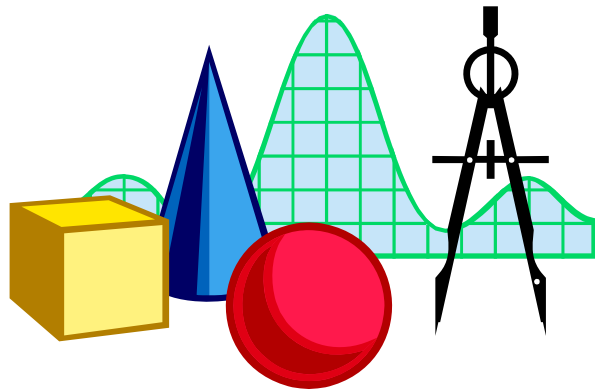


**ABC Unified School District
Technology Professional Development Program**

Introduction to Excel Charts



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Introduction to Excel Charts

WHAT IS A CHART

The charting feature in spreadsheet programs enables you to display important data in a graphical form. Your data can be interpreted much faster viewed in a chart format. Your chart is created from data that you select directly from your worksheet. Your chart can be a separate document or it can be embedded on your worksheet. In either case, the data in your worksheet is linked to the chart, so as changes are made to the data in your worksheet, the results are automatically updated in the chart.

TYPES OF CHARTS

Excel offers many different chart types from which to choose. Which chart type you select depends on your data and what kind of comparison you are trying to make. Chart types include: column, bar, pie, area, scatter, radar, doughnut, bubble, stock, surface charts. Each chart type includes several predefined chart styles. There are also several 3-D chart types that you can rotate.

The more commonly used chart types are those that display data over a period of time (also called "time-series" charts). A bar, line or area chart would be best suited to display data changes over a period of time. Line charts make it easy to see trends, dips and rises over time, while bar charts usually compare values of different items at specific points in time. Temperature charts, profits, sales charts, attendance, population are examples of reasons to use "time-series" charts.

CHARTING TIPS

- **CHOOSE THE RIGHT CHART TYPE**

To really get the point across, make sure you use the chart type that displays your data in the clearest way possible.

- **KEEP IT SIMPLE**

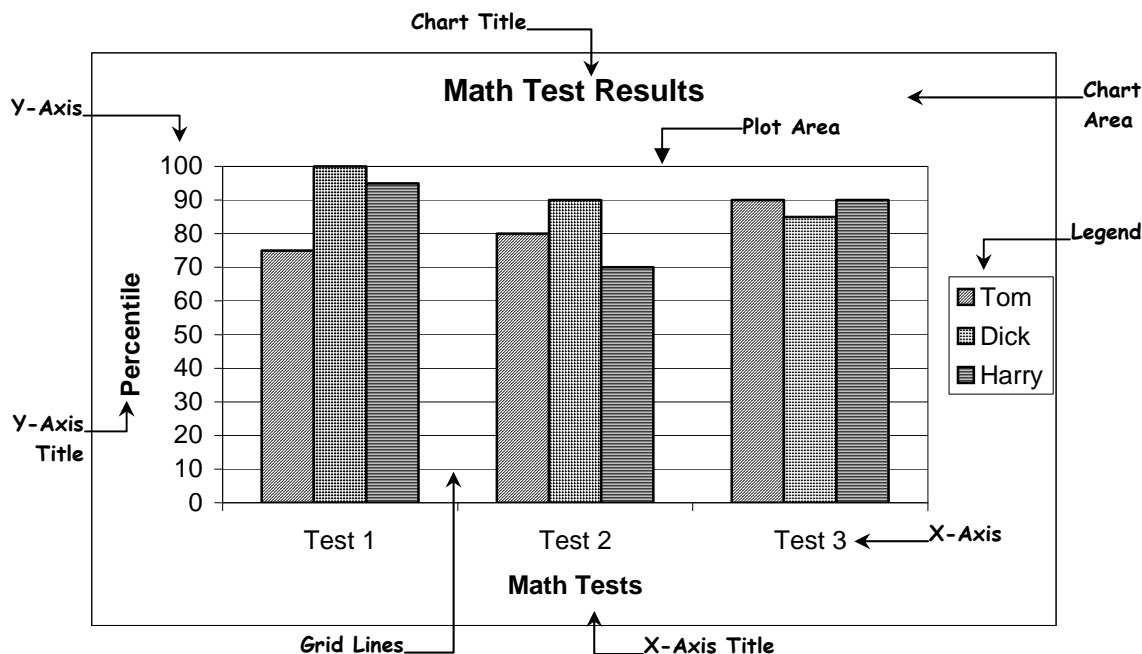
If you're going to use a chart, don't let it get too busy. Make it large enough to display the data clearly on the page, use appropriate text sizes for titles. Don't put too much information in the chart.

