

Product Proposal

Introduction and Statement of Purpose

My final product will be to design and physically develop an anaerobic digester (a system that turns trash into energy) that will be able to work more efficiently in colder temperatures while also being environmentally friendly. Currently, there are some anaerobic digestors out in the marketplace, but the one that I was able to see was one that was only operated with sunlight as the heat source. The problem I see with this is that this system would only work properly in areas that are usually hot and exposed to sunlight consistently. Here in Texas it does get hot, but there are someday that may be cooler and get less direct sunlight, so I want to design one that can be used in a larger range of places without the geography causing some limitations. If completed successfully this will be a useful product as society is moving to be more environmentally friendly this will allow us to become even closer and be able to avoid harsh pollution being exposed to the earth.

Review of Skills and Research

The success of this project relies on the knowledge I already have or will gain about the anaerobic digestion system. This means that I will need to do more research on the system and break down the system so that I will understand it. Once I am able to do so I will have to do research on ways that I can make the system more efficient and eco-friendly. There must be research was done that has alternatives to different energy sources and anaerobic digestion.

Furthermore, to create this I will need to obtain skills in building and analyzing. As when I build my final product I have to have some type of skill that will allow me to put it all physically together. Also, another skill that I do have but will have to utilize is brainstorming. This project will force me to think out of the box and find a solution that may not be obvious.

Methodology

Materials:

- Research about anaerobic digestors and research about alternative energy sources(eco friendly)
- Research on materials to create digester
- Sketch paper and pen/pencil
- 3D Design Software(optional)
- Trash
- Materials to create biodigester(research in progress ex: PVC pipes, bag, etc.)

Description of Process and Procedures:

1. Research information about biodigesters and do research about renewable energy sources or environmentally friendly sources

2. Research on how to create an anaerobic biodigester and on the different materials needed
3. Draft sketch and create the design of the biodigester system on paper
4. Evaluate sketch and make a final sketch of the digester
5. Create a 3D design of the anaerobic digester(optional)
6. Create basic anaerobic biodigester
7. Analyze biodigester and apply the alternative energy source to the power system
8. Make final adjustment to the physical design
9. With the final product make a conclusion from what has been created

Utilization of Higher-Level Thinking Skill

This final product is going to push me to express a variety of different skills such as constructing, designing, problem-solving and more. Since I will be constructing something I have never done before I will most likely face many challenges since it probably will not go exactly how I want it to go. This is why I am going to be able to work around certain problems I face to move forward.

Conclusion

With my final product, I predict that it will be able to efficiently work while being economically friendly. I think from this I will learn how we can be more environmentally caring and hopefully will be a step forward to applying this to our daily lives. I hope that people all around the world will be able to use this product to use in their homes and prevent large amounts of trash on the earth. Hopefully, this can then be done on a bigger scale to help prevent large amounts of pollution from getting into the atmosphere and environment.