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School: Stillwater Area High School

## Brainstorming

1. Energy Solar panels on school
2. Organic + Food (soil) Work with local farmer to transition to regenerative agriculture
3. Waste + Justice Work with grocery store(s) to donate food that would be thrown out to make a food shelf and/or donate to homeless shelters and people
4. Organic (soil, biodiversity) Stop pesticide use in a school district or city or park
5. Justice + Waste + Organic Make organic cotton masks and donate them
6. Biodiversity butterfly garden

Goals for climate action project: My project will be impactful and create a real change. I would like to involve more people than just myself and my partner in PGC. I think this could be through education and presentations or volunteering opportunities or both. I want to fully complete the project and in a timeframe in which I can see the benefits. For the purpose of PGC I want to have everything I have to do done (with this project) by April, so this would mean the project is fully approved and just has to be finished. If it could be fully finished that would be great but not all of my ideas would allow for that. I live in Minnesota and it is safe to assume that there will be snow on the ground from now until May so this restricts the projects I can do. I don't think any sort of garden or restoration project would be ideal and I would have to do that in the spring and summer. In short, my goals are as follows

- My part completed by April
- Involve or educate 250+ youth
- Impact the environment and/or people
- Fully complete by 2022

## Outline of Top 3

### Solar Panels on School roof

Cost: There are two options. The first is that the school purchases solar panels. There are grants for this but it would likely be well over 1 million dollars. The

second is called a power purchase agreement. This means a company owns the solar panels and the school pays no installation fees. The company sells the energy generated from the solar panels to the school at a lower price.

Feasibility: I think the second option is very feasible and the first is definitely an option too. It would take a lot of work to spread the idea and make it popular and convince the school board but it is possible. Yes, this is a very ambitious project, but I'm an ambitious person. Potential barriers to this include the school not having the structural integrity to support solar panels or if the roof needs to be replaced in the near future it would be quite expensive and hard to get approval for.

Metric for success: Work with a company to have the solar panels and layout fully designed. Get a project approved by the school board. Have installation dates set. (by April)

Impact: This would reduce the energy that comes from fossil fuels. The school is huge. It has somewhere between 4-9 acres of usable roof space (based on my google maps estimate) which I expect to generate between .5 and 1 megawatt hours of energy per year. This is a huge amount relative to what individuals and families normally use and this would have a big impact. I think it would also inspire other schools to implement solar solutions.

Steps: Meet with company representatives and get input from them. Gain interest among students. Talk to teachers and leadership. Present ideas to the school board for approval. Go from there as the situation requires.

Pros	Cons
<ul style="list-style-type: none"><li>- School board will listen to student ideas (if persistent enough)</li><li>- Could be free and economical</li><li>- Reduce CO<sub>2</sub> emissions</li><li>- It's about the right scale of a project</li><li>- Combines science, math, logistics work and the environment which is really interesting for me</li><li>- Would reap benefits for years to come and set our school on a track towards a sustainable future</li><li>- Could have a say in where money saved on electricity goes</li></ul>	<ul style="list-style-type: none"><li>- Cannot be fully completed till july/august 2021 but could be confirmed much sooner</li><li>- Not sure how involved I can be in the design process and how much the company that we would do this with would teach me and I would like to learn</li></ul>

Food Shelf from otherwise would be wasted groceries

Timeline: Setup and begin providing food by February.

Cost: It would probably cost a small amount of money to start up, maybe \$500.

Feasibility: I think it is feasible. I would need to work with the right people and organizations. Once again - It is ambitious, but I'm an ambitious person

Metric for success: Have a food shelf set up and available to low income families.

Get food from grocery stores that would be wasted. Restock twice a week. Provide 100 people with food per week. Fully complete and been functioning for two months by April.

Impact: It would give access to healthy food to people who may not have that luxury. It would help the community and individuals that face challenges. It would save energy and reduce food waste. It could provide relief to those struggling because of COVID.

Steps: Reach out to grocery stores and to people/organizations who might help me set this up. Set up a physical location - I'm thinking a good place might be a trailer park or a university campus. Advertise and spread the word. Recruit volunteers. Maintain it by getting food on a regular basis.

Pros	Cons
<ul style="list-style-type: none"><li>- Provide food for people struggling</li><li>- Reduce food waste</li><li>- Food used energy to be produced and transported so that is saved as well</li><li>- Scalable to whatever size we desire</li><li>- Easy community involvement</li><li>- Could be impactful after I leave</li></ul>	<ul style="list-style-type: none"><li>- Might be hard to set up a physical location, with no connections, but I have friends with connections to volunteering in a trailer park near me.</li><li>- Reliant on other people for volunteering and for it to be sustainable</li></ul>

Work with local farmer to transition to regenerative agriculture

Timeline: Confirmed plan by April 2021. Switch to regenerative by 2022 growing season

Cost: May have a cost of different equipment for farmers.

Feasibility: I'm not sure how feasible this is because farmers might not appreciate changing their ways and I can't tell them what to do, but I can encourage them and maybe provide resources.

Metric for success: 2 local farmers switch to regenerative no till, cover crop, agriculture by 2022 season. Confirmed plan by April 2021.

Impact: Regenerative agriculture is effective at sequestering CO<sub>2</sub> from the atmosphere and decreases the toxins in our food.

Steps: Research. Reach out to farmers. Talk to them and plan. Educate people on regenerative agriculture.

Pros	Cons
<ul style="list-style-type: none"><li>- Sequesters CO<sub>2</sub></li><li>- Reduces cancer causing chemicals on food</li><li>- Can make more money for the producer</li><li>- More sustainable agriculture</li><li>- Less erosion</li></ul>	<ul style="list-style-type: none"><li>- Farmers may not be receptive to a highschooler with no experience in agriculture convincing them to change their ways</li><li>- With development going in and increasing land price farmers may be uncertain how long they will stay and therefor unwilling to change</li><li>- Disconnected from my personal community (school and stuff)</li></ul>