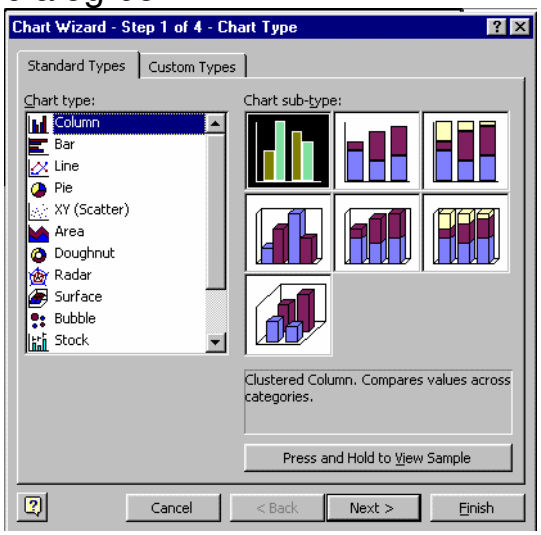
Excel 2003: Simple and Complex Charts

Using the Chart Wizard

You will make decisions in 4 dialog boxes. While making these decisions, you can go back to a previous step or use Finish to end early.

- You can cancel & reselect the area to be charted.
- You can go ahead & make revisions of individual chart elements later.
- Select the data that you want to include in your chart.
- You should include labels and other identifiers.
- If the data is not side-by-side, you can hold down the Ctrl button while selecting the data.

After clicking the Chart Wizard button or using **Insert>Chart**, you will see the first dialog box.



In **Step 1**, you select the type of chart.

- It can be 2- or 3-dimensional & it can be a Standard type or a Custom type.
- Use the "**Press and hold to view sample**" button to see a preview of the chart

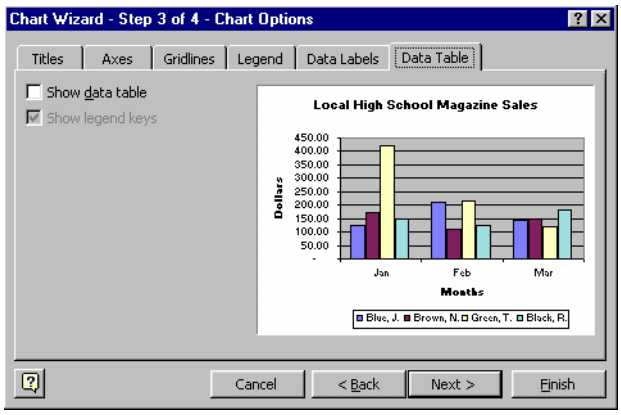
In **Step 2**, you can adjust the range for the data selected.

- Check if the information is more readable with the series in rows or columns.

Excel will try to guess the best orientation of the data, but it may not be correct.

In **Step 3**, six tabs will show various elements in the chart that can be adjusted. They are:

- Titles of the chart, x-axis, and y-axis
- Axes for selection of the type of values
- Gridlines or no gridlines
- Legend or no legend, & where it would be displayed
- Data Labels or not, & which type
- Data Table on display or not on display



In **Step 4**, you choose if the chart will be placed on the same page as the data or on a separate sheet.

Chart Modifications

After you have used **Chart Wizard** to create the chart, you may wish to make modifications.

To **change a chart**, select it by clicking on the chart if it's on the same page or by clicking on the chart sheet tab if it's on its own page.

To **change the data range** used, use **Chart>Source Data** & select the **Series** tab. Change the range of the data series & you may also need to modify the Category range.

To **add a background or revision** to the chart or 1 of its elements, double-click on the chart or element. You will get a dialog box appropriate to the area selected. It may show font options, axis options, or pattern options.

If you want to **change the color** of a portion of data, double-click on the element and change the color under the Pattern tab. For background, use the **Patterns** tab of the dialog box & click **Fill Effects**. You can choose among gradient, textured, patterned, & picture background.