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ANATOMY OF A CHART

To better understand how to create a chart, it helps to know the parts that make up most charts. Bar, Column, or Line charts are made up an **X - Axis** and a **Y - Axis**. The data being plotted are the **Data Series**. If more than one series is being plotted, a **Legend** is used to identify each one.

NAME	TEST 1	TEST 2	TEST 3
TOM	75	80	90
DICK	100	90	85
HARRY	95	70	90



The **X - AXIS** contains the column or row labels from your worksheet. In our sample, the X- axis is Test 1, Test 2, Test 3 (our column headings). The **Y - AXIS** is generated automatically based on the data that is being plotted. For every row or column of data being plotted, a **DATA SERIES** is established. In our sample we have three rows of data, one for each person, so we have three data series. We identify each data series, by using a **LEGEND**. The legend identifies which set of bars represents each set of data.

To finish off the chart, you may add a **TITLE** across the top to help add clarity to the chart. You may also wish to add titles to the X - Axis and/or the Y - Axis.

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CREATING A CHART

Charts can be embedded in a worksheet enabling you to print the worksheet and chart on the same page. Charts can be created as separate documents enabling you to print just the chart. In both cases, however, the data in the worksheet is linked to the chart, so as data is changed, the chart is also updated automatically.

If you are working with "Workbooks", as you should be by now, you know that you can create several "sheets" within a single workbook. When working with charts you can create individual "*chart*" sheets within the workbook. Adding your chart to a new *chart* sheet enables you to print the chart separately from your worksheet.

The **ChartWizard** helps you create the chart by walking you through it step-by-step. You can access the ChartWizard by clicking on the ChartWizard button in the toolbar, or you can use the **INSERT - CHARTS** options from the menu bar.



USING CHARTWIZARD

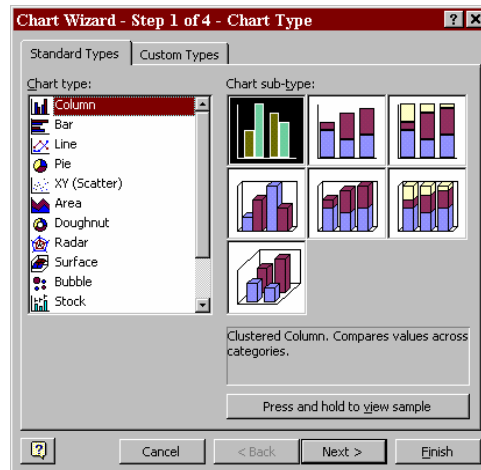
The ChartWizard helps you create a new chart by walking you through it step-by-step.

1. Select the data in your worksheet you want to chart. Include the labels for column and row headings. *To select a range of data in columns or rows not adjacent to each other, use the **CONTROL** key while highlighting the second range.*
2. Click the **ChartWizard** tool.
3. Follow the instructions on the screen. ChartWizard walks you through the process of creating a chart in 4 steps:

