

Charts

Excel 2007

This is not an official training handout of the
Educational Technology Center, Davis School District

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Chart Tools

- **Chart Tools** are shown in three tabs when a chart is selected.
- **Design** tab – Contains the **Type, Data, Chart Layouts, Chart Styles,** and **Location** groups.
- **Layout** tab – Contains the **Current Selection, Insert, Labels, Axes, Background, Analysis,** and **Properties** groups.
- **Format** tab – Contains the **Current Selection, Shape Styles, WordArt Styles, Arrange,** and **Size** groups.

Using Charts

- Charts can be an effective visual presentation showing a comparison of items, changes over time, parts of a whole, trends, and correlations.
- **Comparisons, Changes over Time, and Trends** – Use a column chart, a bar chart, a line chart, a cone chart, a pyramid chart, area chart, or surface chart.
- **Parts of a Whole** - Use a pie chart, a doughnut chart, a stacked column chart, or a stacked bar chart.
- **Correlations** – Use an X Y (Scatter) chart or a Bubble chart.
- **Note** – A radar chart shows data from a central point in a circle.

Creating a Chart

- Select the data for the chart.
- On the **Ribbon**, click on the **Insert** tab.
- In the **Charts** group, click on the desired type of chart and choose the desired chart format.



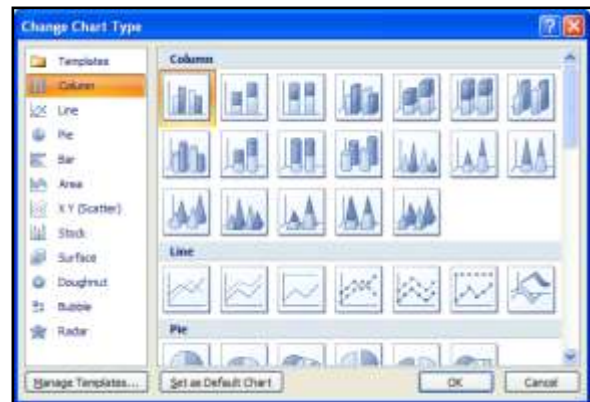
Types of Charts	
Name	Description
Column	Use to compare totals over time and to show a trend.
Line	Use to show change over time, emphasizing the rate of change.
Pie	Use to show relationships and portions of the whole.
Bar	Use to compare totals over time and to show a trend.
Area	Use to show change over time, emphasizing the amount of change.
Scatter	Use to compare trends over uneven intervals of time.
Other	These include Stock, Surface, Doughnut, Bubble, and Radar.

Resizing a Chart

- Click on the chart.
- Place the cursor over an edge of the chart. The cursor changes to a two-headed arrow.
- Click and drag the chart to the desired size.
- **Note** – To maintain the same proportions, hold down the **Shift** key and use the corner to resize the chart.

Changing the Chart Type

- Click on the chart.
- Click on the **Design** tab of **Chart Tools**.
- In the **Type** group, click on the **Change Chart Type** button.
- Click on the desired chart type in the list on the left.
- Choose the desired chart subtype on the right.
- Click on **OK**.



Switching Rows and Columns

- Switching rows and columns changes the way the data is represented on the chart.
- Click on the chart.
- Click on the **Design** tab of **Chart Tools**.
- In the **Data** group, click on the **Switch Row/Column** button.



Changing the Data Selection

- The data to be included in the chart can be changed.
- Click on the chart.
- Click on the **Design** tab of **Chart Tools**.
- In the **Data** group, click on the **Select Data** button.
- Click on the button at the end of the **Chart data range** box.
- Click and drag in the spreadsheet to select the desired data.
- To switch the rows and columns, click on the **Switch Row/Column** button.
- OR
- To remove a series, click on the series in the **Legend Entries** box and then click on the **Remove** button.
- To add a series:
 - Click on the **Add** button in the **Legend Entries** box.
 - Click on the button at the end of the **Series name** box.
 - Click on the cell with the label for the desired series.
 - Press the **Enter** key.
 - Click on the button at the end of the **Series values** box.
 - Click and drag to select the cells with the data for the desired series.
 - Press the **Enter** key.
 - Notice that the contents of the selected cells are displayed in the **Edit Series** window.
 - Click on **OK**.
- To edit a series:
 - Click on the series to be edited in the **Legend Entries** box.
 - Click on the **Edit** button in the **Legend Entries** box.
 - Click on the button at the end of the **Series name** box.
 - Make changes to the **Series name** and **Series values** as noted above.
 - Notice that the contents of the selected cells are displayed in the **Edit Series** window.
 - Click on **OK**.
- **Note** – The chart changes as the data is selected.
- Click on **OK**.



