Minecraft Python  
Basic Guide

# DEFINITIONS

|  |  |
| --- | --- |
| x, y, z | Three integer coordinates |
| xf, yf, zf | Three float coordinates |
| blockTypeId | Integer from 0 to 255. 0 is nothing/air.  See block table for id number. |
| blockData | Integer from 0 to 15.  Extra block data. For example, wool color. |

# COORDINATE SYSTEM

* Blocks are in a three integer ‘vector’ (X, Y, Z)
* The player can be in a three *float* vector.
* (0, 0, 0) is the sea level where the spawn point is
* X and Z are level with the ground
  + -X is west, +X is east
  + -Z is north, +Z is south
* Y is up and down

You can find out what your coordinates are, or the coordinates of the block you are looking at, by pressing **F3**.

# Getting started

You can start out any python script with this to load the minecraft code:

|  |
| --- |
| from mcpi.minecraft import Minecraft mc = Minecraft.create() |

And test the connection with this:

|  |
| --- |
| mc.postToChat('hello') |

# Commands

A ‘🡪’ shows that the function has a return value of the type it points to.

## World

mc.getBlock(x, y, z) 🡪 blockTypeId  
*Find out what kind of block is at the coordinates given.*

mc.getBlocks(x1, y1, z1, x2, y2, z2) 🡪 [blockTypeId]  
*Find out what kinds of blocks inside the coordinates given.*

mc.getBlockWithData(x, y, z) 🡪 blockTypeId, blockData  
*Find out what kind of block is at the coordinates given with the extra data attached.*

mc.setBlock(x, y, z, blockTypeId)  
*Change the block at the given address to the type of block given*

mc.setBlock(x, y, z, blockTypeId, blockData)  
*Change the block at the given address to the type of block given with the special block properties.*

mc.setBlocks(x1, y1, z1, x2, y2, z2, blockTypeId)  
*Like setBlock(), except it fills in a cube between XYZ1 and XYZ2*

mc.setBlocks(x1,y1,z1,x2,y2,z2,blockTypeId,blockData)  
*Like setBlocks(), but with special data.*

mc.getHeight(x,z) 🡪 Integer  
*Get the tallest point at the X/Z position.*

## Player

mc.player.getTilePos() 🡪 x,y,z  
*Get the coordinates of where your feet are*

mc.player.setTilePos(x,y,z)  
*Move (teleport) your player to this position.*

mc.player.getPos() 🡪 xf,yf,zf  
*Get the precise coordinates of where your feet are*

mc.player.setPos(xf,yf,zf)  
*Move your player to this precise position*

mc.getPlayerEntityIds() 🡪 [players]  
*Get the ID’s of players in the game.*

## Other

mc.postToChat(string)  
*Post a chat message*

mc.events.pollBlockHts() 🡪 pos,surface,entityId|pos,surface,entityId|...  
(pos is x,y,z surface is x,y,z, entityId is int)  
*Returns a bunch of info about a block that’s been hit by a sword.*

mc.events.clearAll()  
*Clear the chat messages*

mc.saveCheckpoint()  
*Save a checkpoint*

mc.restoreCheckpoint ()  
*Restore from checkpoint*

mc.setting(setting, status)  
*Set the game setting to ‘status’, which can be 0 or 1 (off or on)*