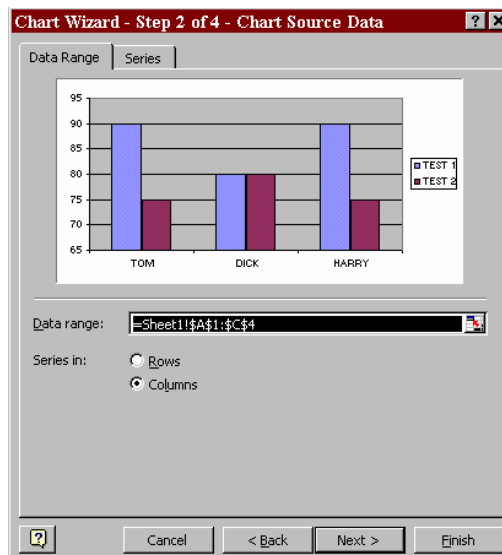
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CHARTWIZARD STEPS 1-4

1. The first window displays 14 chart types from which you may choose. Click on the chart type desired. Several chart sub-types are displayed. Each chart type has four to ten sub-types. Select the one you want, and click on **NEXT**.

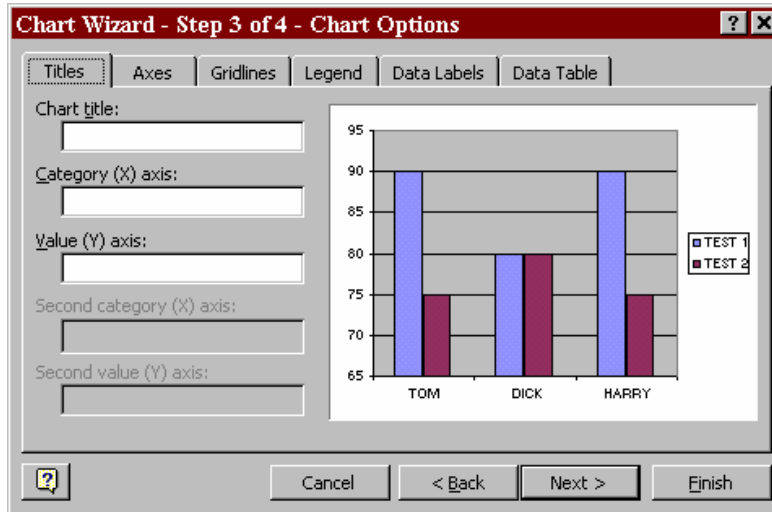


2. A sample chart appears in the *ChartWizard* dialog box. The chart displayed is based on the actual data you selected. In this step you can select a new data series if the current data series is incorrect. As you select options here, your sample chart is redrawn to reflect your changes. No changes are made permanent until you complete ChartWizard. When all changes have been made, click on **NEXT**.

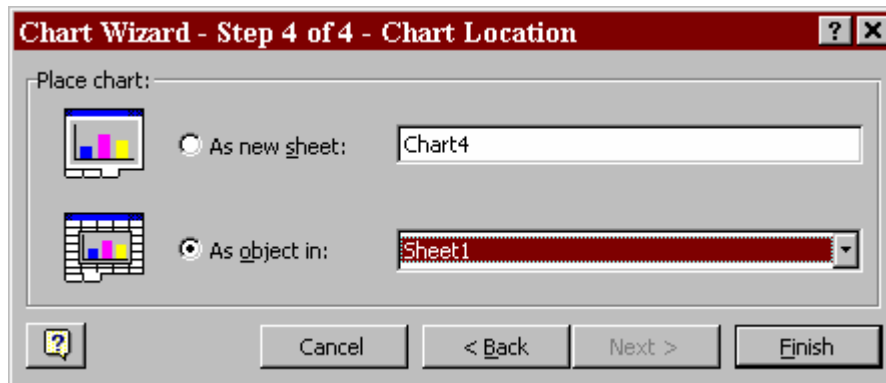


3. In step 3, apply the various chart options available. Here you can add and customize titles, legends, gridlines, etc. Click **NEXT**

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4. In the final step, ChartWizard asks where to place the chart. You have the option of embedding the chart as an object on the current worksheet, or creating a separate chart sheet. When you have made your selection, click **FINISH**.



TIP: Pressing the **F11** key bypasses the ChartWizard and automatically creates your chart in a New Chart Sheet. The chart that displays is the default column chart.

