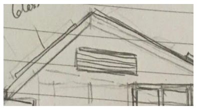
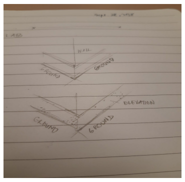
Section B_Construction

CONCEPTUAL DESIGN

Solutions, alternatives, possible improvements and combinations, decision making:

SUBSYSTEMS:
Insulation
Ventilation
Water Collection and Filtration
Pests Control
Electrical Power
Security

Insulation	Ventilation	Water Collection & Filtration	Pests Control	Security	Electrical Power
Bubble wrap over glass (kate) Soft material insulation on glass double as protection (David) Styrofoam on walls(Megan) DIY cellulose insulation (recycled material) treated with chemicals to make rodent proof (Lana) Double layered walls (Megan)	Small opening near the ceiling with screen  (Megan) Fans hanging from the ceiling for circulation (kate) Windows that open and close, controlled by a thermostat (Lana)	Guttering system and storage that's connected inside. (Megan) Rain barrel (kate) condensed water collection from the roof(David) Water heating system for snow in the winter (Lana) Homemade water filtration system using sand, carbon, plastic bottles, etc. (Lana)	Barrier above the floor and up walls. Maybe metal?(kate) Copper mesh awn & Garden › Pest Control › Repellents 50 feet Roll over image to zoom in (Megan) Screen for openings (Megan) Elevation, or maybe baseboards that couldn't let rats pass through  LAB WALL GROUND GROUND ELEVATION GROUND GROUND	Code Lock on door (kate) Glass or plastic walls that are difficult to break (Lana) Security Alarm (Megan) Simple combination lock - to save	Wind turbine (Lana) Solar panels and batteries for backup (David) Portable Generator Inverter for AC power if needed (Lana)

		Rain barrels of clear plastic placed in sunlight to use solar water disinfection method to filter the water. (Lana).	(Megan) Sealant around walls and in cracks (Lana)	money (Lana)	

Selection matrix
3- green
2- yellow
1- red

	Option 1 - High Tech	Option 2	Option 3 - Low budget
Insulation	🟥 Styrofoam on Walls	🟩 Bubble wrap over Glass	🟩 Recycled insulation (chemical treated)
Ventilation	🟩 Windows that open and close & Thermostat	🟨 Fans Attached to Ceiling	🟥 Small Opening Near Ceiling with Screen
Water Collection & Filtration	🟩 Gutter and Storage System	🟨 Clear Plastic Rain Barrels	🟥 Homemade water Filtration system
Pests Control	🟩 Copper mesh around Base and up walls	🟩 Elevation	🟨 Sealant around walls and Cracks
Security	🟥 Security Alarm	🟩 Code Lock Door	🟩 Simple Combination Lock
Electrical Power	🟥 Portable Generator	🟩 Solar Panels	🟨 Wind Turbine
Total	12	16	12