

Source Code:

```
#include <ESP8266WiFi.h>
#include <PubSubClient.h>

const char* ssid="";
const char* password="";
const char* mqtt_server="";
const char* server = "api.thingspeak.com";

String apiKey="";
WiFiClient espClient;
PubSubClient client(espClient);
long lastmsg=0;
float temp=0;
void wifisetup()
{
  delay(100);
  Serial.println();
  Serial.print("Connecting");Serial.print(ssid);
  WiFi.begin(ssid,password);
  while(WiFi.status()!=WL_CONNECTED)
  {
    delay(100);
    Serial.print('.');
  }
  Serial.println("");
  Serial.println("WiFi Connected");
  Serial.println("IP ADD:");
  Serial.println(WiFi.localIP());
}
```

```

void reconnect(){
while(!client.connected()){
Serial.print("Trying MQTT");
if(client.connect("temperature_sensor")){
Serial.println("Done");
}
else{
Serial.print(client.state());
delay(5000);
}
}
}

void thingsp(float temp)
{
String postStr = apiKey;
postStr += "&field1=";
postStr += String(temp);
postStr += "\r\n\r\n";
espClient.print("POST /update HTTP/1.1\n");
espClient.print("Host: api.thingspeak.com\n");
espClient.print("Connection: close\n");
espClient.print("X-THINGSPEAKAPIKEY: " + apiKey + "\n");

espClient.print("Content-Type: application/x-www-form-urlencoded\n");
espClient.print("Content-Length: ");
espClient.print(postStr.length());
espClient.print("\n\n");
espClient.print(postStr);
}

float gettemp(){

```

```
float temp1;
temp1=(analogRead(A0)/1023.0)*330;
return temp1;
}
void mqtt()
{
if(!client.connected()){reconnect();}
client.loop();
long now=millis();
if(now-lastmsg>1000){
lastmsg=now;
temp=gettemp();
Serial.println(temp);
client.publish("ha/_temperature1", String(temp).c_str(),true);} }
void setup()
{
Serial.begin(115200);
wifisetaup();
client.setServer(mqtt_server,1883);
}
void loop()
{
espClient.connect(server,80);
thingsp(temp);
espClient.stop();
mqtt();
}
```