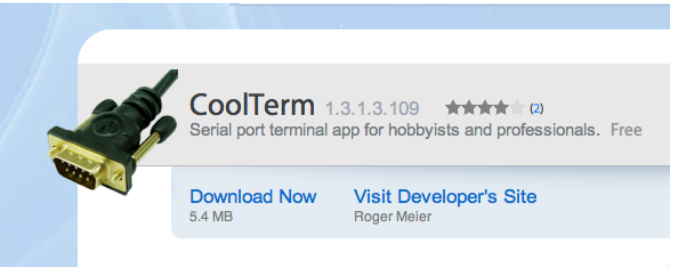
Visualizing the data

Sometimes it's nice to see sensor data in a graph

-CoolTerm (a serial port terminal application)

-Processing (an open-source programming language to create images, animations, interactions…)

We'll use CoolTerm for now:



http://www.macupdate.com/app/mac/31352/coolterm

Download and open CoolTerm.

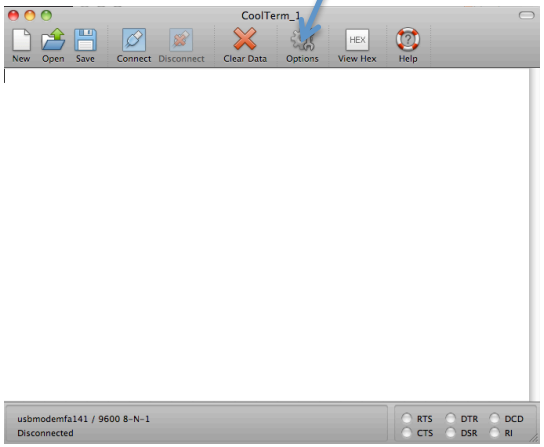
CoolTerm

- Let's go back to a sketch that reads sensor information (such as the one with the photocell) and prints it to the serial port

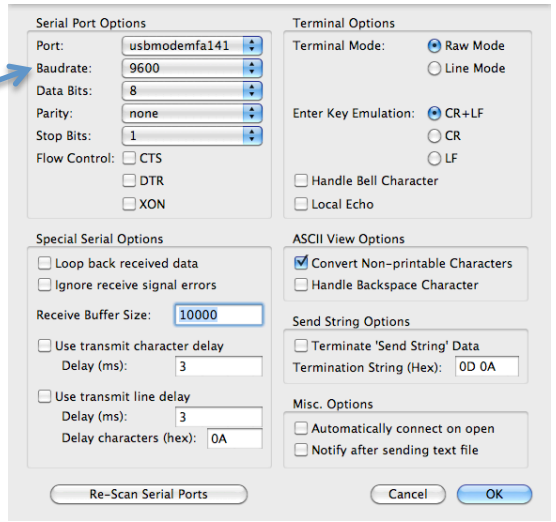
```
Serial.println(potValue);      // print the pot value back to the debugger pane
```

- With your arduino connected:

Click Options



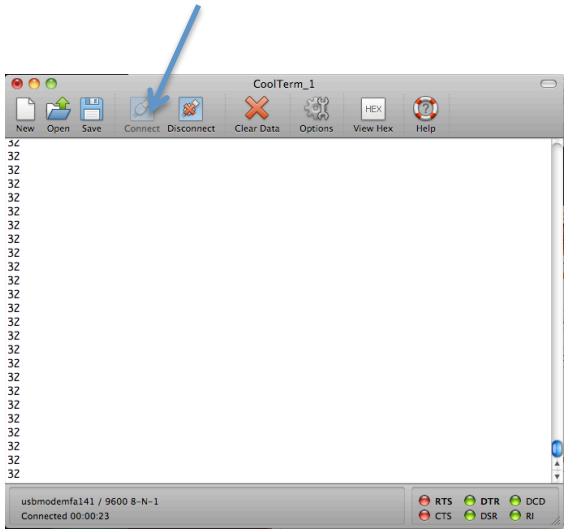
Make sure the Baudrate is set to 9600 (remember, in Arduino we set it to 9600 using Serial.begin(9600)



NOTE: you cannot have two ports open at the same time (so you can't view the Arduino's serial monitor while you are using CoolTerm

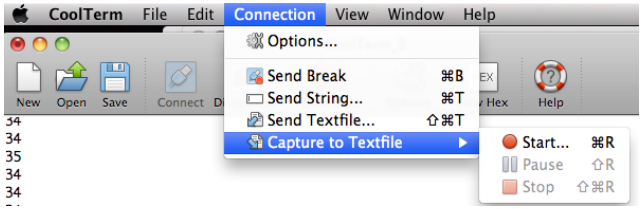
Start recording

Now click CONNECT



You should see data scrolling through

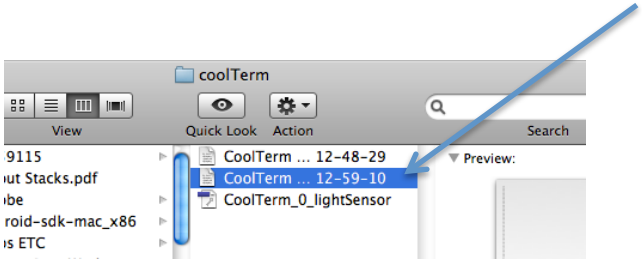
Click Connection → Capture to TextFile → Start



