

Calculator Based Laboratory (CBL) **Instructions for Temperature**

Equipment Needed:

TI-83 Plus Calculator
AC Adapter
TI CBL System
Input/Output Cable
Temperature Sensor

Basic Setup and Use:

Plug the black link cable into the link port on the bottom of the CBL and TI graphing calculator.
Plug the temperature sensor into channel 1.

Temperature SENSOR:

Turn on CBL unit and the calculator.

Press APPS

Press the calculator key for the number that precedes CHEMBIO

Press ENTER (this takes you to the MAIN MENU)

Select SET UP PROBES from MAIN MENU.

Select "1" as the number of probes.

Select TEMPERATURE from the SELECT PROBE menu.

Enter "1" as the channel number

Press ENTER

Select COLLECT DATA from the MAIN MENU.

Select TIME GRAPH from the DATA COLLECTION menu.

Enter "4" as the time between samples, in seconds.

Enter "25" as the number of samples.

Press ENTER

Select USE TIME SETUP to continue.

Enter "0" as the minimum temperature (Y_{min})

Enter "80" as the maximum temperature (Y_{max})

Enter "10" as the temperature increment (Y_{scl})

When everything is ready, press ENTER on the calculator to begin data collection.

When data collection is complete, press ENTER to display a graph of temperature vs. time on the calculator screen.

Use \rightarrow to examine the data points along the curve.

View the calculator data lists and record your temperature data.

Press ENTER then select NO when asked if you want to repeat the trial.

Select VIEW DATA from the MAIN MENU

To view the data lists, press STAT then select EDIT.

You can use the arrow keys to scroll through the time data (L1) and the temperature data (L2).

Record the temperature values in your Data Table.

Data Table

Time (s)	Temp (°C)						
4	_____	32	_____	56	_____	80	_____
8	_____	36	_____	60	_____	84	_____
12	_____	40	_____	64	_____	88	_____
16	_____	44	_____	68	_____	92	_____
20	_____	48	_____	72	_____	96	_____
24	_____	52	_____	76	_____	100	_____
28	_____						

Instructions Adapted from CBL Made Easy!
Vernier Software
www.vernier.com
8565 S.W. Beaverton-Hillsdale Hwy.
Portland, Oregon 97225
(503) 297-5317