

# **Excel Lesson 8**

## **Working with Charts**

**Microsoft Office 2010**  
**Introductory**

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# Objectives

- Identify the types of charts you can create in Excel.
- Create an embedded chart in a worksheet and move a chart to a chart sheet.
- Update a data source.
- Choose a chart layout and style.
- Create a 3-D chart.

## Objectives (continued)

- Display and hide chart elements.
- Format and modify a chart.
- Create sparklines.

# Vocabulary

- axis
- chart
- chart area
- chart layout
- chart sheet
- chart style
- column chart
- data label
- data marker
- data series
- data source
- data table
- embedded chart
- exploded pie chart

# Vocabulary (continued)

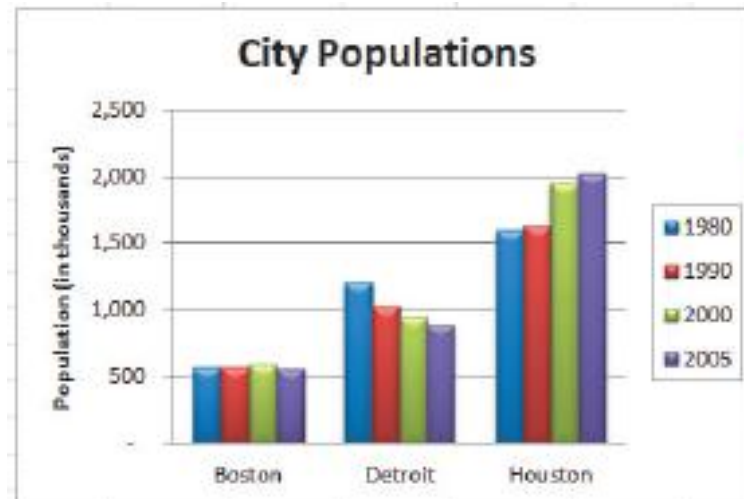
- legend
- line chart
- pie chart
- plot area
- scatter chart
- sparkline

# Comparing Chart Types

- A chart is a graphical representation of data.
- The four most commonly used charts are a column chart, a line chart, a pie chart, and a scatter chart.
- These charts as well as several other types of charts are available in the Charts group on the Insert tab on the Ribbon.

# Comparing Chart Types (continued)

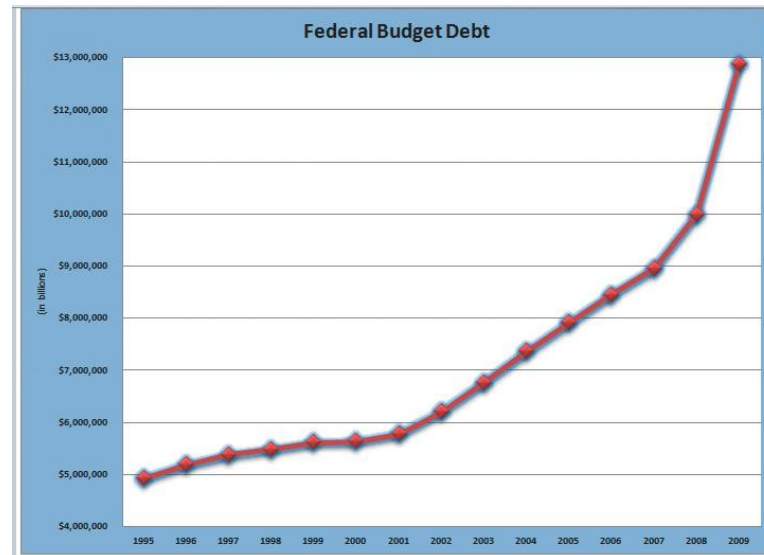
- A **column chart** uses bars of varying heights to illustrate data in a worksheet. It is useful for showing relationships among categories of data.



Column chart

# Comparing Chart Types (continued)

- A **line chart** uses points connected by a line to show data, and is ideal for illustrating trends over time.

