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Excel Spreadsheet Activity
November 9, 2006 / redo 1

Investigation: Constructing a Graph

In the investigation, you will discover how to make a chart with given sets of data.
Follow the instructions to create the graph and complete the Investigation. Once you
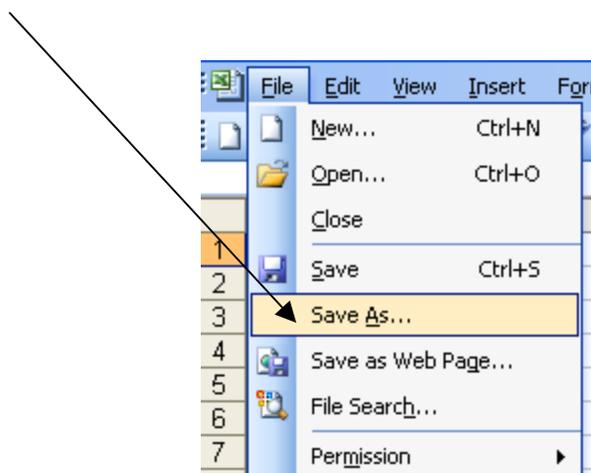have completed the worksheet, turn in the Investigation portion of the worksheet.

Getting Started:

1. Start Excel

Your screen should look like this

MENU BAR

CELL
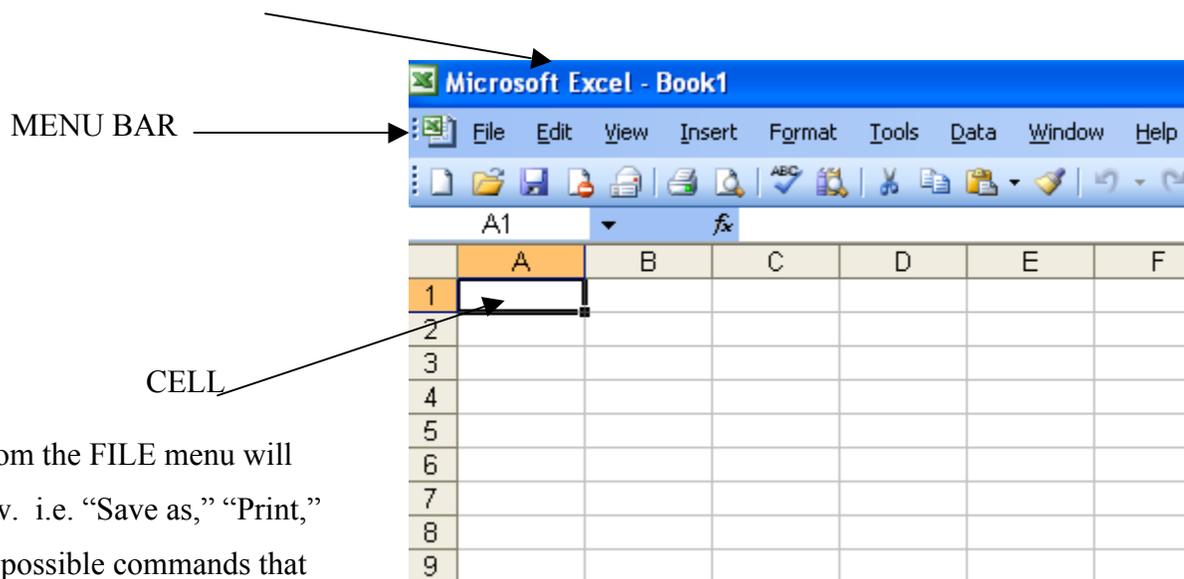
Any commands from the FILE menu will
follow this window. i.e. "Save as," "Print,"
and "New" are all possible commands that
will drop down from this menu bar.

NOTE: At any time, if you need to undo
your last operation, choose UNDO
from the EDIT menu

Sketch:

Step 1. Input of Data.

