Deliverable G
Construction 1 - “Raise the Roof”

Sl. no	Aspect	Objectives	Why	When	How	Result
1	Roof type (shape)	- Weather conditions? -- rain or snow - Shape is suitable for harsh Canadian weather conditions - Shape should be visually appealing -Roof should be easy to construct	- The shape of the roof will affect other prototyping factors such as the slope, overhang, surface area, and ease of construction.	- March 27th, 2019	- Researching and comparing different styles of roofs to find the most efficient for solar panels, while keeping the slope to a minimum.	-Roof will be a gable shape.
2	Roof materials	- 25 year longevity - Able to withstand Canadian winter -can ventilate and regulate indoor temperature	- Improvement to the value and lifetime of the roof will improve the worth and longevity of our livable shed.	- March 27th, 2019	- Researching and comparing different roofing materials to find and use the most effective material for protection against harsh weather and extending the lifetime of the roof.	- Roofing material will be asphalt shingles.

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3	Roof slope	-visually appealing and lasts longer - Sufficient slope to shed water - Low enough slope to make roofing easy -to help determine the appropriate material for the roof	- The slope has an effect on the style, interior dimensions, and materials that is used for the covering.	- March 27th, 2019	- Researching and comparing different slopes to get the most surface area of direct sunlight and to ensure that snow or any other substance won’t get stuck.	- Slope will be a 5/12.
4	Roof overhang	- Large enough to shed water away from the building - Small enough to not affect the structural stability of the roof - Small enough to be cost effective	- The roof overhang sheds water away from the walls of the building, while providing an area to store things such an firewood. Although, having a larger overhang uses more material, and is harder to construct.	- March 27th, 2019	- Researching and comparing different overhangs to find the most cost effective, while also shedding water sufficiently.	- Overhang will be one foot.

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5	Roof surface area	- Sufficient size for solar panels - able to catch enough waterfall during monsoon seasons	- The house needs to have sufficient surface area to allow the solar panels to generate enough electricity so the house can function properly (appliances and such).	- March 27th, 2019	- Measuring how much surface area we need through the other dimensions of the house - Determining how much space the solar team will need for their panels	- Surface area will be 65 square feet.