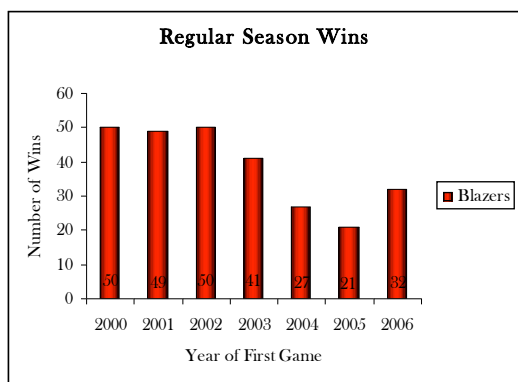# Graphing in Excel

This year in science we will be conducting many experiments. Frequently these experiments include data collection. In order to better understand and interpret our data we will need our numbers presented in a concise and orderly fashion. Often the best method will be to make a graph. You will use the following handout as a reference for the remainder of the year. This will guide you through the Excel program and the graphing process.

Most of the time we are going to want to compare one variable. For example, if we wanted to compare the number of wins by the Portland Trail Blazers from 2000-2006 we would make a graph that looked like this...
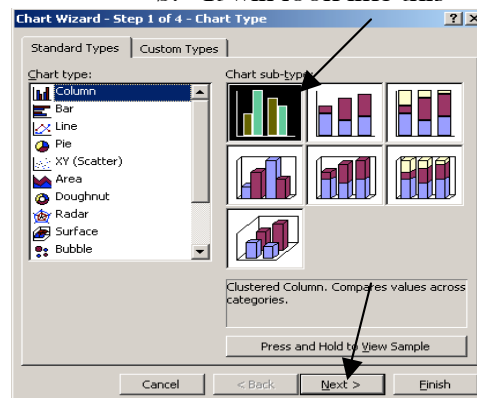

The question is HOW???? Steps…
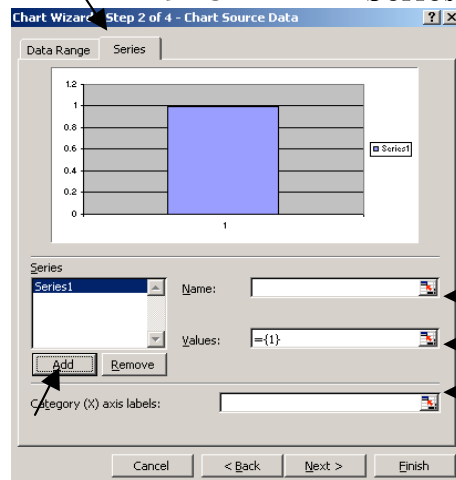
1. Open Excel
2. Enter data…It should look similar to this

3. Make graph
   a. Click on **Insert**, scroll down to **chart**
   b. It will look like this

   c. Choose **column** and click **next**
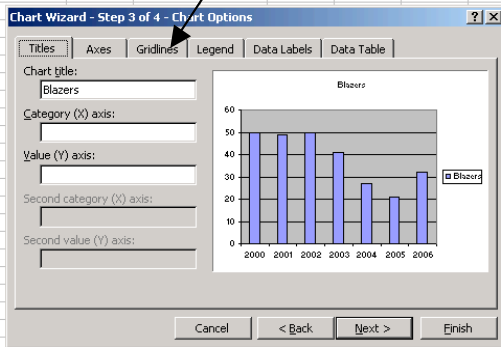   d. Click on the **Series** tab then **Add**