Changing the Chart Layout

- Click on the chart.
- Click on the **Design** tab of **Chart Tools**.
- In the **Chart Layouts** group, click on the **More** button.
- Click on the desired layout.



Changing the Chart Style

- Click on the chart.
- Click on the **Design** tab of **Chart Tools**.
- In the **Chart Styles** group, click on the **More** button.
- Click on the desired style.



Changing the Chart Location

- The chart can be a picture floating on top of the worksheet, or a separate worksheet.
- Click on the chart.
- Click on the **Design** tab of **Chart Tools**.
- In the **Location** group, click on the **Move Chart** button.
- Click on the desired location.
- If selecting **Object in**, click on the down arrow and choose the desired worksheet to place the chart on.
- Click on **OK**.

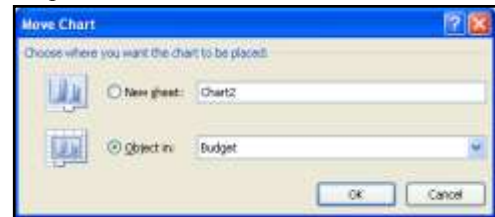
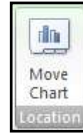


Chart Title

- Click on the chart.
- Click on the **Layout** tab of **Chart Tools**.
- In the **Labels** group, click on the **Chart Title** button and choose the desired location. The choices are **Centered Overlay Title** or **Above Chart**.
- Click in the chart title box on the chart and edit the title as desired.
- To enhance the title
 - Click on the **Chart Title** button and choose **More Title Options...**
 - Choices include **Fill, Border Color, Border Styles, Shadow, 3-D Format, and Alignment**.
 - Changes made to the title are displayed immediately.
 - Click on the **Close** button when finished.
- To move the chart title, place the cursor over an edge of the chart title (the cursor becomes a four-headed arrow), click and drag the title to the desired location.
- To remove the chart title, in the **Labels** group, click on the **Chart Title** button and choose **None**.



Axis

- The axes are lines that show the scale or identify the series graphed.
- Click on the chart.
- Click on the **Layout** tab of **Chart Tools**.
- In the **Axes** group, click on the **Axes** button, and choose **Primary Horizontal Axis** or **Primary Vertical Axis**.
- **Primary Horizontal Axis** has the choices of **None**, **Show Left to Right Axis**, **Show Axis without labeling**, or **Show Right to Left Axis**.
- To enhance the title:
 - Click on the **Axes** button, choose **Primary Horizontal Axis**, and then choose **More Primary Horizontal Axis Options....**
 - Choices include **Axis Options**, **Number**, **Fill**, **Line Color**, **Line Style**, **Shadow**, **3-D Format**, and **Alignment**.
 - Changes made to the axis are displayed immediately.
 - Click on the **Close** button when finished.
- **Primary Vertical Axis** has the choices of **None**, **Show Default Axis**, **Show Axis in Thousands**, **Show Axis in Millions**, **Show Axis in Billions**, or **Show Axis in Log Scale**.
- To enhance the title:
 - Click on the **Axes** button, choose **Primary Vertical Axis**, and then choose **More Primary Vertical Axis Options....**
 - Choices include **Axis Options**, **Number**, **Fill**, **Line Color**, **Line Style**, **Shadow**, **3-D Format**, and **Alignment**.
 - Changes made to the axis are displayed immediately.
 - Click on the **Close** button when finished.
- To remove an axis title, in the **Axes** group, click on the **Axes** button, choose **Primary Horizontal Axis** or **Primary Vertical Axis**, and then choose **None**.



