Scatter Plot Assignment

Use the Santa Fe River temperature data (SFRiverTemp.xls) that is provided for the following exercises.

1. Create a scatter plot of the entire data set. Format the scatter plot in a way that you think is reasonable. What window did you choose?	*x*-minimum _____ *x*-maximum_____ *y*-minimum _____ *y*-maximum _____
2. By changing the source data, create a plot of the data between 6/16/05 at 8:00 am and 6/16/05 at 2:00 pm. Format the chart to have one tick mark along the *x*-axis at every hour. Show the values you used in the spaces to the right. a) Hint: The desired data is in rows 820-826 b) Note that you will need to use decimals to get the graph to start and end at the correct times and to get the tick marks to show up every hour.	*x*-minimum _____ *x*-maximum_____ Major Unit _____
3. Add a linear trendline to the data shown. Give the equation of the line and the value of r^2.	Equation of line:_____ r^2_____

4. Discuss your results from #3 above.
    a) Is the line a good fit to the data? _____
    b) Why or why not?

    c) Is the line a good approximation to temperature data on the Santa Fe River?_____
    d) Why or why not?

    e) Format your graph nicely, print it, and attach it to this sheet when you turn it in.

5. Extension: Create a scatter plot of the Total TCE at well DM117 using the data provided in the GW Well Data tab of SantaFeRiverTemp.xls. What kind of correlation do you see? What kind of mathematical function might describe the pattern of data that you observe? What conclusions do you think you can draw from the data?

Checklist for a good graphs:

Title is descriptive.

Axis scales are appropriate to show the information. Axes are labeled, including units.

Tick marks and labels on axes are spaced appropriately. They are readable.

Printout does not waste a lot of ink (no shaded backgrounds).

Use color effectively if it's going to be viewed in color (eg. on a computer).

Printed graph should not rely on color for key information (copies, FAXes, etc. are usually B&W)