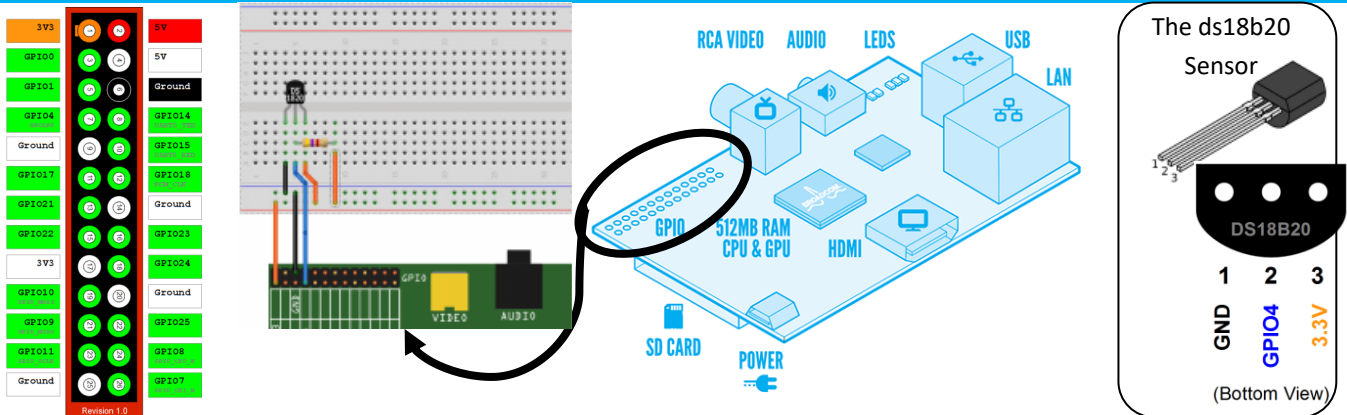




Learn ICT Raspberry Pi Cheat Sheets

Taking the temperature

Wiring Diagram



The easiest way to connect the sensor is using a breadboard like the image above. Connect a 4k7 resistor between pins 2 and 3 of the sensor, connect 3.3v (raspi pin 1) to pin 3 of the sensor, connect ground (raspi pin 6) to pin 1 of the sensor & connect pin 7 of the raspi to pin 2 of the sensor. The [link here](#) shows an alternative method without the use of a breadboard.

Code

```
import os
import glob
import time

os.system('modprobe w1-gpio')
os.system('modprobe w1-therm')

base_dir = '/sys/bus/w1/devices/'
device_folder = glob.glob(base_dir + '28*')[0]
device_file = device_folder + '/w1_slave'

def read_temp_raw():
    f = open(device_file, 'r')
    lines = f.readlines()
    f.close()
    return lines

def read_temp():
    lines = read_temp_raw()
    while lines[0].strip()[-3:] != 'YES':
        time.sleep(0.2)
        lines = read_temp_raw()
    equals_pos = lines[1].find('=')
    if equals_pos != -1:
        temp_string = lines[1][equals_pos+2:]
        temp_c = float(temp_string) / 1000.0
        return temp_c

#To read the temp run:
print("The temperature is " + str(read_temp()))
```

Ideas

Can be used to take temperature of a room or outdoors.