Given Data:

AGE	GRADE
12	83
13	76
14	99
15	78
12	95
14	93
15	82
13	88
13	56
13	68
12	73
15	74
11	86

a. We must first enter all given data into the cells of the Excel spreadsheet. Click in the first cell, A1, and enter your first number. (In this case we will enter the AGEs of the students into the A cells and the student GRADEs into the B cells)
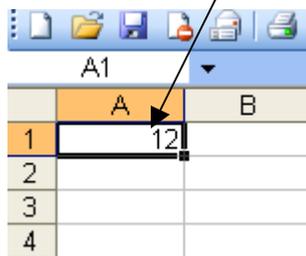
After you enter your first piece of data, press Enter on your keyboard. This will take you to the next cell down, A2, where you will enter your second piece of data.
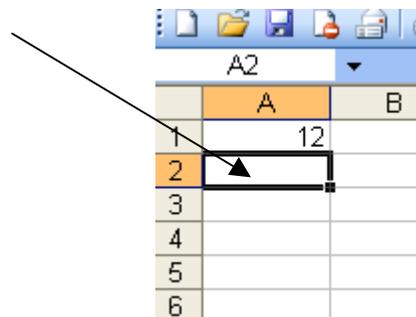
After you have entered all the data for column A,

Use your mouse to click in the cell B1.

You will enter your second set of data here.

Follow the same steps to enter the pieces of

data.

NOTE: Below the menu bar is a window
that indicates the cell you are
currently in.

This window shows

that we are in cell B1.

| | File | Edit | View | Insert |

B1   ▼ f_x

	A	B
1	12	
2	13	
3	14	
4	15	
5	12	
6	14	
7	15	
8	13	
9	13	
10	13	
11	12	
12	15	
13	11	
14		

b. At this point all of your given data should be entered.

B13   ▼ f_x

|	A	B
1	12	83
2	13	76
3	14	99
4	15	78
5	12	95
6	14	93
7	15	82
8	13	88
9	13	56
10	13	68
11	12	73
12	15	74
13	11	86
14		

Step 2. Create a Chart.

