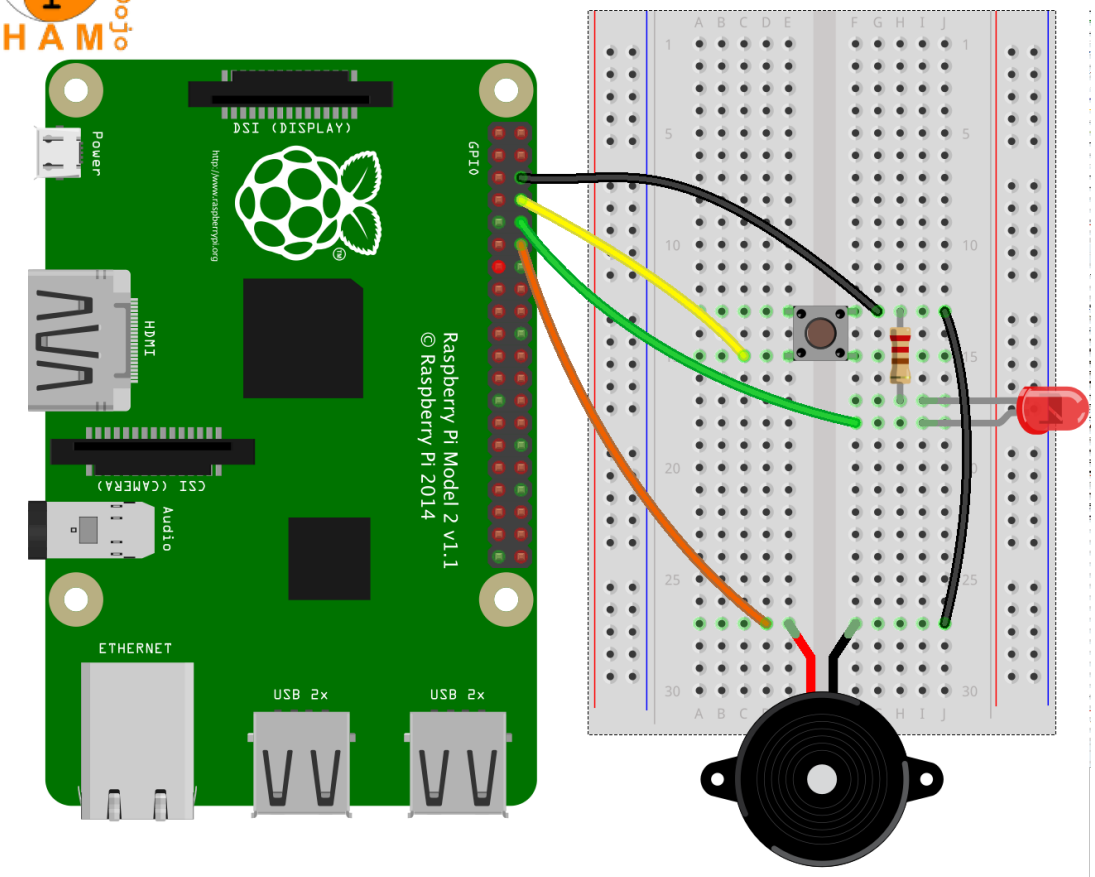
BIGGER BOOM!



Let's make a more impressive explosion crater!

We'll combine lots of the Python code we've already used before (led, buzzer, reaction game)

```
from gpiozero import Button, LED, Buzzer
import mcpi.minecraft as minecraft
import mcpi.block as block
from time import sleep

button = Button(14)     # Our button is connected to pin 14
led = LED(15)           # Our LED is conncted to pin 15
buzz = Buzzer(18)       # Our buzzer is conncted to pin18

mc = minecraft.Minecraft.create() # Connect to Minecraft - it must be running!

# Function to flash LED and make a beeping noise, faster and faster
def countdown():
    t =0.16             # starting on/off time for buzzer and LED
    repeat = 3          # starting number of flashes/beeps
    for i in range(5):  # Countdown from 5
        led.blink(on_time=t, off_time=t, n=repeat,background=True)
        mc.postToChat(str(5-i)) # Show timer on Minecraft screen
        buzz.beep(on_time=t, off_time=t, n=2,background=False)
        t = t/2         # halve on/off time each time through the loop
        repeat = 2*repeat # double number of flashes/beeps each time through loop


#Function to make a big, spherical hole
def bomb(x,y,z):
    mc.setBlock(x+1,y,z,block.TNT.id) # place a TNT block (just for show)
    sleep(1)
    mc.postToChat('BOOM!')
    blastRadius = 5      # The radius of our crater (in blocks)
    for x in range(-1*blastRadius,blastRadius): # x direction
        for y in range(-1*blastRadius, blastRadius): # y direction
            for z in range(-1*blastRadius, blastRadius): # z direction
                if x**2 + y**2 + z**2 < blastRadius**2: # make it spherical
                    mc.setBlock(pos.x + x, pos.y + y, pos.z +z, block.AIR)

# Main program

while True:
    sleep(0.1)
    button.wait_for_press()
    pos = mc.player.getTilePos() # Get the player's position
    countdown()                  # Start countdown
    bomb(pos.x,pos.y, pos.z)     # Set bomb

# Note n**2 is the same as n squared (n*n)
```