Post Disaster Shelters Design Project

Natural disasters can impact a large population in a short time, leaving many people in desperate situations. On average over 30 million people are displaced globally in the course of a year. Within your lifetime, media coverage has shown firsthand the needs of a large population following a natural disaster, for example, the earthquake in Haiti (Jan 2010). Shelter is one of humanity’s basic needs on Maslow’s hierarchy of needs. With this in mind your team will be designing post disaster shelters for locations where the plight of a population is desperate.

Initially, your team will need to investigate and determine a location and a natural disaster, which might occur in that region, for which you will design your shelters. The location should not be in the US, but rather a foreign country that one would consider an emerging or developing country (rather than a “first world” country).

Your team will need to create two shelter designs. The first shelter design will be made from local materials that would be available immediately following the disaster you have chosen and should last 1-2 years. The second shelter design will be made of recycled materials and will be made to last 10-20 years. Of course, initially you will have many ideas and concepts that you will narrow down to your final two designs, as we follow the design process.

The requirements of your shelters (2) are as follows:

1. Must house a 6 persons with some privacy from other family groups
2. Must be able to endure for the timeframe described
   a. One shelter for 1-2 years – local materials only
   b. Second shelter for 10-20 years – recycled materials
3. Only 2 of the same location and disaster are allowed per class – sign up on Angel discussion when your team has decided and make sure there are no more than a total of two teams doing the same problem.

Your team will be creating a design, building prototype to scale, evaluating your shelter against criteria and then doing a cost/benefit analysis of the two different design shelters that you create to compare them.