You can specify where to save the text file

Graph the data

Open the file with excel:



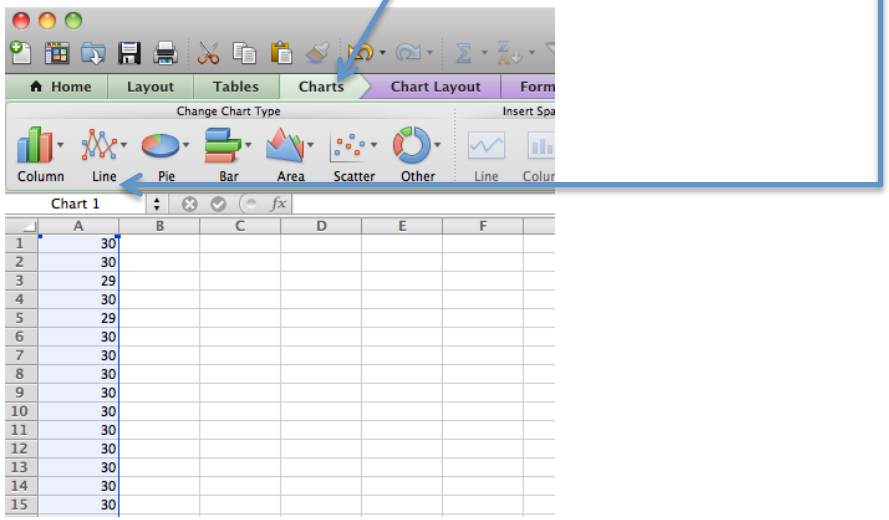
Your data should look something like this:
a long column of numbers (your sensor data)

	A	B
1	30	
2	30	
3	29	
4	30	
5	29	
6	30	
7	30	
8	30	
9	30	
10	30	
11	30	
12	30	

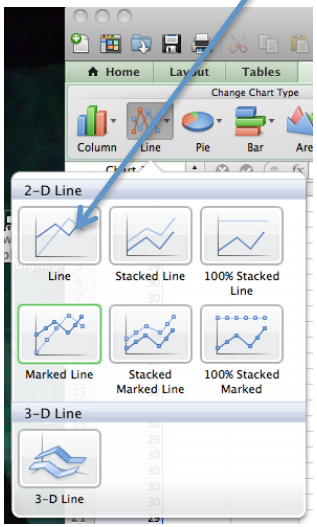
Graph the data

-Click on “Chart”

-Then click on “Line”

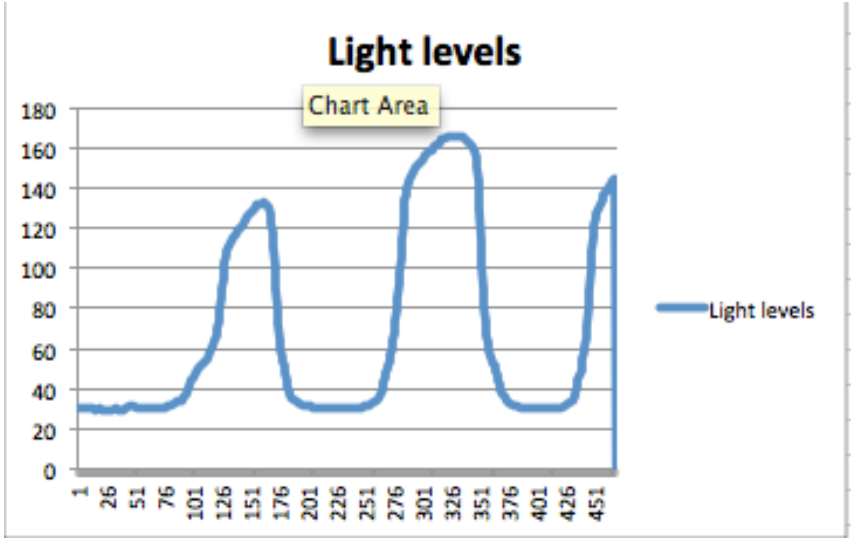


Then click on “Line”



And you should get something that looks like this:

(This is from me moving
My hand near and far
The photocell)



Now you can work in excel to label the axes and format it how you like