

EasyData™

CATEGORY
TOOL

DESCRIPTION

EasyData lets you collect, view, and analyze real-world data on the TI-83/84 Plus (SE) graphing calculators using Vernier USB sensors (only the TI-84 family) and through data collection devices, such as Texas Instruments CBR 2™ motion detector, CBL 2™ System, or the Vernier LabPro®.



DIDACTICAL SUGGESTIONS

EasyData can be used as a tool to simplify data collection, and also as a means to help develop conceptual understanding.

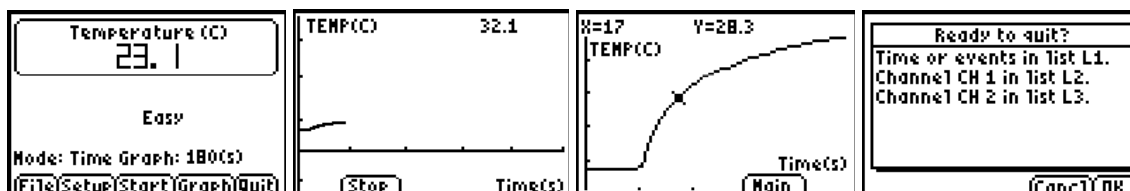
On a TI-84 Plus with operating system version 2.3 or later you can simply connect the Vernier USB sensors. A TI-83 Plus requires a separate data collection device, such as a CBL 2 system.

The major data collection tools to use with EasyData are:

- EasyTemp – Temperature probe
- EasyLink – USB interface to connect Vernier sensors to the TI-84 Plus (SE)
- CBR 2 – USB motion detector

When the calculator detects the data collection device, EasyData opens automatically and starts a default experiment appropriate for that device.

For example, we use the temperature sensor. Below left is the screen that is shown when the temperature sensor is plugged in.

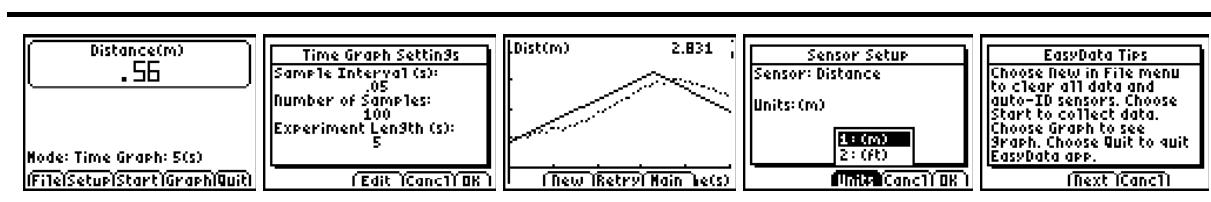


To collect data (with the EasyTemp) you can do the following steps:

- Select **Start** to start collecting data, and then wait five seconds.
- Hold the EasyTemp sensor for about 30 seconds.
The graph shows the temperature as it changes.
- Select **Stop** to stop collecting data.
EasyData displays a scaled graph of the sampled temperatures.
- Press **▶** repeatedly to scroll the cursor to the right, and note the temperature at each data point.
- When you finish exploring the graph, select **Main** to return to the EasyData main screen.
- Select **Quit**. A message indicates that the collected data has been stored in calculator lists.

When you quit EasyData, a message reminds you which calculator lists contain the collected data. You can then examine the data using your calculator or a computer.

- On your calculator, you can explore the data by viewing the data in the list editor. (On the TI-843/84 Plus, press [STAT] and then select Edit.)
- You can also perform statistical analysis (such as calculating mean, median, and standard deviation) on the data.
- By using TI Connect™ computer software and an appropriate TI Connectivity cable, you can copy the data to a computer and import the data into other software tools such as:
 - Spreadsheet software to analyze the data,
 - TI InterActive!™ for formal presentations.



POINT OF VIEW

EasyData is a wonderful application that makes collecting and analyzing real data much easier. Because of the simple way to connect the data collection devices to the calculator – especially on the TI-84 where you do not need a CBL 2 or other intermediate device any more – students can go any where (no extension cord needed!) to collect data and bring them back to school or home. Data can be analyzed with a graphing calculator, but with a link cable and TI Connect it is really easy to send the data to a computer for further analysis.

With EasyData the connection between science and mathematics is very natural. Also the didactical opportunities of a graphing calculator with EasyData contribute to thorough understanding of the underlying concepts.