

Hex12

“Homeshed”

This hexagonal structure has proven quite versatile and economical. It began with a hexagonal deck frame made from 2x8's with sides 6' long, and with internal members just under 4'. The total area is 93.4 sq.ft. It is 10'4-3/4" from side to side, and 12' from point to point. It is supported entirely by six piers around the perimeter.

An attic within the roof structure provided extra room for storage or sleeping, and a small built-in desk area. A 5' - high sleeping loft was built “downstairs,” and a small storage room – or a cubby for an alternative toilet – was enclosed beneath it.

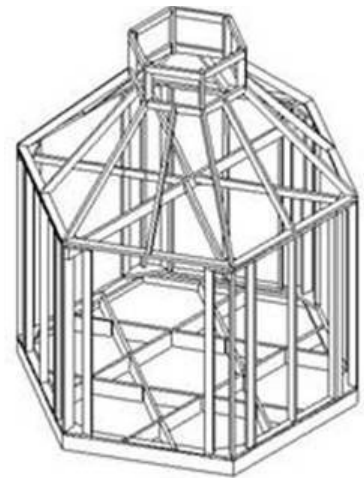
The cupola allowed for natural lighting, ventilation, and a view of the neighborhood.

If I were to do this again, I would do the vertical portion of the frame with six pillars extending one foot in each direction (as shown in the frame illustration. These pillars would be sheathed with 1-foot-wide strips of plywood on each outer side, leaving 4-foot-wide openings on each of the six sides. This would make it possible to join a series of them together to make a multi-roomed dwelling.

In the structure I built, the floor framing consisted of short interlocking pieces in the pattern of hexagons and triangles as shown in the illustration. The intent was to save costs by using salvaged scraps. The floor sections are covered by plywood lids so I have storage underneath. In some cases these sections have bottoms on them, others give direct access to the earth beneath. I had even begun an indoor well project (**see water**) beneath one of them, but ran into difficulties at a depth of about 30 feet.

More recently I have thought of this structure as an initial building for an off-grid infrastructure. It could provide the basic amenities of sleeping and sanitation, secure storage for tools and personal belongings, but with free floor space and broad openable panels, it could become a workshop for the fabrication of additional off-grid components.

In order for this to be practical it would need to be redesigned as a portable kit. The six vertical pillars would be ideal for this, but the 12 – foot hexagonal deck assembly would be too ungainly for convenient transportation. The deck re-design shown here would divide this deck in two pieces that could be secured together on site by adding the pieces on each end upon assembly. As a multipurpose structure of widely varying loads, I would recommend providing a central support pier, in addition to those around the perimeter.



For the present, I would picture the kit form for the roof structure as simply a collection of pre-cut pieces.

22*6=132' of 2X8