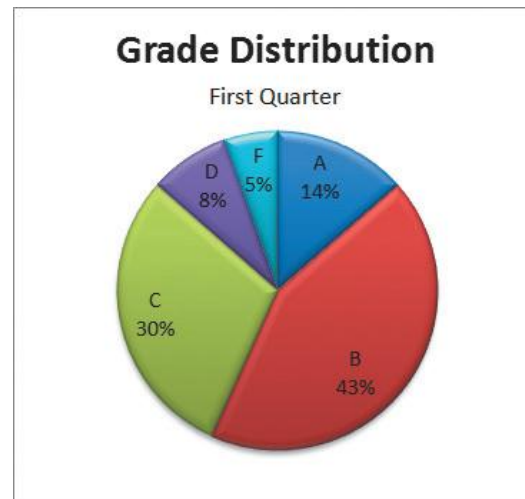


Line chart



# Comparing Chart Types (continued)

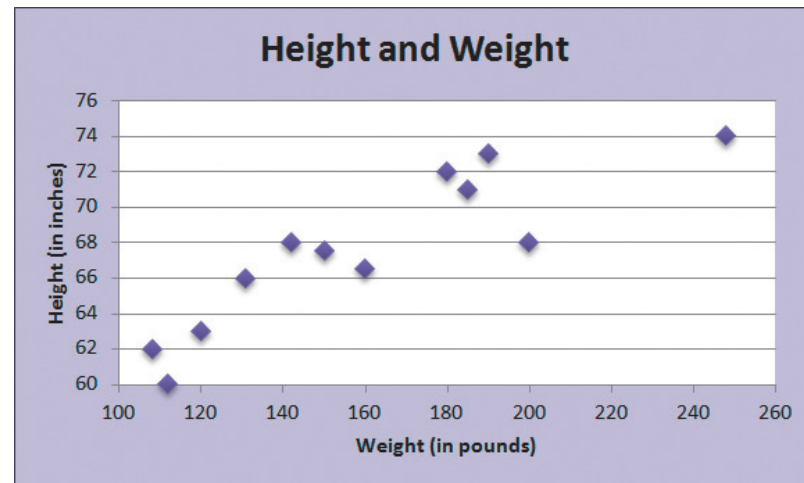
- A **pie chart** shows the relationship of parts to a whole. Each part is shown as a “slice” of the pie.



Pie chart

# Comparing Chart Types (continued)

- A **scatter chart**, sometimes called an XY chart, shows the relationship between two categories of data, such as a person's height and weight.



Scatter chart

# Creating a Chart

- The process for creating a chart is similar no matter which chart type you want to create.
  - First, you select the data you want to use for the chart.
  - Second, you select a chart type.
  - Finally, you select the chart location.

## Creating a Chart (continued)

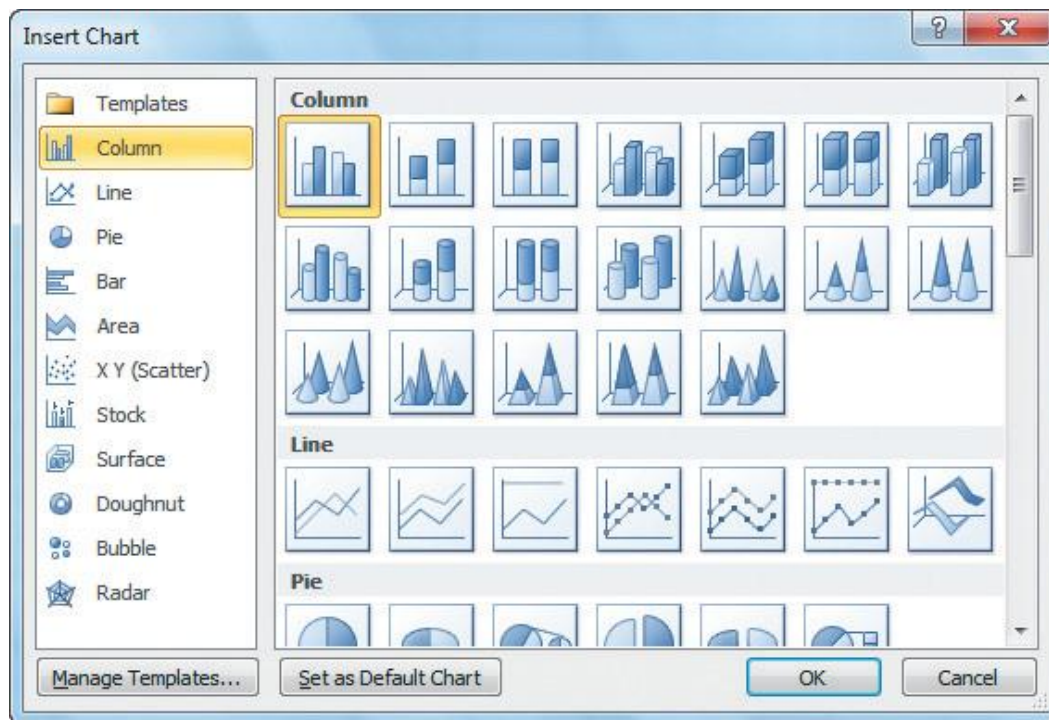
- Selecting the data to chart is the first step.
- The chart data, called the **data source**, is stored in a range of cells in the worksheet.
- You can also choose whether to chart more than one series of data.
- A **data series** is a group of related information in a column or row of a worksheet that is plotted on the chart.