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MOVING OR RESIZING AN EMBEDDED CHART

When you click once on a chart, small black squares (handlebars) appear on the chart border. These handlebars enable you to make minor changes to the chart. You can *resize* the chart by dragging the handlebars. By positioning your cursor inside the chart border you can *move* the chart by dragging it to a new position. You may also use the Chart Toolbar to change the chart type, add/remove legends, add/remove gridlines, add unattached text or text boxes.

THE CHART TOOLBAR

The Chart Toolbar provides tools for changing your chart type, adding or removing gridlines, and legends. From the Chart Toolbar you can also use the ChartWizard to make additional changes to your charts. While all the main chart types can be accessed through the Chart Toolbar, the chart style options for each type are not available. For more detailed formatting of your charts the *Chart Menu* in the Chart Window is available.



THE CHART MENU

When major changes need to be made to a chart, *double-click* anywhere within the chart border. This will access the *Chart Menu*. (If you are already working from a chart sheet, the chart menu should already display). From here you can enhance the appearance of your charts by changing chart types, changing chart patterns, colors, fonts, etc.

To make a change to the chart, click on the area of the chart that you want to edit. Black handlebars appear around the object. The objects can be edited with the commands from the Chart menu, the chart toolbar, by double clicking on the object, or clicking your *right* mouse button to display the *quickmenu*.

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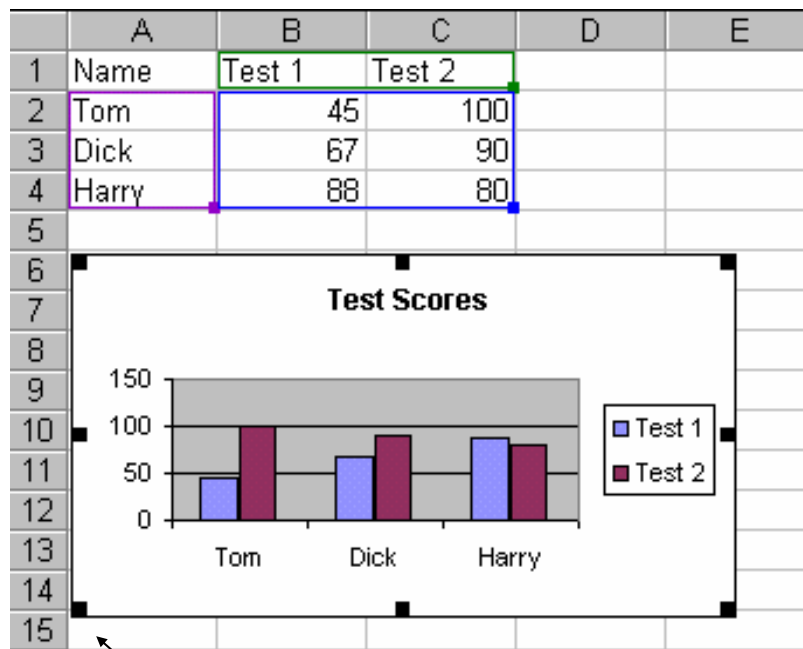
THE CHART MENU BAR

When a chart is selected notice that the menu bar at the top of the screen has changed. The options in the Menu Bar reflect choices specific to working with your charts. Like the Chart Toolbar, the Chart Menu Bar offers options for changing chart type, adding or removing gridlines and legends, adding arrows and text boxes. The Chart Menu also provides choices not available through the Chart Toolbar.

The Menu Bar contains commands that apply to charts. These commands are not included in the regular worksheet menu bar. Items can be edited with commands from the *Insert* or *Format* menus in addition to the chart toolbar.

PRINTING THE CHART

Charts can be printed alone on a separate page whether they are embedded in the worksheet or if they are in their own chart sheet. They can also be printed along with the worksheet if embedded on the same page as the worksheet.