To **add or remove gridlines**, use **Chart>Chart Options** and choose the **Gridlines** tab. Check or decheck the appropriate boxes. If you have a 3-dimensional chart, there is the option for 3 sets of gridlines. You can change a chart's type by using **Chart>Chart Type** and clicking the appropriate chart.

If you want to **move the chart** to a different place on the same worksheet, you can click a border and drag it to a new location. If you want to move a chart to a different worksheet or to a separate chart sheet, use **Chart>Location** to designate the new location.

Making an (X,Y) Scattering Graph

You can make a traditional (X,Y) graph. You can use the **Chart Wizard**, but you highlight just two columns containing the pertinent data. You do not select the row headers.
After you have selected the columns, choose **XY (Scatter)** as the **Chart Type**.
Hold your left mouse button down on the "**Press and Hold to View Sample**" button to see if it is an (X,Y) chart.
If it is not, press **Cancel** to close the **Chart Wizard** and reselect the information again.
If it is an (X,Y) chart, **continue** with the **Chart Wizard**.

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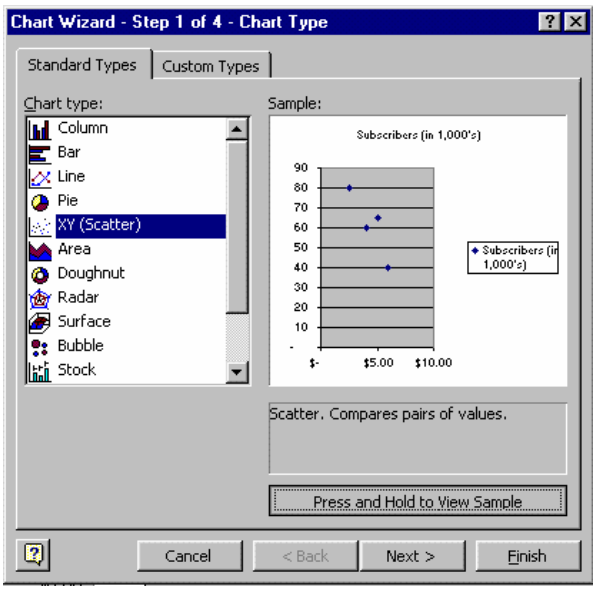
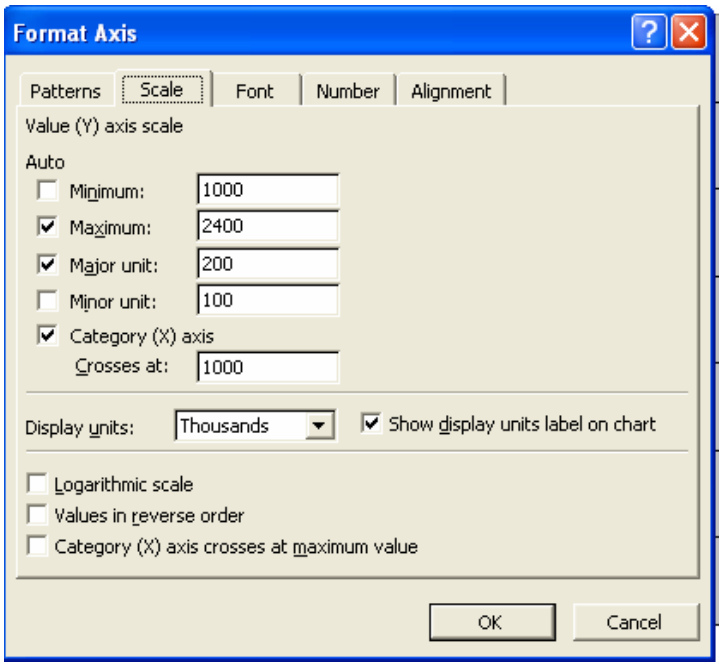


Working with the Axis Scaling

When you create a chart, a scale for the value axis is automatically included in the chart. Sometimes you will want to change this scaling. For example, you can change the scale to emphasize small differences.

Right-click on the axis that you want to change.
Select the **Format Axis>Scale**.
Make **changes to the options** that are available under "**Auto**."
Choose to "**Display units**" in thousands or hundreds, as appropriate.
Click **OK** to enforce changes.

