

```

1 //assigning pin for the temperature sesor
2 int temppin=0;
3
4 void setup() {
5   Serial.begin(9600);
6   Serial.println("CLEAR SHEET"); //setup so PLX-DAQ recieves data.
7   Serial.println("CLEAR DATA"); //aka talking to PLX-DAQ
8   Serial.println("LABEL, TimeElappsed, TempC, TempF"); //Label the columns in the
   Excel spreadsheet
9   Serial.println("RESETTIMER");
10 }
11
12 void loop() {
13   Serial.print("DATA,"); //PLX-DAQ no knows that it will recieve data
14
15   unsigned long ElapsedTime=millis(); //Reads how much time has elapsed since the
   beggining of he experiment
16   ElapsedTime=ElapsedTime*0.001; //convert milliseconds to seconds
17
18   int temp=analogRead(temppin); //Reading data from the hot sensor. Stored as a 10bit
   number
19   float voltage = temp * 5.0/1024;
20   float tempC=(voltage - 0.5) * 100; //Converting 10bit number to the temperature.
21
22   float tempF=((tempC*9/5)+32); //Convert to Fahrenheit
23   //print data. Separate data print outs with by comma, so PLX-DAQ recognizes it as
   separate data
24   Serial.print( ElapsedTime ); //print how much time elapsed since the begginign of
   the experiment
25   Serial.print(",");
26   Serial.print( tempC ); //print the temp in Celsius
27   Serial.print(",");
28   Serial.println( tempF ); //print temp in Fahrenheit
29
30   delay(1000); //repeat the loop every second (take data every second)
31
32 }
33
34

```