increase general sustainability of an average home or apartment complex.

Solution -

- A way to purify and recycle excess water from a habitat in an environmentally conscious way (algae)
- A way to reduce energy use and make solar energy more adaptable to a variety of environments (interlocking solar panels)
- A way to make a green roof to help conserve energy and water that is “portable” (astroturf-style green roof).
- We have come up with many more ideas that are too many to list. The ones above are the ideas that we have all agreed are most important. We are
considering a project idea to make an independent, multi-family, self-sustaining habitat, or "biosphere" that would have all of these aspects and more!

Field Work -

The group went on a walking tour of green buildings and sustainability around PSU, and we learned about some really cool stuff like an entire community having a central heating/boiler system to conserve energy and resources, and also we learned that you can make really good insulation for buildings out of old recycled blue jeans! Other than that, we have not done an extensive amount of fieldwork or field research, however we will most definitely do more.

Human Factors -

We have to take into account the erratic and mostly unpredictable behavior of Humans and their patterns (or lack thereof) of energy consumption and use. We also must consider the possibility of children or pets that could break, or be harmed by, the equipment and systems, therefore we must protect against that. There are also, no doubt, many Human aspects that we have not yet taken into consideration, because we are still in the first stage of designing this project.

Final Event Prep -

We don’t really know what to put in this category, but it was on the sheet, so it’s in this paper. We will make a poster, and a slideshow, and a 3D model.

Posted 20th February 2015 by Peaceful Penguins

Add a comment
17.02.2015
All are here

Today we took a tour of sustainability at PSU and the dude who led the tour's name was Fletcher and he was cool.

Okay, so we learned about insulation with denim jeans! Which is really cool and sustainable!
Also, bioswells, which are like storm drains except they have plants and they slow down water flow to the actual storm drains.

Posted 17th February 2015 by Peaceful Penguins

10th February 2015

Green Apartments Slideshow - Concept from week 1
[https://docs.google.com/presentation/d/1fWAll8_CEAlf-cCP4e5010epxAri0JR1AvoyJuWzsM/edit?usp=sharing]

Posted 10th February 2015 by Peaceful Penguins

10th February 2015

10.02.2015
Tucker, Htet Htet, Adrik, Nick, Jonathan, Anne

Last week we confirmed what we wanted to focus on:
Portable Green Roof
Interlocking Solar Panels
Algae Water Recycling System

Next Week:
Meet at Market Center Building 1600 SW 4th Ave. at 03:45
Meet in the lobby
Meet a visitor from the Institute of Sustainable Solutions

This Week:
- Problem: Trying to reduce the amount of water and energy wasted by a single habitat, and make significant energy/water saving devices and systems more accessible for any building/environment.
- Solution: A way to purify and recycle excess water from a habitat in an environmentally conscious way (algae), to reduce energy use and make solar energy more adaptable to a variety of environments (interlocking solar panels), a green roof to help conserve energy and water that is “portable” (astroturf green roof)

Generated list of questions to ask the Institute of Sustainable Solutions people:
1) In their expert minds, how feasible are interlocking solar panels?
2) How big of a problem is methane?
3) Ways to use or reduce methane?
4) RAIN ENERGY?!?
5) Work to instal new sustainable systems in older buildings? / Ways to be more sustainable without a big upgrade?
6) How can we make little things like laundry and insulation more sustainable?
7) How can we work natural disaster protection into sustainability?
8) In their expert minds, can a green roof be turned into an astroturf type of thing?
9) With solar panels, they generate a certain number of watts, but how long does it take to generate those watts? What is a watt hour? Also, how big are solar panels? Materials to build them efficiently?
10) Algae filtration systems already in existence?
11) How long does it take to purify water with algae?
12) How pure does the water get this way?
13) What type of algae?
14) Are there other ways to get solar energy besides solar panels?
15) Turning algae into biodiesel? What is biodiesel? How clean is biodiesel?
16) How easy/hard is it to grow/maintain algae?
17) What is the difference between a water wheel and a water turbine?

Who will benefit and how?
- People who are environmentally conscious but don't have the money or the right type of home for sustainable systems already on the market. They would have access to
sustainable systems that they didn't before, and their cost of energy and water would go down, and they would feel good about themselves because they are doing things that are better for the environment!
- Green roofs help to mitigate the heat island effect of big cities, also help to create habitats for native insects, birds, and other small creatures, and can contain bioindicator plants that can help people to keep an eye on their personal habitat and it's environmental impact.
- Water recycling helps reduce grey water runoff, older/used algae can be made into biodiesel or fertilizer, can use water wheels or water turbines to generate more clean energy.
- Interlocking solar panels can be used in a smaller space, and can move to track the sun, easy to be set up/taken down/re-arranged by someone who is not an expert (user friendly).

We will focus on algae water recycling, interlocking solar panels, and astroturf green roof. We will mostly focus on the astroturf green roof because it can be most accessible/adaptable and it can have the most variations.

Posted 10th February 2015 by Peaceful Penguins

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27th January 2015

Field trip on the 15th of February

Posted 27th January 2015 by Peaceful Penguins

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27th January 2015

Peaceful Penguins Meeting 01 - 27.01.2015
Parker, Htet Htet, Tucker, Adrick, Jonathan
Time index: 15:29 - 16:50
- Jonathan pitched a project idea via powerpoint - green apartments
- Whole group brainstormed any ideas we may have, conversation goes towards energy efficiency
- Group talks about field research we may want to do
- Air batteries?
- Architects - Center for Public Interest Design
- Sustainability - social equity, environmental ecology, economics
- Interior, recycled furniture, minimal material, multi-use

Posted 27th January 2015 by Peaceful Penguins

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