The **Minimum and Maximum** options control the lowest and highest numbers on the axis.
The **Major Unit and Minor Unit** options control how the axis is divided between the minimum and maximum values.
The **Category (X or Y) axis Crosses at** is where the x or y axis crosses the value axis. The default is zero, but you can change it to any number between the maximum and minimum values.

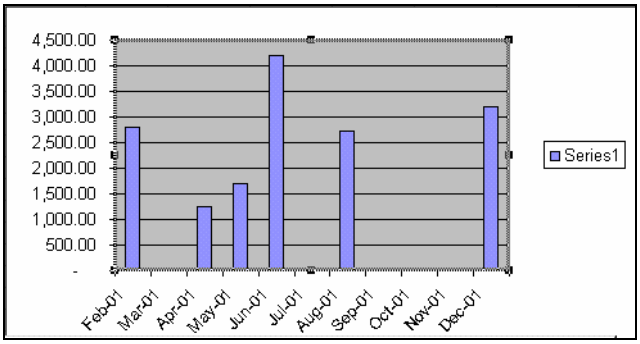


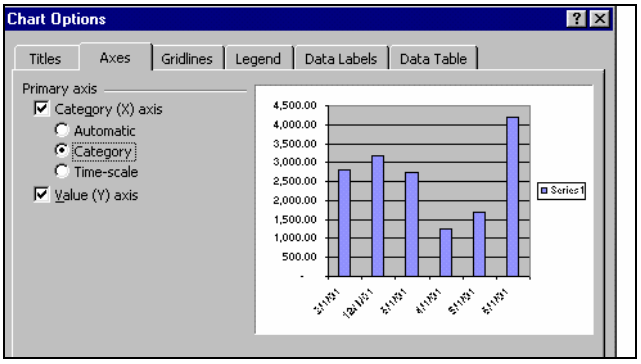
After you have made changes to the axis, if you reenter the **Format Axis** dialog box you see that the **check boxes remain clear**. The defaults were changed manually. **Putting a check in the checkbox** will cause the default values to be used.

Using and Disabling the Time-Scale Axis

The time-scale axis is automatically applied to any chart axis data that is formatted by date. It arranges the data chronologically, even if the data is not in chronological order. The resulting chart shows the data on a time-scale that is evenly distributed in the chart. If there are missing dates in the data sequence, the time-scale axis leaves empty spaces on the axis.

There may be times when you have date-formatted data that is not arranged chronologically and you want to display it this way in the chart. In order to do that, you have to disable the automatic time-scale axis. Your data will be displayed on the chart in the same order it appears on the worksheet.
Right-click on a blank area of the chart.
Select **Chart Options>Axes**.
Select the **Category** option.
Click **OK** to enforce the new action.



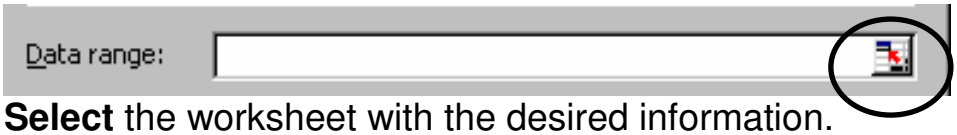


Comparing **Time-scale** view at top with **Category** view in preview.

Changing the Data Range

If you have created a chart & you want to look at different information, such as looking at first quarter and then second quarter, you can use the same chart. The worksheet range currently in a chart can be replaced with a range of data from a different worksheet.

When you switch between worksheets in the same workbook, Excel will select the same range when you move to a new worksheet. However, you can choose a different range if you want.
Right-click on a blank area of the chart.
Select **Source Data>Data Range**.
Click the **button** at the end of the **Data range text box**.