Axis Title

- Click on the chart.
- Click on the **Layout** tab of **Chart Tools**.
- In the **Labels** group, click on the **Axis Title** button, and choose **Primary Horizontal Axis** or **Primary Vertical Axis**.
- **Primary Horizontal Axis** has the choices of **None** or **Title Below**.
- To enhance the title:
 - Click on the **Axis Title** button, choose **Primary Horizontal Axis**, and then choose **More Primary Horizontal Axis Title Options....**
 - Choices include **Fill**, **Border Color**, **Border Styles**, **Shadow**, **3-D Format**, and **Alignment**.
 - Changes made to the title are displayed immediately.
 - Click on the **Close** button when finished.
- **Primary Vertical Axis** has the choices of **None**, **Rotated Title**, **Vertical Title**, or **Horizontal Title**.
- To enhance the title:
 - Click on the **Axis Title** button, choose **Primary Vertical Axis**, and then choose **More Primary Vertical Axis Title Options....**
 - Choices include **Fill**, **Border Color**, **Border Styles**, **Shadow**, **3-D Format**, and **Alignment**.
 - Changes made to the title are displayed immediately.
 - Click on the **Close** button when finished.



- To move the axis title, place the cursor over an edge of the chart title (the cursor becomes a four-headed arrow), click and drag the title to the desired location.
- To remove an axis title, in the **Labels** group, click on the **Axis Title** button, choose **Primary Horizontal Axis** or **Primary Vertical Axis**, and then choose **None**.

Chart Legend



- Click on the chart.
- Click on the **Layout** tab of **Chart Tools**.
- In the **Labels** group, click on the **Legend** button and choose the desired location. The choices include no legend, showing the legend on any of the four sides, and as an overlay on the right or the left.
- To enhance the legend:
 - Click on the **Legend** button, choose **More Legend Options...**
 - Choices include **Legend Options, Fill, Border Color, Border Styles, and Shadow**.
 - Changes made to the title are displayed immediately.
 - Click on the **Close** button when finished.
- To move the legend, place the cursor over an edge of the chart title (the cursor becomes a four-headed arrow), click and drag the legend to the desired location.
- To remove the chart title, in the **Labels** group, click on the **Chart Title** button and choose **None**.

Data Labels



- Data labels place a number in the chart indicating the value of the chart item.
- Click on the chart.
- Click on the **Layout** tab of **Chart Tools**.
- In the **Labels** group, click on the **Data Labels** button and choose the desired option.
- To enhance the legend:
 - Click on the **Legend** button and choose **More Legend Options...**
 - Choices include **Label Options, Number, Fill, Border Color, Border Styles, Shadow, 3-D Format, and Alignment**.
- Changes made to the legend are displayed immediately.
- Click on the **Close** button when finished.
- To move a data label, place the cursor over an edge of the chart title (the cursor becomes a four-headed arrow), click and drag the label to the desired location.
- To remove data labels from a series:
 - Click on a label for the series. (All of the labels for the series are selected.)
 - In the **Labels** group, click on the **Data Labels** button and choose **None**.
- To remove all data labels, in the **Labels** group, click on the **Data Labels** button and choose **None**.

Data Table

- A data table is a table below the chart with the data.
- Click on the chart.
- Click on the **Layout** tab of **Chart Tools**.
- In the **Labels** group, click on the **Data Table** button and choose the desired option. The choices include no data table, a data table, and a data table with legend keys.
- To enhance the data table:
 - Click on the **Legend** button and choose **More Data Table Options...**
 - Choices include **Data Table Options, Fill, Border Color, Border Styles, Shadow, and 3-D Format**.
- Changes made to the data table are displayed immediately.
- Click on the **Close** button when finished.
- To remove the data table, in the **Labels** group, click on the **Data Table** button and choose **None**.