    a. Now, that our given data is entered into the spreadsheet we can create a chart.
First, use your mouse to click on INSERT from the menu bar. A window will
drop where you will select the CHART option.
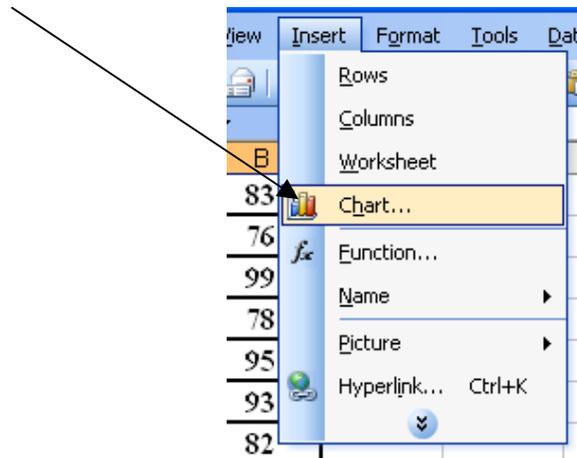
    b.   Once you select CHART, another window will appear. This window,
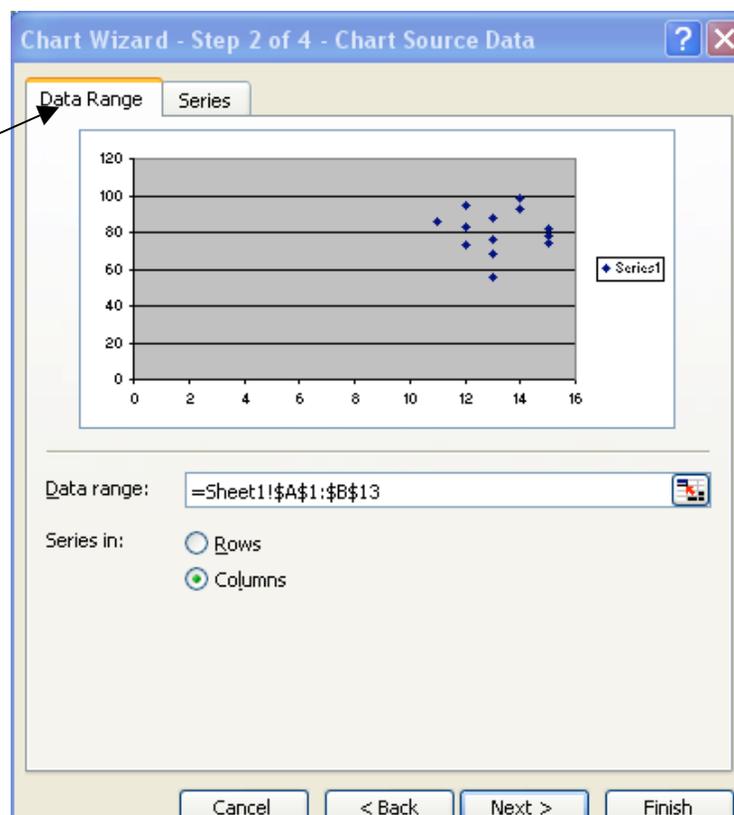CHART WIZARD, allows for you to choose the type of chart you will create.
