MAJI WATER QUALITIE DETECTOR

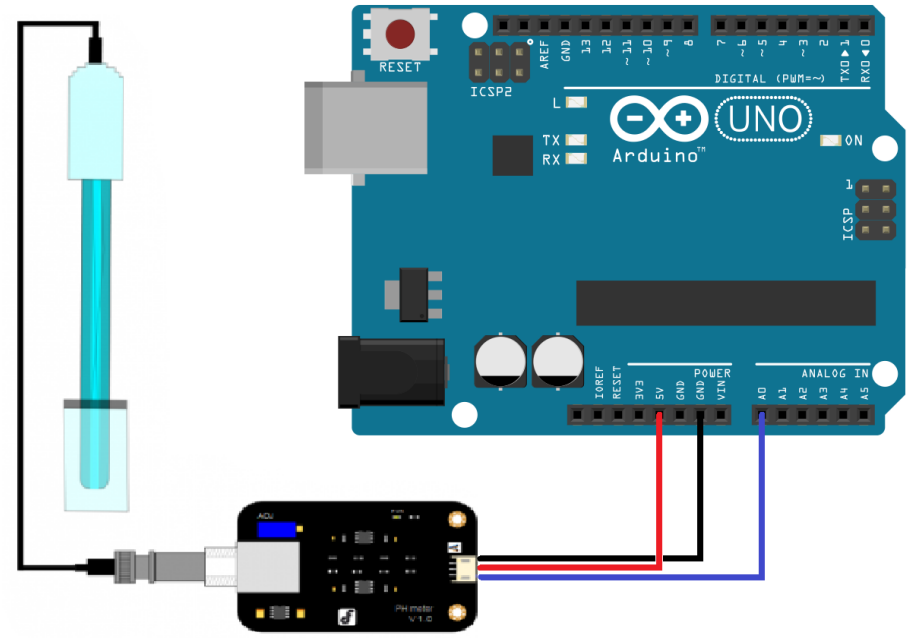
MAJI is a connected device that allows to measure the water quality and to extract data that will be used in various forms such as the making of a global map of areas of access to drinking water

Component Required:

1. Arduino UNO R3.
2. LCD Display Module
3. waterproof temperature sensor
4. PH meter
5. condictivity sensor
6. Turbidity sensor
7. shield arduino GPS
8. leds
9. 9v battery
10. 3D printer

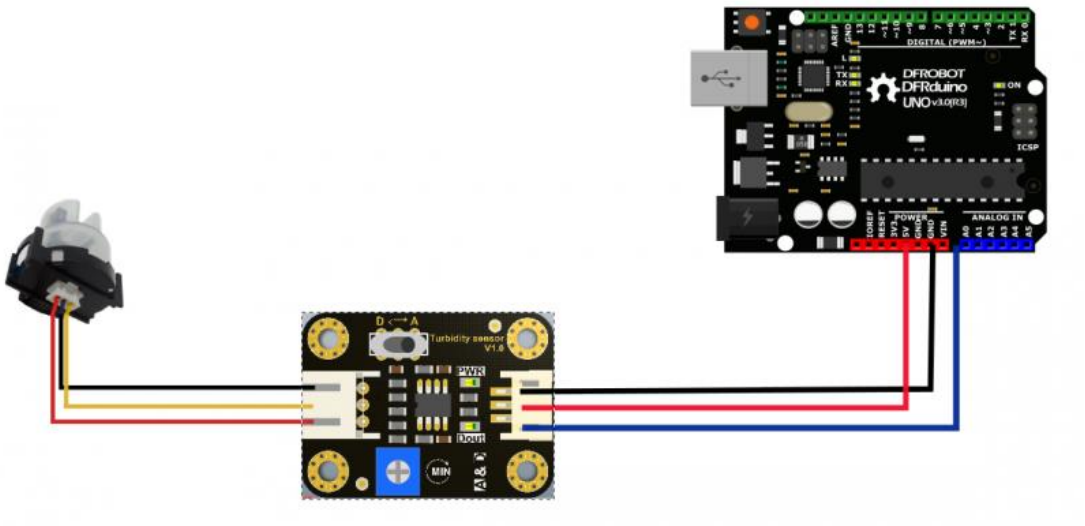
PH meter :

The ph meter is an instrument used to measure acidity or alkalinity of a solution. pH is the unit of measure that describes the degree of acidity or alkalinity. It is measured on a scale of 0 to 14.



Turbidity sensor :

The turbidity sensor detects water quality by measuring level of turbidity. It is able to detect suspended particles in water by measuring the light transmittance and scattering rate which changes with the amount of total suspended solids (TSS) in water. As the TTS increases, the liquid turbidity level increases



Conductivity sensor:

the conductivity sensor measures the electrical conductivity in a solution. Inside the conductivity probe, two electrodes are positioned opposite from each other, an AC voltage is applied to the electrodes causing cations to move to the negatively charged electrode, while the anions move to the positively electrode. The more free electrolyte the liquid contains, the higher the electrical conductivity.

Wiring and Connections:

The assembly of the maji prototype is quite simple. Use the stls files to make the case. Follow the instructions to make the good connections to the Arduino pin:

Turbidity sensor pin A0 ;
Conductivity sensor pin A1
Ph meter pin A2 ;
Temperature sensor pin 4 ;
You just have now to include the arduino code.

Arduino code: maji_code

3D printer: maji_stls