Minecraft Example Code

Use Python IDLE 2 and Minecraft side by side. In IDLE - File - New Window for a new script, remember to save it with a .py extension. Use TAB key to move out of Minecraft into IDLE.

Hello
Say hello in the chat window.

```python
import mcpi.minecraft as minecraft


world = minecraft.Minecraft.create()
world.postToChat('hello')
```

Random Teleport
Move around minecraft to a new location every 5 seconds.

```python
import mcpi.minecraft as minecraft
import random
import time

world = minecraft.Minecraft.create()

while True:
  x = random.randrange(-128, 128)
  y = random.randrange(0, 64)
  z = random.randrange(-128, 128)

  world.player.setPos(x, y, z)
  time.sleep(5)
```

Frozen

Change everywhere you step into ice.

```
import mcpi.minecraft as minecraft
import time

world = minecraft.Minecraft.create()

ice = 79

while True:
  time.sleep(0.2)

  x, y, z = world.player.getPos()
  world.setBlock(x, y - 1, z, ice)
```

Tower

Build a stone tower, change the block type and the height of the tower.

```
import mcpi.minecraft as minecraft

world = minecraft.Minecraft.create()

x, y, z = world.player.getPos()

for i in range(5):
  world.setBlock(x + 3, y + i, z, 1)
```

Wall

Build a wall.

```
import mcpi.minecraft as minecraft

world = minecraft.Minecraft.create()
x, y, z = world.player.getPos()

wall_height = 5
wall_length = 10

for i in range(wall_length):
  for j in range(wall_height):
    world.setBlock(x + i, y + j, z, 4)
```

Reset World

Clear out all other blocks (it may take some time to finish) and just leave grass and air. Add layers of soil, rock, coal and diamond below the grass.

```
import mcpi.minecraft as minecraft
import mcpi.block as block

world = minecraft.Minecraft.create()

world.setBlocks(-128, -64, -128,
                128, 0, 128,
                block.GRASS)

world.setBlocks(-128, 0, -128,
                128, 64, 128,
                block.AIR)
```

Tree

Build a tree at an x, y, z position. Change the block types, make leaf and trunk heights random. Build a forest using a loop

```
import mcpi.minecraft as minecraft
import mcpi.block as block

world = minecraft.Minecraft.create()

def build_a_tree_at(x, y, z):
  trunk_height = 5
  leaf_height = 3

  # tree trunk
  world.setBlocks(x, y, z,
                  x, y + trunk_height, z,
                  block.WOOD)

  # leaves
  world.setBlocks(x - 2, y + trunk_height, z - 2,
                  x + 2, y + trunk_height + leaf_height, z + 2,
                  block.LEAVES)

x, y, z = world.player.getPos()

build_a_tree_at(x + 9, y, z + 7)
build_a_tree_at(x + 5, y, z + 10)
```

House

Build a house from an x, y, z coordinate. Change to put a roof of different block type on top of it, add more windows, change width, depth, height of house

```python
import mcpi.minecraft as minecraft
import mcpi.block as block

world = minecraft.Minecraft.create()

def build_a_house_at(x, y, z):

    width = 6
    height = 8
    length = 6

    # house
    world.setBlocks(x, y, z,
                    x + length, y + height, z + width,
                    block.COBBLESTONE)
    # clear inside
    world.setBlocks(x + 1, y, z + 1,
                    x + length - 1, y + height - 1, z + width - 1,
                    block.AIR)

    # door
    world.setBlock(x + 3, y, z, block.AIR)
    world.setBlock(x + 3, y + 1, z, block.AIR)

    # window
    world.setBlock(x + 1, y + 5, z, block.GLASS)


build_a_house_at(10, 0, 40)
build_a_house_at(20, 0, 40)
build_a_house_at(30, 0, 40)
```

Creeper

An obsidian block follows you, trying to catch up, as you walk around. Change the block to make it more like a minecraft creeper.

```
import mcpi.minecraft as minecraft
import mcpi.block as block
import time
import random

world = minecraft.Minecraft.create()

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

# put the block a little way away to begin with
blockX = x
blockZ = z
blockY = y + 10
blockSpeed = 1.75

time.sleep(3)

while True:
  # erase block current position
  world.setBlock(blockX, blockY, blockZ, block.AIR)

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

  # move closer to player
  if x > blockX:
    blockX = blockX + 1
  elif x < blockX:
    blockX = blockX - 1
  if y > blockY:
    blockY = blockY + 1
  elif y < blockY:
    blockY = blockY - 1
  if z > blockZ:
    blockZ = blockZ + 1
  elif z < blockZ:
    blockZ = blockZ - 1

  # show block in new position
  world.setBlock(blockX, blockY, blockZ, block.OBSIDIAN)
  time.sleep(1 / blockSpeed)
```