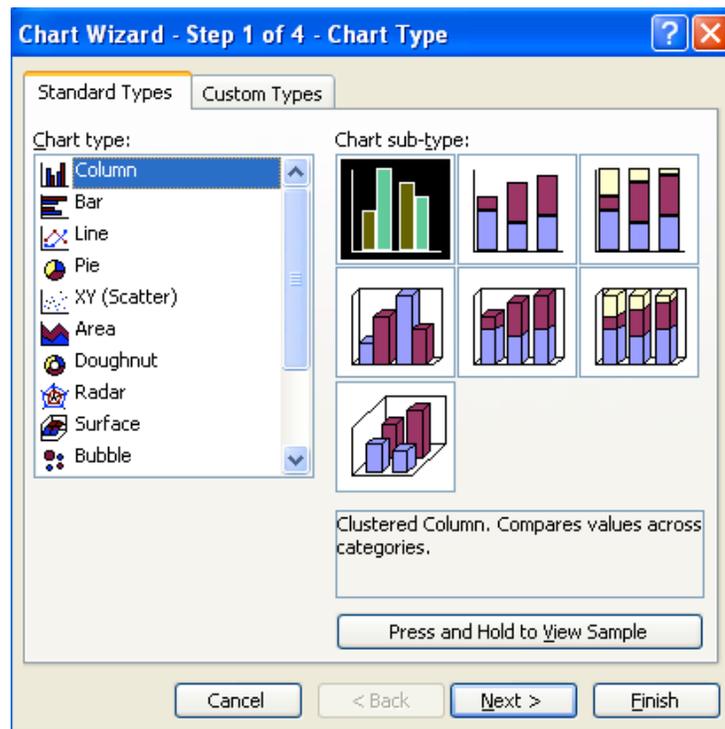
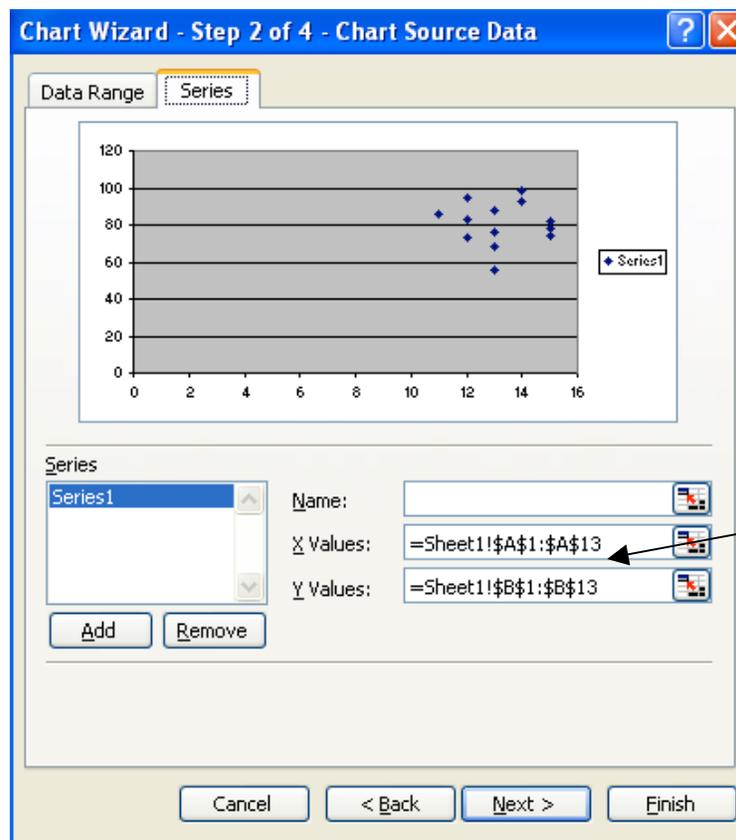c. Next, you want to select XY (Scatter) and then click [Next >]..
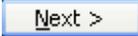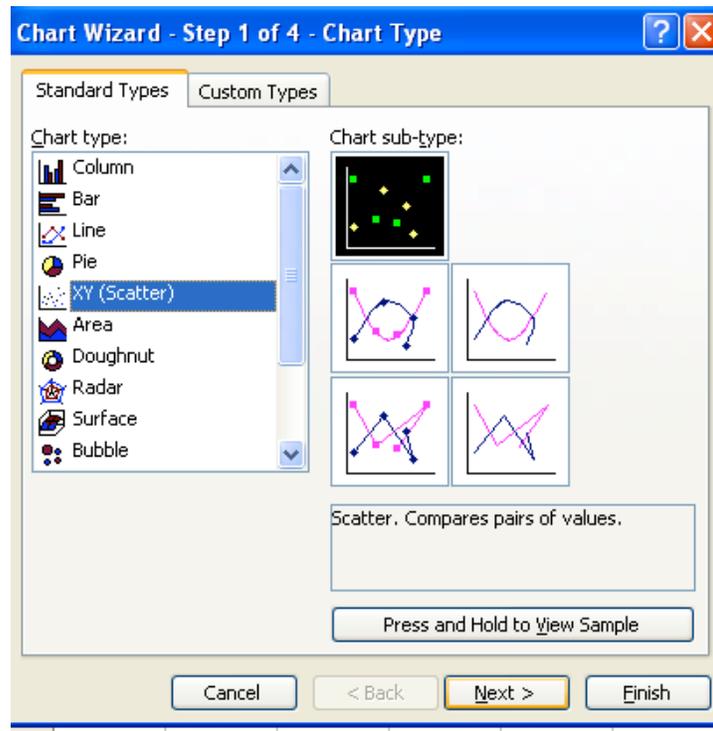
d. Another window will appear. The tab DATA RANGE has already selected your first column A and B and selected it as your data range.

