Raspberry Pi  
Minecraft  
Python coding

Tutorial by Andrew Oakley   
Public Domain 17 May 2018 [www.cotswoldjam.org](http://www.cotswoldjam.org)

To start Minecraft, click the Pi menu - Games - Minecraft Pi

Click Start Game then click an existing game or click Create New

TAB key to switch between the Minecraft world and the normal mouse on the desktop. The TAB key is to the left of the letter Q.

ESC for the game menu

|  |  |
| --- | --- |
| Mouse to look WSAD to move SPACE to jump Left-click to destroy a block Right-click to create a block  1-9 to select a type of block | 0 to select the sword  E to reassign blocks 0-9  SPACE twice to fly  SPACE twice again to stop flying  SPACE once while flying to go up  SHIFT while flying to go down |

To code with Minecraft, leave Minecraft running. Press the TAB key to release the mouse from the game, so you can use the mouse on the desktop.

Click Pi menu - Programming - Python3 (IDLE)

At this point your tutor may want you to open an existing program using File menu - Open.

Alternatively, to create a new program use File menu - New File

Once you have loaded or written your program, use Run menu - Run module or press F5.

Example Minecrft code:

from mcpi.minecraft import Minecraft

from mcpi import block

mc = Minecraft.create()

x,y,z = mc.player.getTilePos()

# Change the block under the player's feet to Glass

mc.setBlock(x, y, z-1, block.GLASS.id)

List of block types:

|  |  |
| --- | --- |
| 0 AIR  1 STONE  2 GRASS  3 DIRT  4 COBBLESTONE  5 WOOD\_PLANKS  6 SAPLING  7 BEDROCK  8 WATER\_FLOWING  8 WATER  9 WATER\_STATIONARY  10 LAVA\_FLOWING  10 LAVA  11 LAVA\_STATIONARY  12 SAND  13 GRAVEL  14 GOLD\_ORE  15 IRON\_ORE  16 COAL\_ORE  17 WOOD  18 LEAVES  20 GLASS  21 LAPIS\_LAZULI\_ORE  22 LAPIS\_LAZULI\_BLOCK  24 SANDSTONE  26 BED  30 COBWEB  31 GRASS\_TALL  35 WOOL  37 FLOWER\_YELLOW  38 FLOWER\_CYAN  39 MUSHROOM\_BROWN  40 MUSHROOM\_RED  41 GOLD\_BLOCK  42 IRON\_BLOCK  43 STONE\_SLAB\_DOUBLE | 44 STONE\_SLAB  45 BRICK\_BLOCK  46 TNT  47 BOOKSHELF  48 MOSS\_STONE  49 OBSIDIAN  50 TORCH  51 FIRE  53 STAIRS\_WOOD  54 CHEST  56 DIAMOND\_ORE  57 DIAMOND\_BLOCK  58 CRAFTING\_TABLE  60 FARMLAND  61 FURNACE\_INACTIVE  62 FURNACE\_ACTIVE  64 DOOR\_WOOD  65 LADDER  67 STAIRS\_COBBLESTONE  71 DOOR\_IRON  73 REDSTONE\_ORE  78 SNOW  79 ICE  80 SNOW\_BLOCK  81 CACTUS  82 CLAY  83 SUGAR\_CANE  85 FENCE  89 GLOWSTONE\_BLOCK  95 BEDROCK\_INVISIBLE  98 STONE\_BRICK  102 GLASS\_PANE  103 MELON  107 FENCE\_GATE  246 GLOWING\_OBSIDIAN  247 NETHER\_REACTOR\_CORE |

Wool is white by default, but can have another colour, for example red:

mc.setBlock(x, y, z, block.WOOL.id, 14)

|  |  |
| --- | --- |
| 0 White  1 Orange  2 Magenta  3 Light blue  4 Yellow  5 Lime  6 Pink  7 Grey | 8 Light grey  9 Cyan  10 Purple  11 Blue  12 Brown  13 Green  14 Red  15 Black |