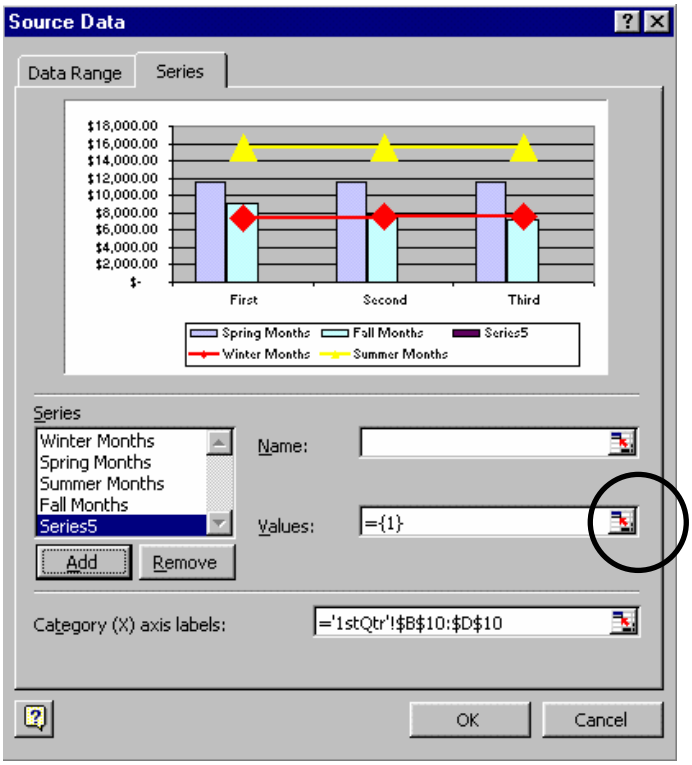


Select the worksheet with the desired information.
Hold down the left mouse button and drag to select the new range.
Press **Enter** on the keyboard.
Click **OK** to enter the new data.

Adding and Removing a Data Series on Your Graph

You can add additional information to an existing chart. This option is helpful for charts that accumulate data over time. Since you can add the data as it is included in the spreadsheet, there are no empty placeholders for data that is not yet available.
You can remove information from an existing chart. This does not remove the information from the spreadsheet.

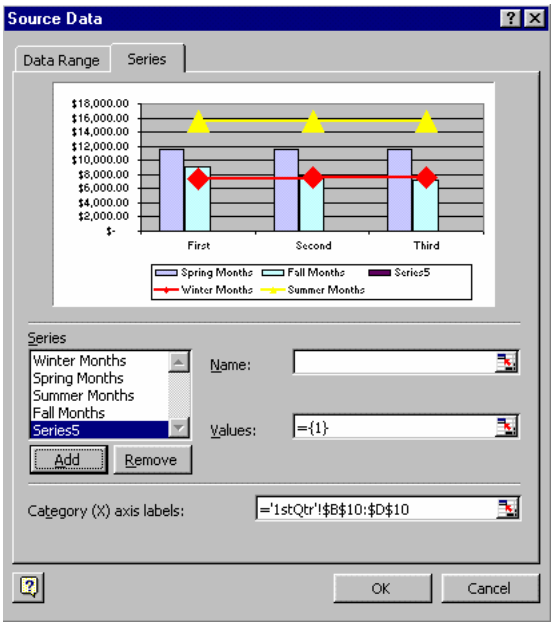
To add information, right-click on a blank area of the chart.
Select **Source Data>Series**.
Select **Add** to add an additional data series.
Click the **button** at the end of the **Values** text box.
Select the worksheet with the desired information.
Hold down the left mouse button and drag to select the new range.
Press **Enter** on the keyboard.
Type the name of the data series in the **Name** dialog box.
Click **OK** to enter the new data.



To remove a data series, right-click on a blank area of the chart.
Select **Source Data>Series**.
Select the data series you want to remove from the Series list box.
Select **Remove**.
Click **OK** to enforce the change.

Adding Data From Different Worksheets

You can add information from different worksheets to the same chart. This is useful when you want to compare similar data kept on separate worksheets. This is done the same way that you add additional information.



Including Data Series Names

When you create a graph without including a name for the series, there are default names such as Series1, Series2, etc., depending on the number of data series you create. You can change those default names to be more appropriate.