Step j
Step e
Step h

*It will look like this after we click on **Add**

   e. Delete what is in the box.
   f. Click on the red arrow next to values
   g. Highlight what we want for values. This time it is Wins (values on y-axis).
   h. Click back on red arrow
   i. Click on red arrow next to category x-axis
   j. Highlight what we want our labels to be. This time it is the years. If we do not highlight the years then we will have 1, 2, 3, etc. for labels under the bars.
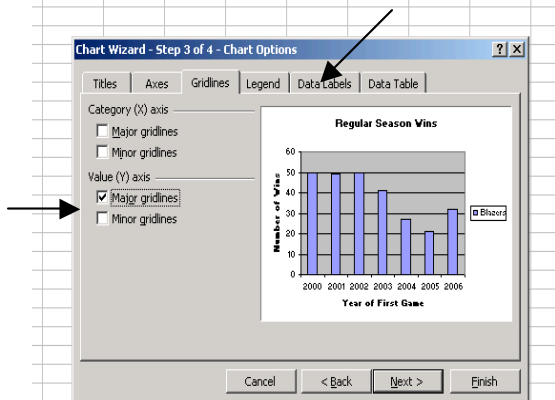   k. Name the series. Ours will be Blazers.
   l. Click next

4. Format your graph

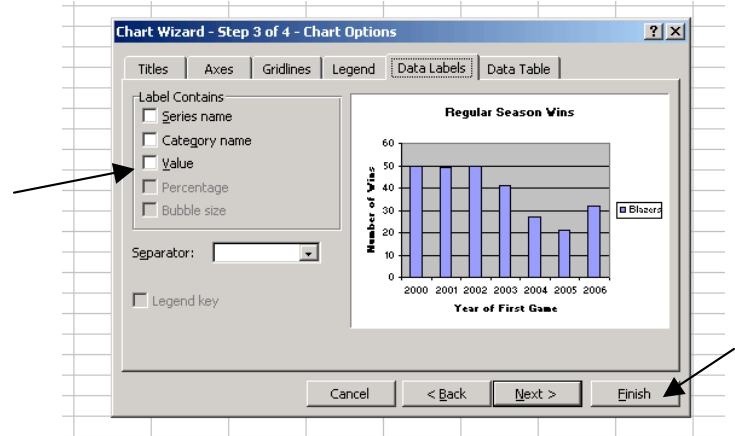*After we click next, we will have a screen that looks like this.

    a. Put a Chart title in: this time it is Regular Season Wins
    b. Type in a x-axis title: this time it is Year of First Game
    c. Type in a y-axis title: this time it is Number of Wins
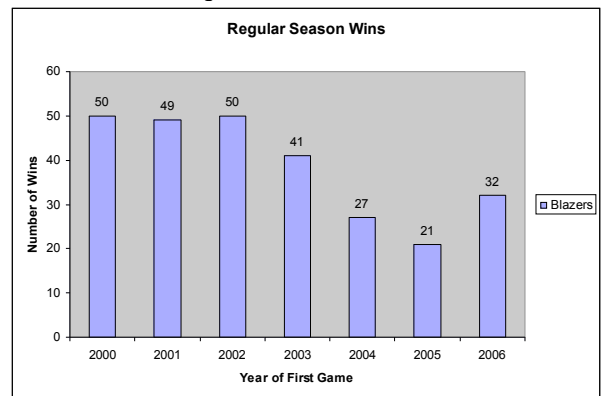   d. Click on Gridlines

5. Remove Gridlines

    a. Unclick the Value (Y) axis box; there will not be a check mark when we are done.
    b. Click on Data Labels

6. Insert Data Labels

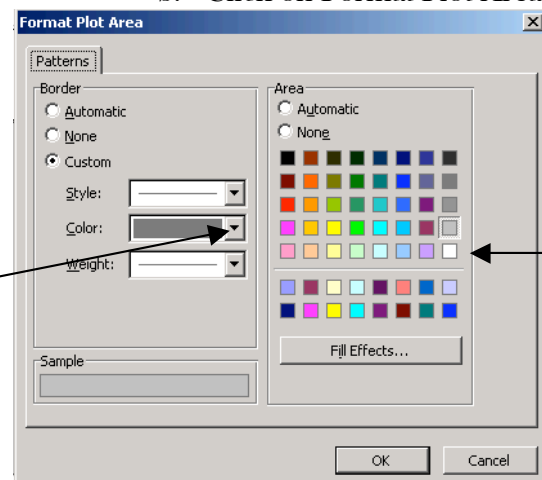   a. Click on value, this will add a check mark.
    b. Click on Finish