Data Range Tab

e. Next, click on the SERIES tab.

You will see a bunch of numbers, symbols and letters next the 'X Values' and 'Y Values'. The program has already selected the appropriate data for the chart. The 'X Values' is our column A – the age of each student, and the 'Y Values' is our column B – the grade of each student.
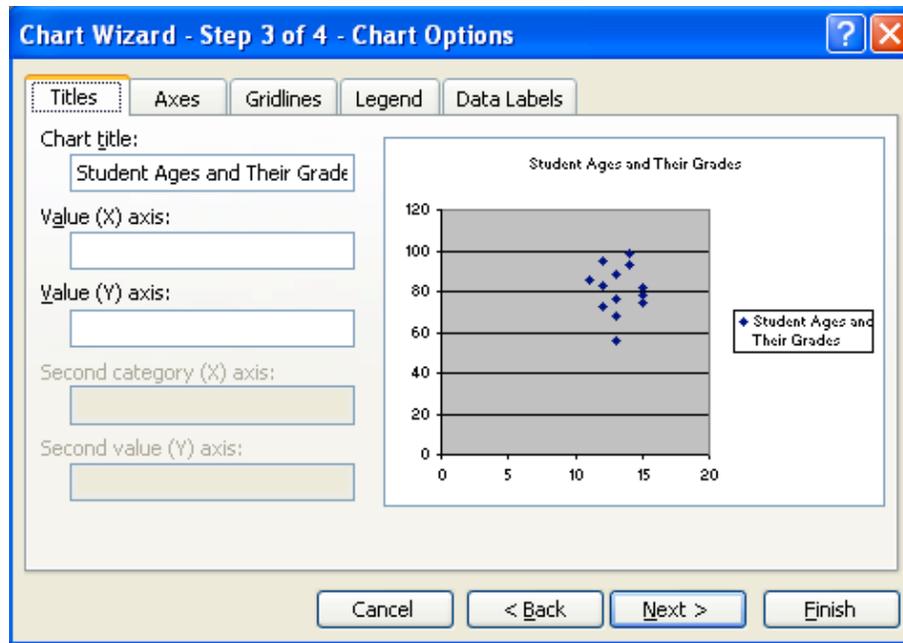
f. Above the 'X Values' and 'Y Values' is 'Name', click into the 'Name' box and type the title of your graph – *Student Ages and their Grades*.
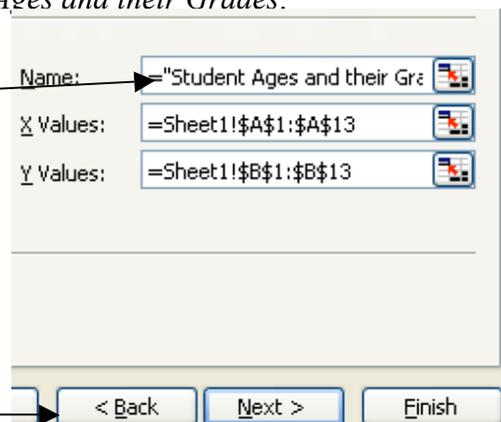
NOTE: At anytime, if you wish to return to the previous window click on the BACK button.
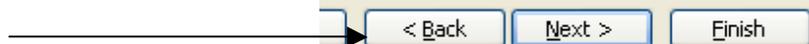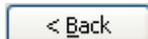
g. Next, click [Next >] once you have entered a title.
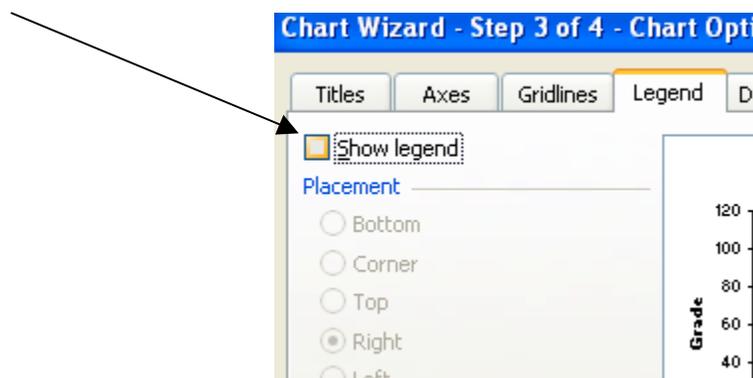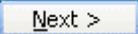
h. Another window will appear.

In this window you will label your X and Y axis. Type your labels, *Age* and *Grade* (and the title *Student Ages and their Grades* if it is not already there), into the appropriate text boxes.
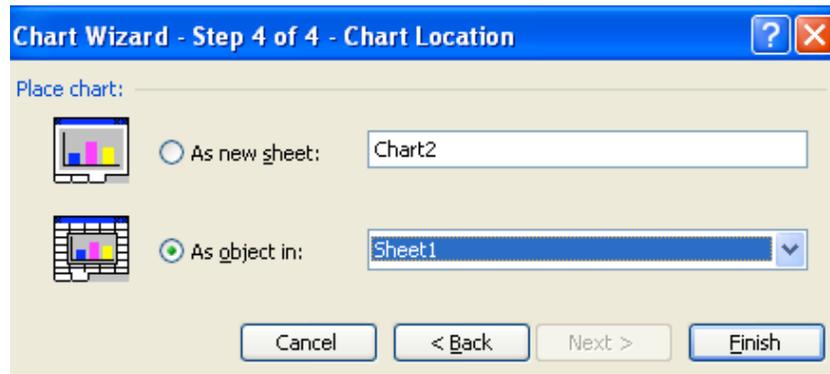
i. Now, click on the LEGEND tab of the window.

j. In this window, you SHOW LEGEND will already be selected. De-select the SHOW LEGEND block.

k. Next, click [Next >] .

l. A final window will appear.

Chart Wizard - Step 4 of 4 - Chart Location

Place chart:

○ As new sheet: Chart2

● As object in: Sheet1

[Cancel] [< Back] [Next >] [Finish]

This window allows you to choose where you want your chart. The
window has pre-selected to show the chart as an object in sheet 1 –
the same page where you have entered your data.

m. Click FINISH.