Right-click on a blank area of the chart.
Select **Source Data>Series**.
Select the data series in the **Series list box** you want to edit.
Select the text in the **Name text box**.
Type the new name for the data series.
Select **OK**.

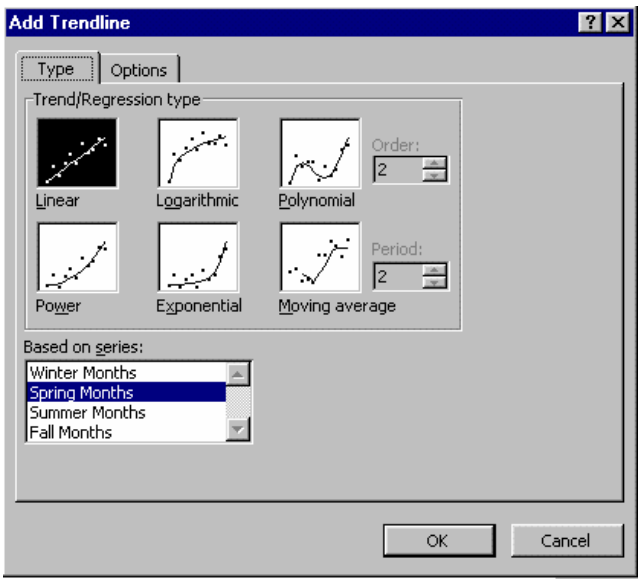
Creating Charts with Both Lines and Columns

You can mix different chart types within a single chart. For example, if you want to compare a particular time period such as the current quarter with past quarters, you could have the current quarter different from the others.

First, create the chart in one chart type, such as using columns or lines.
Right-click on the data series you want to change.
Select **Chart Type>Standard Types**.
Select the chart type you want to use from the list box.
Click **OK** to enforce the change.
Select any other data series you want changed and repeat the action.

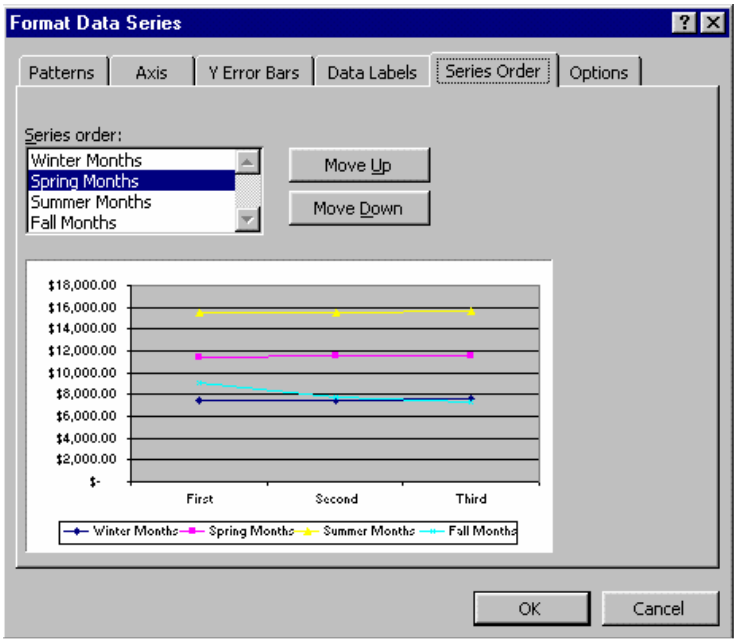
Adding a Trendline

You can add a trendline to your chart.
Right-click on the data series to which you want to add a trendline.
Select **Add Trendline**.
Select the trendline type you want to use under Trend/Regression type.
Click **OK** to enforce the changes.