## Creating a Chart (continued)

- Selecting the chart type is the second step.
- The next step is to select the type of chart you want to create, such as a column, pie, or line chart.
- Each chart type has a variety of subtypes you can choose from.
- The chart types are available on the Insert tab in the Charts group.

# Creating a Chart (continued)

- Insert chart dialog box



## Creating a Chart (continued)

- Choosing the chart location is the third step.
- After you select a chart type and subtype, the chart is inserted in the center of the worksheet.
- This is called an **embedded chart**. You can move an embedded chart to a **chart sheet**, which is a separate sheet in a workbook that stores a chart.

# Updating a Data Source

- Charts are based on the data stored in a worksheet.
- If you need to change the data in the worksheet, the chart is automatically updated to reflect the new data.
- You switch between a chart sheet and a worksheet by clicking the appropriate sheet tabs.

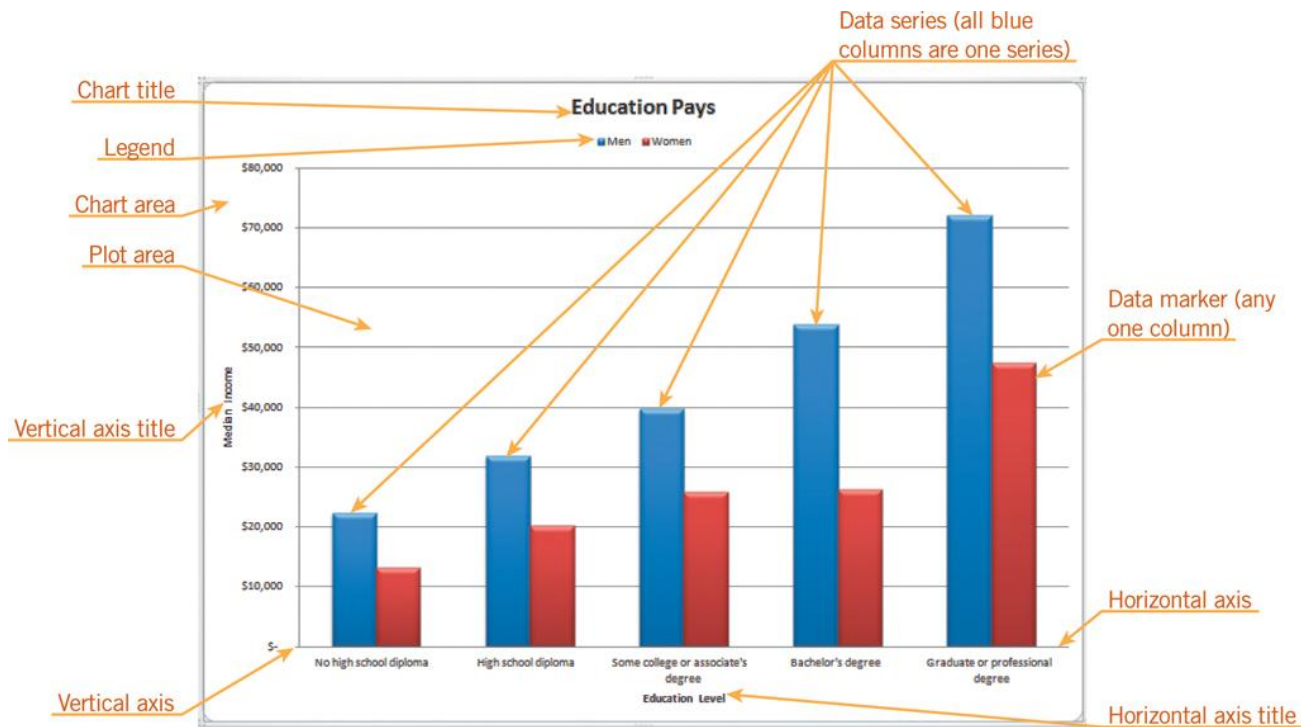


# Designing a Chart

- Most charts include some basic elements, such as a title and **legend**, which you can choose to include or hide.
- Charts are made up of different parts, or elements. The chart on the next slide identifies some common chart elements.

# Designing a Chart (continued)

- Chart elements



# Designing a Chart (continued)

- A **chart layout** specifies which elements are included in a chart and where they are placed.
- A **chart style** formats the chart based on the colors, fonts, and effects associated with the workbook's theme.
- You can modify a chart's appearance by displaying or rearranging the chart title, axis titles, legend, data labels, data table, axes, gridlines, and the plot area.