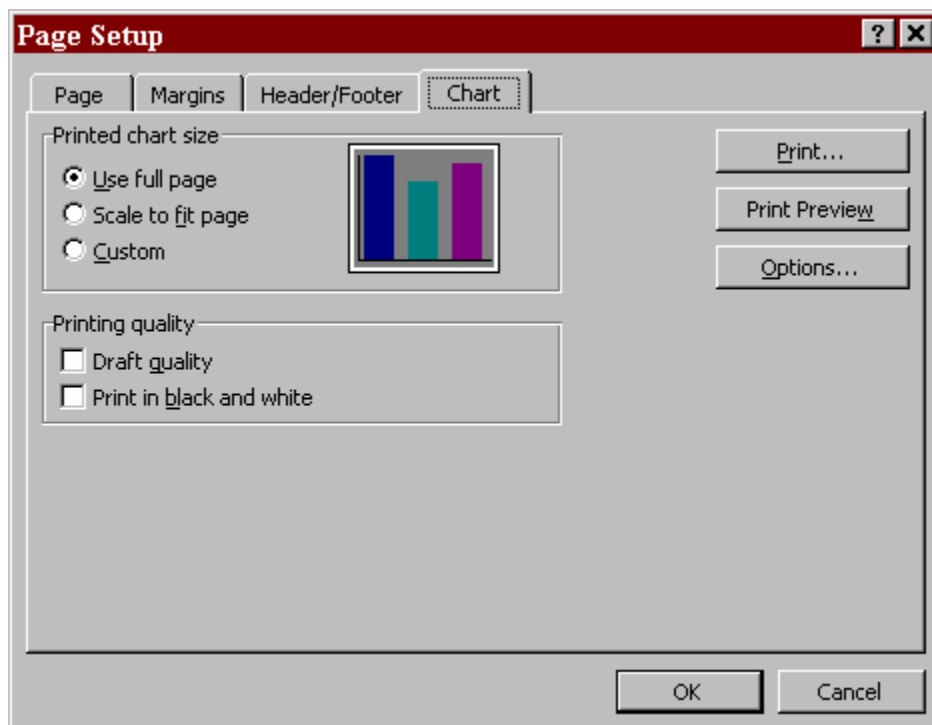
If you Click on the chart, handlebars appear around it indicating that it is selected. If you print now, only the chart will print not the worksheet

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Print the chart and/or worksheet in the same manner you print any other worksheet. It is suggested you use **Print Preview** before printing to make sure everything looks as it should.

1. Select the chart you wish to print. If the chart is embedded in a worksheet and you only want to print the chart, click on the chart to select it.
2. From the Main Menu, select **FILE**
3. Click on the **PRINT** option.
4. Select the print options you want.
5. Click on **OK** to begin printing.

Before printing you may wish to go to Page Setup to change print options for your chart.



If you have selected a chart to print, the Page Setup options display a Chart Tab in addition to the normal page setup tabs. From this dialog box, you can change Margins, Headers/Footers, Orientation, and chart size.

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EDITING A CHART

SELECTING THE CHART

◆ SEPARATE CHART

If your chart is in a separate sheet, bring it to the screen by selecting the Chart sheet it is in.

◆ EMBEDDED CHART

If your chart is embedded in the worksheet, click on the chart to select it.

A new **Chart Menu Bar** appears at the top of the screen. The commands found in the Chart menu enable you to fine-tune your charts. The **Chart Toolbar** also appears on the screen.

Once the chart is selected and the chart menu appears, you can click on individual elements of the chart to make changes to that element. When a chart element has been selected, small handlebars (■) appear on that element. If you do not select an individual element on your chart, many options in the chart menu will not be available.

There are several ways to make changes to the chart elements once selected:

- Double-click on the element.
- Click the **Format** icon in the Chart toolbar.
- Right click on the element. This displays a context sensitive menu displaying the Format command.
- Use the *Chart*, *Format*, or *Insert* menu options from the Chart Menu bar.



CHANGING CHART TYPES

Chart - Chart Type

ADDING/DELETING A LEGEND TO YOUR CHART

Chart - Chart Options - Legend Tab

ADDING/DELETING GRIDLINES TO YOUR CHART

Chart - Chart Options - Gridlines Tab

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ADDING TITLES TO YOUR CHART

You can add text to your chart in the form of a title, or a label attached to the X-Axis, Y-Axis or a data point.

