Eight Foot Hexagonal Shed

This project began as an effort to get the most out of a small rented room. It consists of a slightly truncated hexagonal sleeping platform (8' point-to-point) elevated 5' off the floor. The layout of the pieces is shown here, and allows spanning wide areas with smaller scraps of wood. To truncate it as mentioned above, picture replacing the two pieces parallel to the right side with a single piece that would span the full distance. With perimeter pieces at 4’ each, this truncation distance would be 7’.

Beneath this platform is a hexagonal wrap-around desk with the center and an access section cut out. This provides 16 feet of outside desk perimeter that can all be reached from a swivel-seat in the center. Lighting is attached to the under-side of the sleeping platform.

By taking up all available slack, I was even able to get a small hammock to sag between the opposing points. With a book shelf and a telephone within reach, and a keyboard in my lap, it was an excellent place to be lazy. The hammock was swung up and hooked out of the way when not in use.

The frame used for the sleeping platform is a network of 30" 1x6's connected as shown The length of the perimeter pieces is 48", with one 7’ piece for the truncated side. Plywood was screwed to the bottom of this network, and the upper surface was cut into hexagonal and triangular lids. This provided compartments for the storage of clothes and tools.

The desk is a slightly modified version of the same layout, done in 1x3's, with a couple of additional supports. The structure is supported vertically by 4x4’s salvaged from pallets. An earlier version was supported by pairs of 5' 1x6's at each of the points.

This unit contains an adequate bedroom and office cubical in a very convenient and compact form. For additional storage, the 1X6's in the top frame could be replaced by 1X8's or wider. As an emergency housing situation a group of these could be nestled together in a warehouse or abandoned store. 4'-wide panels could separate them to provide privacy.

It then occurred to me that since three of the outside pieces were exactly four feet, you could make a hexagonal floor, and attach six 4’ X 8’ pieces of plywood around it (one panel with a door of course). Since the internal frame is truncated, there would be room to enter and move around before settling in above or below the platform.

Yep, I just had to try it – no problem.

The roof was a hexagonal frame based upon the parabolic dome calculation method described elsewhere. It is covered by heavy vinyl plastic cut from the bottom of a slightly-abused plastic wading pool. The “plumbing” on the lower-left is a wood stove (see “dragon”in the energy section) with a jacket around it to capture heat for the shack. Note the metal around the entry point – very important. Temperatures of the incoming air could get hot enough to become a fire hazard. The tube in the background comes from a blower that circulates the air.

You might find it interesting that this hexagonal layout can also be translated into an "any-stick shelter" structure, but it is much trickier to assemble, and is probably not as practical.

The area of a hexagon will be the length of one of its sides squared, times 2.5981.

The center-to-center length of the internal pieces of this structure will be 2/3 the length of one of the sides.