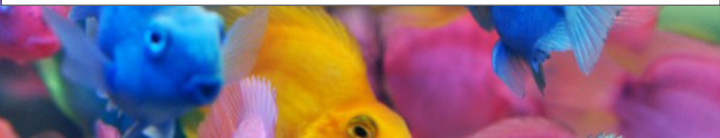
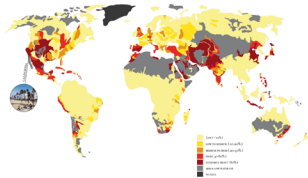




SYSTEMS

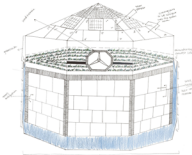


WATER STRESS LEVELS AROUND THE WORLD

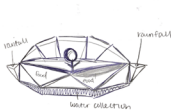


My structural system drawing is a combination of both my off-grid energy structure as well as my greenhouse structure as drawn below. It acts as both a greenhouse and as a water collection storage structure because of the extreme drought that California is in. For the greenhouse, the roof opens according to what the temperature is outside or inside. There is a water collection system under the whole structure in order to catch the rainfall if it does rain to help get water when in a drought.

WORLD MAP OF WATER STRESS LEVELS AROUND THE WORLD
Key Location: California (Extreme Drought)



STRUCTURAL SYSTEM DRAWING



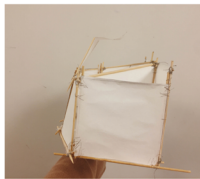
STRUCTURE DRAWING 1



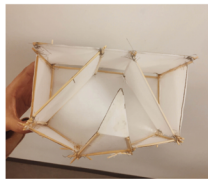
STRUCTURE DRAWING 2



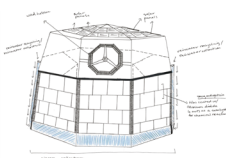
FRONT ANGLE OF STRUCTURE



SIDE ANGLE OF STRUCTURE

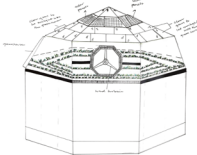


BIRD'S-EYE VIEW OF STRUCTURE



STRUCTURE DRAWING 1: Off-Grid Energy

For my structure, I based it off of my original structure shape, with the structure and interior, but I added major parts to the structure in order to allow it to work off grid as well as be a more useful resource. I added a rainwater recycling and rainwater collection system that will allow the water to get down to the bottom of the structure, where the water collection is. I also added a wind turbine that will help with wind power when off-grid as well as solar panels that will enable the solar energy and add to another aspect of an off-grid structure. For the whole body of the structure, I added the tiles that I researched about. They are tiles coated with titanium dioxide that acts as a catalyst for chemical reactions using the sunlight when the UV rays hit it and that will be surrounded it to help with smog mitigation.



STRUCTURE DRAWING 2: Greenhouse

For my structure, I decided to make a clear glass rooftop above the greenhouse with solar panels in order for the greenhouse to get both energy and sunlight from the clear glass. If I were to make this structure in real life, the rooftop would be able to raise up automatically as well as the clear glass walling around the greenhouse according to how cold or how hot it is outside. Sometimes the inside might be hotter than it is outside and then therefore the plants will be able to get fresh air. The wind turbine will be there in order to help with energy again for the greenhouse.



Xtreme Leather MC# 6591-02

Xtreme Leather is extremely resilient leather. It has a solar reflective version with a unique cooling property. There are special pigments that are used to reduce the heating of the leather that's caused by solar radiation.



Natur'lin Semi-rigid MC# 6521-01

Natur'lin Semi-rigid is a natural insulation that is composed of 75% linen and 15% polyester. It is used for wall and ceiling insulation. It is water resistant and it is semi-rigid. It's also biodegradable, easily recyclable, renewable and is a waste material content.



bCore MC# 7132-03

The material has a similar mechanical performance to standard wood and it is processed to use the same machining equipment as any other core material. It has medium water resistance and is sound absorbing as well as it's composable, biodegradable, and lightweight.



Cork-n Roll MC# 7416-02

The fabric has natural and rustic appearance, yet it's feeling is smooth and refined. It has a medium water resistance and it is extremely sound absorbing. Although it has a low thermal conductivity, it is composable and biodegradable.



Biolather MC# 6185-02

Biolather are the tough, flexible, translucent sheets that are made of bacterial cellulose. Bacterial cellulose is produced of the secretion from the bacteria that are fed by a sugary solution in a warm bath. The biolather is extremely high water resistant and has a flexible stiffness.