# Creating a 3-D Chart

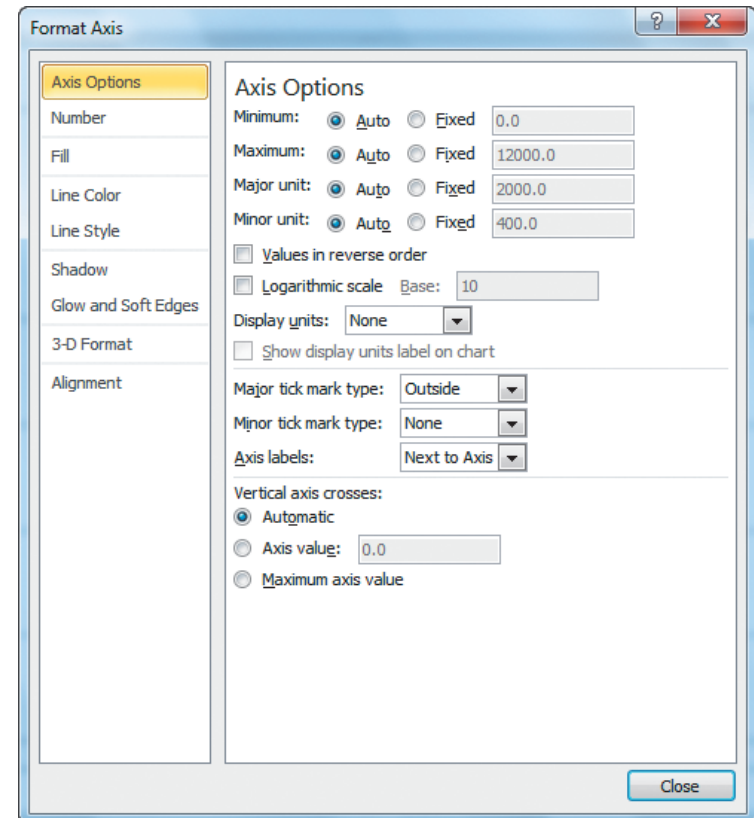
- In a pie chart, the slices are different colors to distinguish each data marker. Pie charts can be 2-D or 3-D.
- To create a 3-D chart, choose one of the 3-D chart styles, such as “Pie in 3-D.”

# Formatting and Modifying a Chart

- The Chart Tools provide a simple way to create professional-looking charts.
- To make changes to an element's fill, border color, and border style, and so forth, you need to open its Format dialog box.
- Select the chart element. Then, on the Format tab, click the Format Selection button to open the Format dialog box.

# Formatting and Modifying a Chart (continued)

- Format Axis dialog box for the horizontal (value) axis



# Formatting and Modifying a Chart (continued)

- You use the standard text formatting tools to make changes to the fonts used in the chart.
- You can change the chart type or subtype. Select the chart, and then on the Design tab, click the Change Chart Type button.




# Inserting Sparklines

- **Sparklines** are mini charts that you can insert into a cell.
  - A line sparkline is a line chart that appears within one cell.
  - A column sparkline is a column chart that appears within one cell.
  - A win/loss sparkline inserts a win/loss chart, which tracks gains and losses, within one cell.



# Inserting Sparklines (continued)

- Examples of line, column, and win/loss sparklines

	A	B	C	D	E
1	<b>Sparklines</b>				
2	<b>Line</b>				
3	Revenue	\$ 1,203	\$ 1,028	\$ 951	\$ 887
4					
5	<b>Column</b>				
6	Units Sold	1595	1631	1954	2017
7					
8	<b>Win/Loss</b>				
9	Value	102	175	(75)	25
10					

## Inserting Sparklines (continued)

- To create a sparkline, first select the range where you want to insert the sparkline.
- In the Sparklines group on the Insert tab, click the button corresponding to the type of sparkline you want to create.

# Summary

In this lesson, you learned:

- A chart is a graphical representation of data. You can create several types of worksheet charts, including column, line, pie, and scatter charts.
- Charts can be embedded within a worksheet or created on a chart sheet.
- The process for creating a chart is the same for all chart types. Select the data for the chart. Select a chart type. Move, resize, and format the chart as needed.

# Summary (continued)

- Charts are made up of different parts, or elements. You can apply a chart layout and a chart style to determine which elements appear in the chart, where they appear, and how they look.
- If the data in a chart's data source is changed in the worksheet, the chart is automatically updated to reflect the new data.

## Summary (continued)

- You can fine-tune a chart by clicking a chart element and then opening its Format dialog box. You can also edit and format the chart text, using the standard text formatting tools.
- You can change the type of chart in the Change Chart Type dialog box.
- Sparklines are mini charts you can insert into a worksheet cell to show a pattern or trend. The three types of sparklines are line, column, and win/loss.