Changing the Plotting of the Data

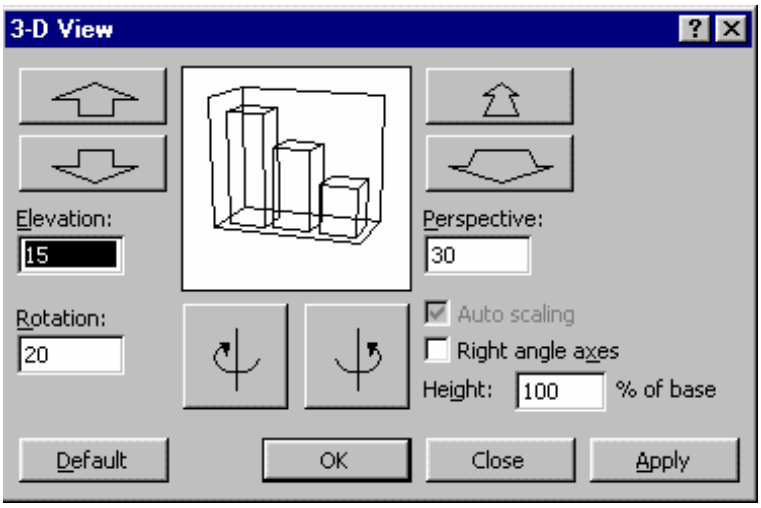
You can rearrange the data series within a chart after you have created it. This can be done even if the data was not listed in that order. For example, you could list names or items alphabetically.
Right-click on the data series you want changed.
Select **Format Data Series>Series Order**.
Click on the item or name that you want moved.
Click **Move Up or Move Down**, as desired.
Click **O*K*** to enforce the changes.



Adjusting the 3-dimensional Properties of a Chart

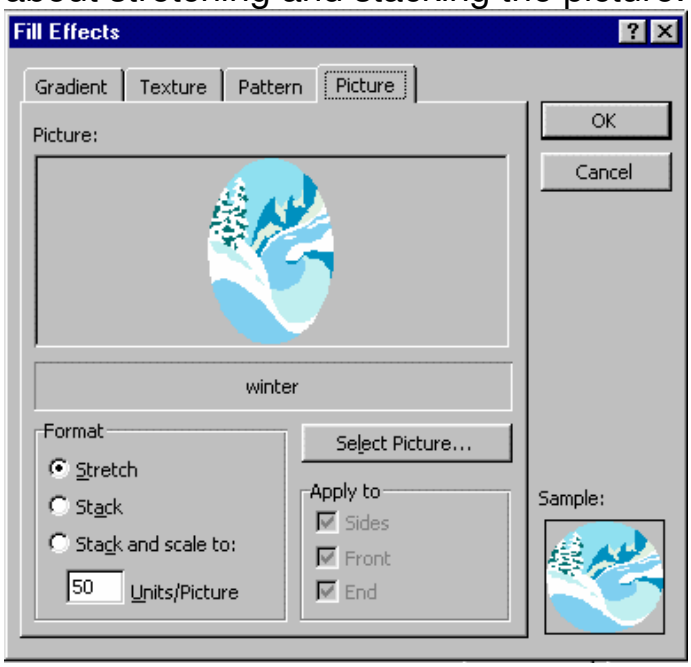
You can change the **elevation, rotation**, and **perspective** of a 3-D chart.
The **elevation** tilts the chart so that you appear to be viewing it from different heights.
The **rotation** moves the chart around a vertical axis.
The **perspective** elongates the chart from front to back, making it appear that its depth is changing.
Right-click on a blank area of the chart.

Select **3-D View** and type in different numbers.
Click **OK** to make the changes effective.
The 3-D view of a chart can also be adjusted by **selecting** the chart, **holding down the left-mouse button** and **dragging** one of the corners to the desired position.



Using Pictures in a Graph

You can use pictures instead of column bars in your graph. If you choose a simple and recognizable picture, your column can become more interesting. To insert a picture into a column, first make the graph with simple columns.
Then right-click on the data series that you want to display as a picture.
Select **Format Data Series>Patterns>Fill Effects** and choose the **Picture** tab.
Then choose **Select Picture**.
Find the picture you want and click on **Insert Picture**.
Once you are back at the **Fill Effects>Picture** dialog box, make formatting choices about stretching and stacking the picture.



Stretching is sizing one picture to fill the column space.

Scaling is having a picture appear with correct proportions.

Stacking is having the pictures appear on top of one another within the column space. When stacking, the smaller the number in the box, the smaller the picture in the stack.