Conceptual Glazing Options

TEAM 5: OMAR, RYAN, LOLOH, CODY
Woven Bag - Omar

- They are very cheap to buy and transport to Kenya.
- They are transparent to allow light to get in the greenhouse.
- They come laminated in order to protect the greenhouse from the rain.
- Biaxially Oriented Polypropylene (BOPP) is a polypropylene film that has been stretched in both the machine and cross directions. Not as transparent as the other types of plastic, but it has good resistance to fatigue.
- Resistant to oils and greases
- Good puncture and flex-crack resistance over a wide range of temperatures
- Not affected by moisture and does not wrinkle or shrink with environmental changes
- Recyclable
Polyethylene Film (plastic film)-Loloh

- Thick and flexible
- UV resistant
- Diffuses light: bounces light and reduces shadows
- Easy to install
- Price around $50 - $100
- Provides good heat distribution
- Long-lasting
Cloth/Plastic Combination - Ryan

- Cloth or another cheap, non-transmissive material would cover the sides to reduce cost.
- Diffractive Polyethylene Film would cover the top section like shown.
- Film would be weather proof and long lasting (approximately 7 years).
- Cloth would be replaced more often, but it would be cheap.
- Completely UV resistant.
- Total Cost: around $35.
Insulated layer filled with CO₂ - Cody

- Translucent: Use cheap plastic that is completely clear
- Light Diffusion: Only cover the top with plastic and the rest with recycled tarp
- Weather proof: Flaw
- Insulation: Great during daytime, lacking during the evening
- Cost: Cheap plastic, but CO₂ source would be deciding factor

Keys:
- 1) CO₂ Absorbs UV and other radiation and converts it to the infrared range
- 2) “Another atmosphere”