Chart - Chart Options - Titles Tab

DELETING CHART OBJECTS

1. Select the object in the chart you wish to delete.
2. Press the **Del** key on the keyboard.

FORMATTING A CHART

Since a chart is made up of many individual elements, each element is capable of being formatted independently. To format an element in a chart, it must first be selected. A selected element displays handlebars. There are two ways to access the formatting dialog box for individual elements:

- Double-click on the element you wish to format. (This is faster and more efficient).
- Select the element and click on the **Properties** tool on the Chart toolbar.
- Select the element and then use the **FORMAT** menu.

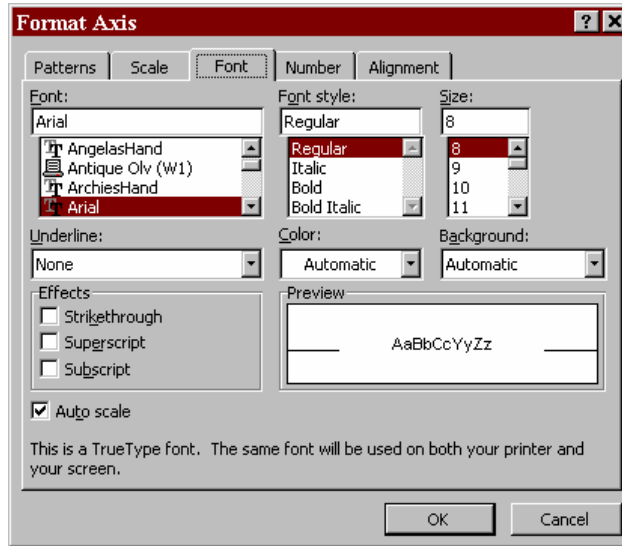
In each case, the ***Format*** dialog box appears with several folder tabs. Depending on which element has been selected, different folder tabs appear.

Most ***Format*** dialog boxes enable you to change the font, add borders and patterns, and alignment.

CHANGING FONTS

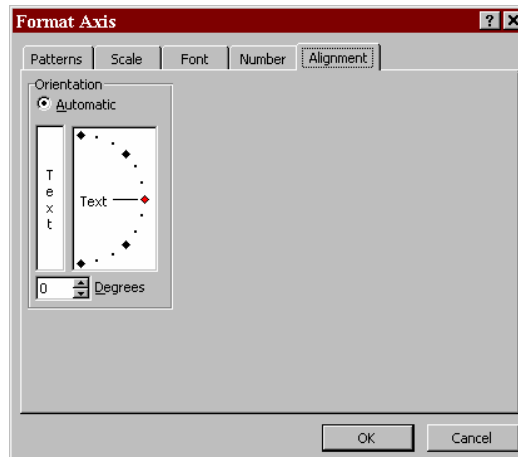
1. Double-Click on the element whose text you wish to format. The ***Format*** dialog box appears with several folder tabs.
2. Select the **Font** folder tab.
3. From here you can select the font, font style, size, and color of the text in your chart.
4. When you have made all your changes, click on **OK** to apply the new formatting and return to your chart.

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CHANGING ALIGNMENT

This option lets you change the orientation of the text.



ADDING PATTERNS AND BORDERS TO THE CHART

1. Double-Click on the element whose patterns and borders you wish to format. The *Format* dialog box appears with several folder tabs.
2. Select the **Patterns** folder tab. This box is divided into two sections: BORDER and AREA.

The Border section controls the type of border you want to apply to the selected object.

The Area section controls the area inside the border, such as the pattern, and the foreground and background color.

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3. Choose the Border style desired from the drop-down lists on the left side of the dialog box (Style, Color, Weight options). If you do not want a border for the selected object, select None.
4. Choose the color and shading/pattern for the selected object from the drop-down lists on the right side of the dialog box (Pattern, Foreground, Background). These options control the pattern inside the selected area. Great for changing the pattern for each data series in a column chart.
5. If you want a drop-down shadow to appear on the background of the border, click on the shadow check box.
6. Click on **OK**, or press **ENTER** to apply the formatting and return to your chart.