Gridlines

- Gridlines in the chart assist the viewer in reading the chart.
- Click on the chart.
- In the **Axes** group, click on the **Gridlines** button, and choose **Primary Horizontal Gridlines** or **Primary Vertical Gridlines**.
- The choices of **None, Major Gridlines, Minor Gridlines, or Major & Minor Gridlines**.
- To enhance the horizontal gridlines, click on the **Gridlines** button, choose **Primary Horizontal Gridlines**, and then choose **More Primary Horizontal Gridlines Options...**
- To enhance the vertical gridlines, click on the **Gridlines** button, choose **Primary Vertical Gridlines**, and then choose **More Primary Vertical Gridlines Options...**
- Choices include **Line Color, Line Style, or Shadow**.
- Changes made to the gridlines are displayed immediately.
- Click on the **Close** button when finished.
- To remove gridlines, in the **Axes** group, click on the **Gridlines** button, choose **Primary Horizontal Gridlines** or **Primary Vertical Gridlines**, and then choose **None**.



Plot Area

- The plot area of a chart can be given a background color, gradient, or picture.
- **Note** – The background should be simple so as to not make the chart hard to read.
- Click on the chart.
- On the **Ribbon**, click on the **Layout** tab of **Chart Tools**.
- In the **Background** group, click on the **Plot Area** button and choose the desired option.
- The choices are **None** (which clears the plot area fill) or **Show Plot Area**.
- To enhance the plot area:
 - Click on the **Legend** button and choose **More Plot Area Options...**
 - Choices include **Fill, Border Color, Border Styles, Shadow, and 3-D Format**.
 - Changes made to the gridlines are displayed immediately.
 - Click on the **Close** button when finished.
- To remove the special options which have been applied to the plot area, in the **Background** group, click on the **Plot Area** button and choose **None**.



Analysis

- Various items can be added to the chart to assist in analysis.
- Possible options include **Trendlines, Lines, Up/Down Bars, and Error Bars.**
- Click on the chart.
- Click on the **Layout** tab of **Chart Tools.**
- In the **Analysis** group, click on the desired button and choose the desired option.
- To enhance the analysis item:
 - Click on the **Legend** button and choose **More item Options...**
 - Choices include item **Options, Line Color, Line Styles, and Shadow.**
 - Changes made to an analysis item are displayed immediately.
 - Click on the **Close** button when finished.
- To remove an analysis item:
 - Click on the item.
 - In the **Analysis** group, click on the appropriate button and choose **None.**
- To remove all analysis items, in the **Analysis** group, click on the appropriate button and choose **None.**

Formatting Text in the Chart

- Click on the chart.
- Click on the text to be formatted.
- Click on the **Home** tab.
- In the **Font** group, click on the desired button and make the desired change



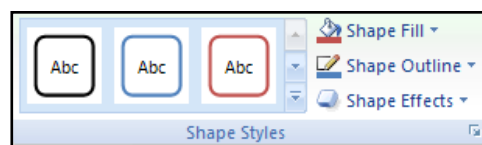
Using the Mini Toolbar

- Click on the chart.
- Right click on the text to be formatted.
- Use the **Mini Toolbar** to format the text as desired.



Formatting the Chart with Styles

- Click on the chart.
- Click on the text to be formatted.
- On the **Ribbon**, click on the **Format** tab of **Chart Tools.**
- In the **Current Selection** group, click on the down arrow of the **Chart Elements** box and select the element of the chart to be formatted.
- To format the shape of the selected element:
 - In the **Shape Styles** group, click on the **More** button at the bottom right corner of the **Shape Styles** window.
 - Click on the desired style.
 - **Note – Live Preview** in **Office 2007** displays the shape with the style the mouse is hovering over.
 - To change the fill of the shape, in the **Shape Styles** group, click on the **Shape Fill** button and choose the desired fill.
 - To change the outline of the shape, in the **Shape Styles** group, click on the **Shape Outline** button and choose the desired outline.
 - To change the effect of the shape, in the **Shape Styles** group, click on the **Shape Effects** button and choose the desired effect.

