Minecraft Block Building

Lets play with the 3D coordinates to make some cool structures! Here I will describe the amount of cubes that you can print off and construct to build real life Minecraft structures.

Goals

- Learn about 3 dimensional coordinates.
- Make cool structures from Minecraft blocks.

Materials:

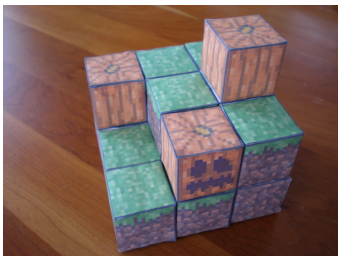
- Minecraft Papercraft blocks. These can be found at this link:
  - http://www.pixelpapercraft.com/papercraft/505a37f9d3a7bc5709000187/mini-blocks-all
- Some space for building.
- 5x5 grid for building.

Directions

1. Download and construct needed blocks.
2. (Optional) Draw or construct grid of 5 squares by 5 squares on a flat surface. Grid should labeled like shown below:

0,0,4	1,0,4	2,0,4	3,0,4	4,0,4
0,0,3	1,0,3	2,0,3	3,0,3	4,0,3
0,0,2	1,0,2	2,0,2	3,0,2	4,0,2
0,0,1	1,0,1	2,0,1	3,0,1	4,0,1
0,0,0	1,0,0	2,0,0	3,0,0	4,0,0

3. Place a wood block (if using the grid place in bottom left corner) this block will be the "origin point" or starting point. It has the coordinate of 0 for x, 0 for y, and 0 for z.
4. Place a second wood block to the right of the first. This block now has the (x,y,z) point of (1,0,0).
5. Place a third wood block in front of the origin block (1st block) this block now has the (x,y,z) coordinates of (0,0,1)
6. Now lets get a little trickier, put a fourth wood block on top of the first wood block! The fourth wood block now has the coordinates (0,1,0)! The table below shows how the middle number displays height.



0,1,0
0,0,0

7. Now lets follow this list! The coordinates (x,y,z,Block) will tell you where and what type of block to put down!

   (1,1,0,Wood)
   (1,0,1,Wood)
   (2,0,0,Wood)
   (0,0,2,Wood)
   (0,1,1,Wood)
   (0,2,0,Wood)
   (1,1,1,Crafting Table)

8. By now you can see that we are building a 5X5 cabin for Minecraft's player. Continue making blocks and placing them. You can use the coordinate system to plan out or communicate where these blocks can go!