Lab notes

1. Gather 36 popsicle sticks, Tape, Glue, and String, and separate 30 popsicle sticks in groups of 5.
2. Align each group of 5 popsicle sticks side by side, and have 1 of the 6 leftover sticks to be attached in a future step.
3. Once aligned, every popsicle stick in each group must be glued together by fives (*Note, Do NOT glue more than 5 together.)
4. Once done, use tape to create a 6 sided box using all of the popsicle sticks
5. Keep the top of the box off to fill with the supplies, then add 2 inch styrofoam and packing peanuts.
6. Then keep the top set of the popsicle sticks loosely taped together.
7. Then, glue string to the loosely taped top side of the box.
8. Once delivered, in order to access the necessities you must pull the string in an upwards motion.
9. This will cause the sides to collapse outwards in order for you to reach the supplies.
10. You may remove the packing peanuts and styrofoam and put them on the top of the makeshift floor.
11. This will be used to make a bed, in which you may put the top of the box back on in order to make a makeshift shelter.

Design 1

What I would like to do in a situation in which many are in need of disaster assistance and relief along with it is to use our military forces such as the ever popular national guard by using some tax money to our need and advantage. The National Guard would be sent by helicopter and would be dropped down along with supplies, this would be in order to provide help, supplies, and support. The supplies would come in their backpacks and the bag in question would be made out of polyester and Supima cotton, the polyester would be on the inside protecting the supplies and the Supima cotton would serve as a support to withstand the friction of the air and also add some protection. The backpack would most likely be 60-70 Liters filled with supplies, and 28 inches tall backpacks per National Guard, since it is a regular tactic used in order for long deployments and they will most likely be there indefinitely until the people in need of assistance are okay, in a safe place, and have a sensation of comfort. The backpacks would weigh from 80-120 lbs in order to truly carry the essentials for those in need, another regular military grade backpack, it may vary depending on the type of assistance needed but it should be full proof. The National Guard will be transported to the people in need using parachutes, obviously being military grade, being heavy enough to cause friction with the air to slow down the human, but light enough not to cause the human to fall. Deployment should

cause us to lose some money, but in the long run this will help many and we will continue to make money by using taxes to our advantage.

Design 2

This next design will be able to incorporate an actual airdrop using parachutes and a crate, but what type of crate and what type of parachute? The Parachute will use a T-10 parachute, will cost at least $350 and at most $800 but with this airdrop a nice $400 will be used in order to ensure the safety of the airdrop. The Parachute will be dropped by a medical helicopter and will drop first aid kits, water, food, and many other necessities. The Crate itself will be made of 5 x 1 foot wood constructed into a 5 x 5 crate, then 10mm extruded polypropylene double layer collapsible side walls, cross fluted for structural rigidity. Then it would have packing peanuts on the inside to protect the supplies and the inside walls would be covered with Supima Cotton (very durable egyptian cotton but also soft), causing easy and better airdrops. Luxury supima cotton is what we would need, costing us at least $100, durable, cheap, and reusable.

Ikal: Strategies for a good system
This website was made by students for research on this specific topic which helps us in the situation that we are in and to be able to learn from them and their way of thinking.It provides examples to help build your own system and how to do it, it also provides diagrams for a better understanding on the topic of work.

Ikal: Red Cross
This website provides a good understanding of how to work a system to deliver resources to a disaster site. Since the Red Cross does this many times, they can help us to be able to see what it's like to do it and what the best way is.

Jacob: Humanitarian airdrops
The air drops are usually to send aid as a last resort and it allows others to send aid from far away that cars and boats cannot get to which is actually very helpful for us but still can damage the land.

Jacob: Food choices
Air drops are potentially dangerous but very helpful to transport supplies to another place you cannot drive through. The resources do need reinforcement to keep the supplies from breaking or damaging the plane can drop the supplies more than 1,000 feet from the ground to then drop the supplies.

Jacob/Ikal: Crate and airdrop organization
MIlitary can use this in during natural disasters and can transport food and water, this website also uses donations in order to help people in need using airdrops to deliver resources and is usually dropped off on shores or beaches because of the clears

Seb:
Red Cross Disaster Relief: Provides immediate relief by using red cross vans, which are used in order to provide supplies such as first aid kits, emotional support, and gives water and hot meals.

***Disaster Assistance*: Able to provide help and supplies for the entire country using FEMA, and using many different corporations in order to provide help to all.**

***Disaster Relief Assistance Using Taxes*: The IRS is able to provide supplies and assistance for those who are in a disaster by using tax payer money in order to complete that action for the greater good of people, using the taxes to make supplies and send out military to help the U.S.**

***Parachute Design*: Nasa Talks about how parachutes function and how they design them for their spacecraft in order for the spacecraft in question to land softly and safely, should help us with designing our parachute for the airdrop.**

Nick:
***Emergency Supplies Kit* - It gives basic information on how to pack and how to know if your first aid kit is expired. It tells you stuff that isn't on your mind like a radio and plastic shear to make shelter in place.**
***How to use a first aid kit*- The website tells you how to use the website through a natural disaster or just in general either way it shows you on how to use the kit.**