

3.1 Soil moisture Sensor

```
int MV;

float mp;

void setup()

{

    Serial.begin(9600);

}

void loop(){

    MV=analogRead(A0);

    mp=((MV/539.00)*100);

        Serial.print("\nSoil Moisture Value: ");

        Serial.print(mp);

        Serial.print("%");

        delay(1000);

}
```

3.2 temperature sensor

```
int T;

float temp;

void setup() {

    Serial.begin(9600);

}

void loop() {

    T = analogRead(A0);

    temp = (T * 5.0 / 1024.0 - 0.5) * 100;

    Serial.print("\nTemperature: ");

    Serial.print(temp);

    Serial.print(" °C");

    delay(1000);

}
```

3.22 led with sensors tempreature

```
#include <Wire.h>
```

```
#include <LiquidCrystal_I2C.h>
```

```
int T;
```

```
float temp;
```

```
LiquidCrystal_I2C lcd(0x27, 16, 2);
```

```
void setup() {
```

```
  lcd.init();
```

```
  lcd.backlight();
```

```
}
```

```
void loop() {
```

```
  T = analogRead(A0);
```

```
  temp = (T * 5.0 / 1024.0 - 0.5) * 100;
```

```
  lcd.clear();
```

```
  lcd.setCursor(0, 0);
```

```
  lcd.print("Temp: ");
```

```
  lcd.print(temp);
```

```
  lcd.print(" C");
```

```
  delay(1000);
```

```
}
```

5. Led Light with Arduino

```
// C++ code
```

```
//
```

```
void setup()
```

```
{
```

```
  pinMode(8, OUTPUT);
```

```
}
```

```
void loop()
```

```
{
```

```
  digitalWrite(8, HIGH);
```

```
  delay(1000); // Wait for 1000 millisecond(s)
```

```
  digitalWrite(8, LOW);
```

```
  delay(1000); // Wait for 1000 millisecond(s)
```

```
}
```

10 gas sensor

```
int MQ = A0;
int led = 8;
float val;

void setup() {
  pinMode(led, OUTPUT);
  Serial.begin(9600);
}

void loop() {
  val = analogRead(MQ);

  if (val >= 250) {
    digitalWrite(led, HIGH);
    Serial.println("Gas Detected!");
  } else {
    digitalWrite(led, LOW);
    Serial.println("No Gas");
  }

  delay(1000);
}
```