Your chart will appear in sheet 1 where you have entered your data.

82	
88	
56	
68	
73	
74	
86	

Student Ages and Their Grades

(scatter plot: x-axis AGE 0 to 16, y-axis GRADE 0 to 120)
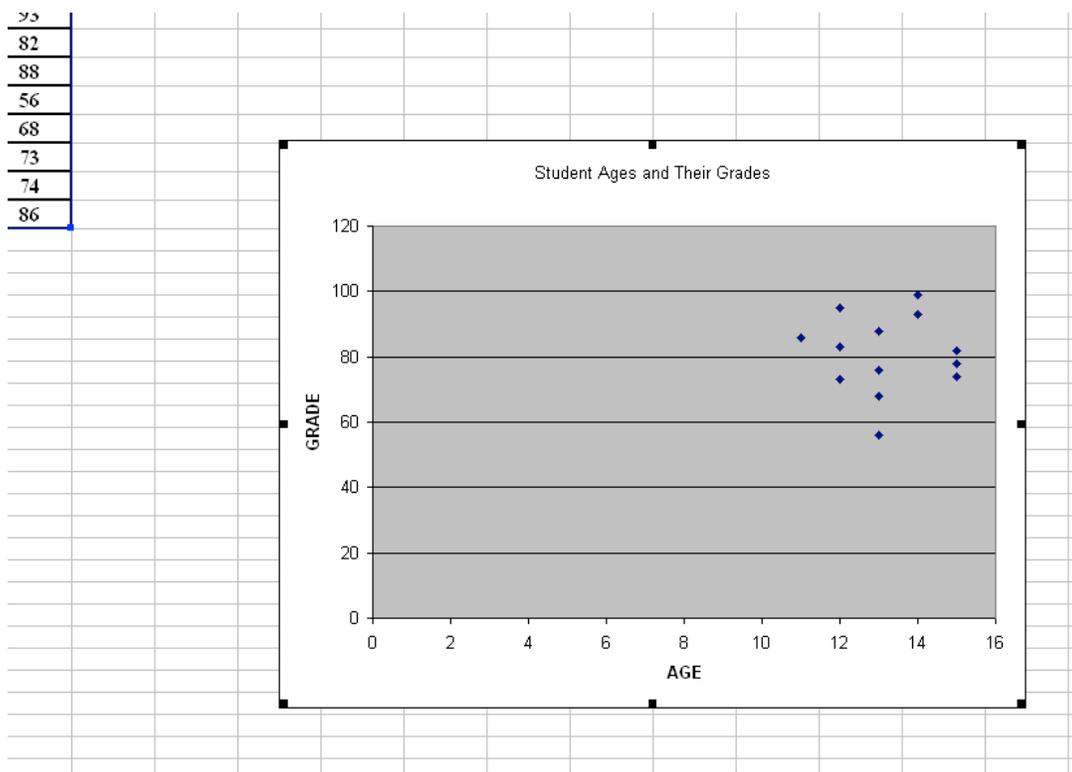
Investigation:

1. When you used the pre-selected data range, where were the points placed on the chart?

    _____The points were placed in a bunch at the upper right side of the_____ chart._____

    _____

2. Observing your chart, what can you say about the average grade of the students? _____The students overall scored very well. Their grades were___ close together and stayed around an average of approximately 80%._____

    _____

3. Do you think their age may affect their grade? Explain.

    ____No. As you look at the graph, older students scored higher than some____ younger and yet lower then some of the youngest students._____

    _____

4. In step 2h, we entered labels into the appropriate text boxes. What would our graph look like, if we had ignored this step? Explain.

    _____There would not be any labels present on the graph itself._____ All we would see would just be the scatter graph._____

    _____

5. Is there another kind of graph/ chart that allows us to represent the information a different way? If so, what kind?

    _____Yes. (answers will vary) Bar graph, line, column, pie, area, etc. _____

    _____

    _____

Present Your Findings:

       With your predetermined partner discuss your results. After you and your partner have completed your investigations, discuss when and where this process/ investigation may be useful. You will then print out your chart and write a brief explanation of your investigation.