**Programming Minecraft in Python**

1. Once the Raspberry Pi has booted, start Minecraft from the Games menu.
2. Minecraft should now start. Click on the Start Game button.
3. Select a pre-made world or create a new one.
4. At this point you can play Minecraft as you normally would.
5. Here are some useful keyboard shortcuts:

Mouse movement – turn, aim, third person camera movement

Left mouse button – Destroy blocks

Right mouse button – Place blocks

Mouse wheel – Scroll through the quick-bar

Esc – Opens of closes the menu and gives back cursor control

1 to 8 – Selects the quick-bar item

W – Move forward

A – Pan left

S – Move backward

D – Pan right

Spacebar – Jump, double tapping toggles Fly Mode. In Fly Mode pressing will gain altitude

Left Shift – Sneak

E – Opens a list of blocks

O – Release the mouse cursor from the game window

1. Now let us write a program to make stuff happen in Minecraft. We will write a program in the Python programming language. We must save all of our programs in the Documents/minecraft folder. If you are not clear where that is, ask for assistance.
2. Start IDLE by double-clicking the desktop icon.
3. Once IDLE has started, Choose File|New Window from the menu bar.
4. In the new window, type the following code:

import mcpi.minecraft as minecraft

mc = minecraft.Minecraft.create()

x = 10

y = 30

z = 12

mc.player.setPos(x, y, z)

1. Save this file with the filename

transport.py

1. Select Run|Run Module from the menu bar. When the program runs, it will connect to Minecraft and transport the player to coordinate (10, 30, 12). Be warned, depending on your World, you could be inside an object or underwater. If underwater, double click the spacebar and increase your altitude. If stuck inside an object, edit transport.py with different coordinates and run it again.
2. Now let’s write a program that will place a flower everywhere you go (repeat steps 10 – 13). Here’s the code.

import mcpi.minecraft as minecraft

import time

mc = minecraft.Minecraft.create()

while True:

pos = mc.player.getPos()

x = pos.x

y = pos.y

z = pos.z

block = 38

mc.setBlock(x, y, z, block)

time.sleep(0.2)

1. When you run this, try moving around the world and you will notice that everywhere you go, you plant a flower.