7. Format Graph

*The graph will look similar to this when it is completed

    a. We want a white background so right-click anywhere where there is grey.
    b. Click on Format Plot Area
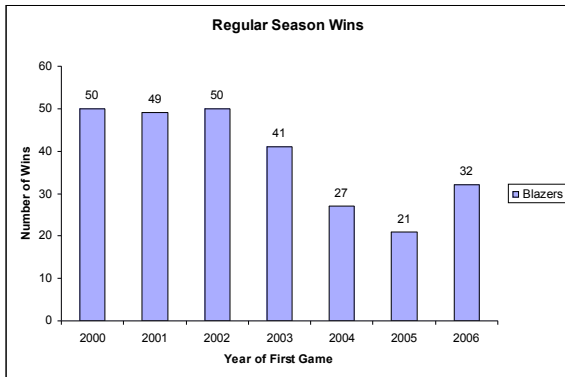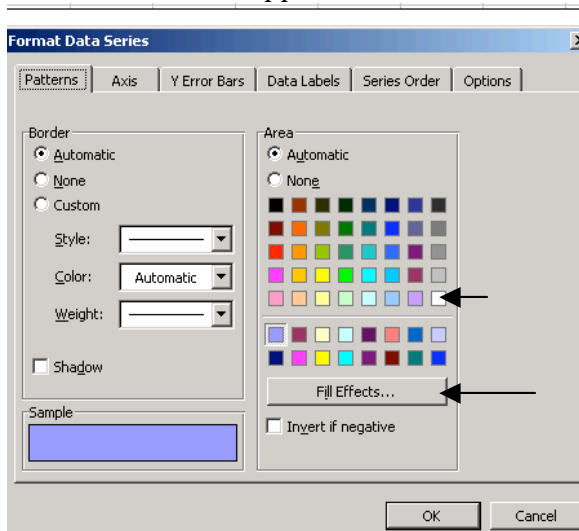
Step c

Step d

This box will appear.

    c. Click on color and make it white
    d. Click on the white color box

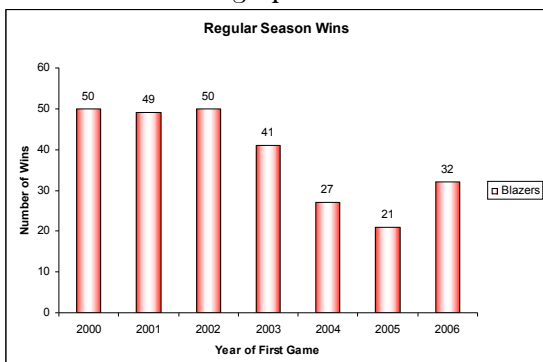The graph will look similar to this when it is completed.

8. **More Formatting:** This changes the color of your data Bars
   a. Right click on any of the bars
   b. Click on Format Data Series, this box will appear

   c. If you do not have a color printer then make the bars white (we can color them in later), by clicking on the white box. If you have a color printer click on Fill Effects and see what you can come up with.

9. Your final graph will look something like this

Sometimes there will be two or more variables that we want to compare. For example we may want to compare how many games the Blazers won, with how many game the Sonics won. We need an easy way to enter in the Sonics' data. Let's pretend that we already have the Blazer graph made.

1. Steps to add another variable
   a. Right click anywhere on the white space of the graph.
   b. Click on Source Data
   c. Click on the series tab
   d. Click on Add
   e. Follow steps 3e-3h
   f. Name the Series. This time it will be Sonics
   g. Click OK
   h. Change color of bars 8a-8c

*Your final graph will look something like this