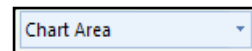


- To format the text of the selected element:
 - In the **WordArt Styles** group, click on the **More** button at the bottom right corner of the **WordArt Styles** window.
 - Click on the desired style.
 - **Note – Live Preview in Office 2007** displays the text with the style the mouse is hovering over.
 - To change the fill of the shape, in the **WordArt Styles** group, click on the **Text Fill** button and choose the desired fill.
 - To change the outline of the shape, in the **WordArt Styles** group, click on the **Text Outline** button and choose the desired outline.
 - To change the effect of the shape, in the **WordArt Styles** group, click on the **Text Effects** button and choose the desired effect.



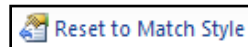
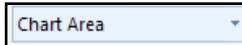
Formatting Parts of the Chart

- Click on the chart.
- Click on the text to be formatted.
- On the **Ribbon**, click on the **Format** tab of **Chart Tools**.
- In the **Current Selection** group, click on the down arrow of the **Chart Elements** box and select the element of the chart to be formatted.
- In the **Current Selection** group, click on the **Format Selection** box.
- The formatting window for that element opens.
- Make the desired changes.
 - Click in the left pane on the desired choice.
 - In the right pane, make the desired adjustments.
 - Click on the **Close** button.



Resetting the Chart

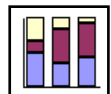
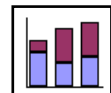
- Click on the part of the chart to work with.
- On the **Ribbon**, click on the **Layout** tab of **Chart Tools**.
- In the **Current Selection** group, click on the down arrow of the **Chart Elements** button and choose the desired element of the chart
- **OR** click on the element of the chart to be customized.
- In the **Current Selection** group, click on the **Reset to Match Style** button.



Special Features of Various Charts

Column Charts

- A **Stacked Column** chart compares the parts to the whole. The total number of items in the whole can also be seen in relation to other categories.
- A **100% Stacked Column** chart compares the parts as a percentage of the whole for easy comparison with other categories.



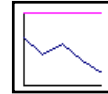
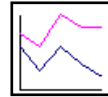
Bar Charts

- A **Stacked Bar** chart compares the parts to the whole. The total number of items in the whole can also be seen in relation to other categories.
- A **100% Stacked Bar** chart compares the parts as a percentage of the whole for easy comparison with other categories.



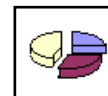
Line Charts

- Line charts show trends over time.
- A **Stacked Line** chart compares the parts to the whole over time. The total number of items in the whole can also be seen in relation to other categories.
- A **100% Stacked Line** chart compares the parts of the whole over time as a percentage for easy comparison.



Pie Charts

- Pie charts show the parts of a whole.
- **Pie of Pie** and **Bar of Pie** charts show information extracted from a slice of the pie.
- Exploded views show the pieces separated.

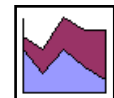


X Y Scatter Charts

- Choose between charts with dots, lines, or smooth lines as well as markers or no markers.

Area Charts

- Area charts show trends over time. They can be 3-D view.
- A **Stacked Area** chart compares the parts to the whole over time. The total number of items in the whole can also be seen in relation to other categories.
- A **100% Stacked Area** chart compares the parts of the whole over time as a percentage for easy comparison.



Doughnut Charts

- Exploded views show the pieces separated.

Radar Charts

- Radar charts can have markers or be filled.

Surface Charts

- Surface charts can be 2-D or 3-D in either a filled or wire-frame chart to show trends.

Bubble Charts

- Bubble charts compare sets of three values in either a 2-D or a 3-D chart.

Stock Charts

- Stock charts compare sets of three, four, or five values. These charts must have the specified number of values and be in the order indicated.

Cylinder, Cone, and Pyramid Charts

- A **Stacked Column** or a **Stacked Bar** chart compares the parts to the whole. The total number of items in the whole can also be seen in relation to other categories.
- A **100% Stacked Column** or a **100% Stacked Bar** chart compares the parts as a percentage of the whole for easy comparison with other categories.