Mindfulness

Any thouths or questions?

Elizabeth introduction and slides

Learning objective

1. Define solid waste.
2. Define hazardous waste.
3. Identify and define the solid and/or hazardous waste streams in our project areas.
4. Generate exploratory intervention ideas related to our project areas.

Review from Tuesday

- Is everybody feeling okay with the collective feedback and grading plan?

Review from Tuesday: interventions have consequences

- Everything is interconnected.
- The interventions we make and solutions we design impact behavior and decision making.
- We should consider the potential consequences of our designs/interventions/actions.

Review from Tuesday: some intitial definitons of waste

- Definition of waste as "stuff we can no longer use."
  - "we" can be different people/systems/ecosystems/etc.
  - great solutions connect one "we's" waste with another "we's" food.
- What about the "solid" part?
- What about the "hazardous" part?

Last thoughts on definitions and project topics

- Goal is to work on projects and learn material you can't learn elsewhere in the EEE curriculm.
  - EAEE 4210 THERMAL TREATMNT-WASTE/BIO MAT
  - EAEE E4150 AIR POLLUTION PREVENTION/CONTR
  - EAEE E4951 Engineering systems for water treatment and re-use.
  - EACE E4163 Sustainable Water Treatment and Reuse.
  - EAEE E4950 ENIVRON BIOCHEMICAL PROCESSES

Group activity

- Introduce yourselves (names and pronouns)
  - Share your project ideas or topics
- For each project idea/topic try and define:
  1. What are the waste(s) you are working with?
  2. Are the waste(s) solid? And/or under what conditions are they solid?
  3. Are the waste(s) hazardous? And/or under what conditions are they hazardous? To what/whom are they hazardous?
  4. Utilization: Are there any other perspectives/systems that could use the waste(s)? What processes/transformations would improve utilization?
  5. What are some possible interventions or culminating deliverables for this project?

Mushroom Idea

1. Wood, compost, ash and pesticide contaminated soils, pig slurry, probably more.
2. So far mostly solid
3. Some of the ash and pesticide applications seem pretty hazardous to earth ecosystems (including humans), and sounds like mushrooms can help with treated wood that has bad chemicals in it as well. Mushrooms release enzymes that help break a lot of stuff down; also can encourage growth of other organisms that break stuff down.
4. Yes, a lot of this organic material can be used in other things; but the fungi help break down toxic compounds, and help generate soil/hummus that is ready to be used by plants faster.
5. Design: Add mushrooms to different compost bins, encourage mushrooms to grow in old dumps/landfills, etc.

   Design: Can also explore circular manufacturing with mycelium-based composites

Dog poop Idea

1. Dog poop (in nyc)
2. Hopefully solid but not always.
3. To my knowledge not hazarous to most things in most circumstances, but can be bio-hazardous. Also dogs are capable of eating hazardous stuff...
   - Need to look into this more
4. Yes; soils! Bacteria, funghi, all the "soils makers" etc., and then from there plants can use it.
5. What are some possible interventions?
   - Design: Public reusable scoops and buckets?
   - Design: Policy requiring individual (city-provided) scoops/buckets.
   - How do we make this something people will actually use?
   - What are the costs of making this a separate waste stream?
   - How can it be woven in with other existing (or emerging waste streams) like compost?
   - Design: micro compost bins in each tree well, with public scoop
   - Design: redesign tree wells themselves for sanitary and hands-free composting of poop. (some kind of multilayered system or automated top soils mixer or something?)

Next activities

- Flip through notes on project ideas
- Research approach (google scholar, CLIO, web of science, nypl)
- Return to Groups for more project discussion
- Return to Groups for image hunt