

Analyzing data using Vernier DataQuest® (Tutorial F2)

http://www.atomiclearning.com/k12/en/movie/86427/play_window?type=Tutorial&sid=2421

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The Vernier DataQuest application has numerous tools for analyzing data that you've collected. I'll collect some

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data by first inserting the Vernier DataQuest application into a new page by clicking Insert, and then selecting

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Vernier DataQuest. I'm using the Go Temp Temperature sensor, so I'll plug it into my computer's USB port. I'm currently

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in Meter View, the Meter tab is selected on the left side, and I see a read out from my connected sensor over to the

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right. Before I begin collecting data, I'll use the prediction tool to draw a prediction of the data that I'm going to

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collect. To do this, I'll first need to select the Graph view by clicking the icon on the left side. In the Document

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Tools, I'll click Analyze, Draw Prediction, followed by Draw. That gives me a pencil tool that I can use to draw

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my prediction. I'll move the tool to the lower left corner, and click the mouse to add a point. I'll then move to draw

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the line towards the upper right corner. I'm predicting the temperature data I'm collecting will increase over time.

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I'll then click again to add a second point. Next I'll press the Esc key, to remove the pencil tool. To begin

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data collection, I'll click the Start Data Collection icon in the lower left corner. It looks like a little Play button.

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I'll click the mouse, and this will begin taking measurements and adding data points. Once I'm done collecting

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data, I can just click the Stop Collection button. I can see that the data was successfully captured, and I can now

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compare the collected data to the prediction that I drew. In Graph view, I can start analyzing the data I've

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collected. I'll click Analyze in the Document Tools. The next menu shows us a list of tools we can use to analyze

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our data. I'll choose Statistics. In the dialog box that opens up I can see information about the temperature data

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I collected, including the minimum, maximum, and mean temperature. Once I've viewed this information, I can click "ok" to

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close the dialog box. I can always view that information again at any time right inside the Graph View, by moving over

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to the left side and clicking to open "Stats." I can then see all of that information. I'll click Analyze again, and

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this time, choose Curve Fit, I want a linear regression, so I'll choose Linear. In the dialog box that opens up,

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I can view the information. Once I've viewed this, I can click "ok" to close the dialog box. I can always view the

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regression information at any time in the Graph View, by moving over to the left side and clicking to open Fit

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Linear. Sometimes there might data that you'd like to omit. This may occur at the beginning or end of your data run.

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You have the option to strike data inside or outside a defined region. First I'll define a region by moving into

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the graph, then click, hold and drag to create my region, and then let go of the mouse to define it. Now I'll right

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click, choose Strike Data, and for my example, I'll choose Outside Selected Region. The data outside the region is

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then omitted. I can see this more clearly by changing to Table view, I'll click the Table View icon toward the upper left corner.

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In Table view, we can now see the data points crossed out. These points are no longer considered in the analysis.

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