

# Excel: Creating Charts and Graphs

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## **Background Information**

This short workshop is designed to provide an overview for creating and formatting charts and sparklines in Excel. You will also learn how to copy and paste this data to use in reports, posters and infographics.

## **Required Skills**

- Beginners knowledge of Excel
- Software navigation (using a mouse and keyboard)
- Basic algebra skills


## **Agenda**

- Creating a new worksheet
- Chart basics
  - Creating a basic chart
  - Modifying your chart data
- Basic chart formatting
  - The design ribbon
    - Chart elements
  - The format ribbon
- Creating sparklines
  - Deleting sparklines
- Quick analysis to make charts
  - Formatting
  - Charts
  - Sparklines
- Inserting a Chart into Word and PowerPoint
- Printing your chart

## **Creating a new worksheet**

Creating a new worksheet in Excel can help organize your charts and graphs keeping your data separate from your charts and tables.

To create a new worksheet:

1. At the bottom of your worksheet you will find a worksheet tab
2. Click the  symbol and a new worksheet tab will appear, to go to that worksheet click the tab.
  - To rename your worksheet you can double click the worksheet tab or right click and select *Rename*. Start typing in the new name and hit *Enter* when you're finished.

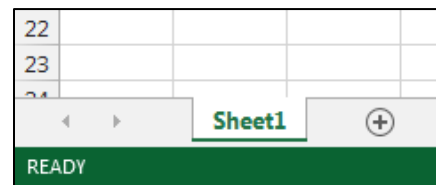


Figure 1 - Worksheet tab



Figure 2 - Renaming a worksheet

## Moving Data

Creating a separate worksheet for your charts is an important step in creating an organized workbook. Having your essential chart data and charts on a separate worksheet can make your information easier to digest, and can make creating charts a much simpler process.

To move your data:

1. Select the cells you want to bring over to your new worksheet
2. Right click and select *Copy* on those selected cells
3. On your new worksheet right click and select *Paste* in the location that you want your data
  - You may have to use the *Paste Special* options to correctly bring over your data,

## Charts in Excel

There are seven types of chart categories: bar, line, pie, area, scatter, stock and combo charts. Under each chart category there are sub groups of charts.

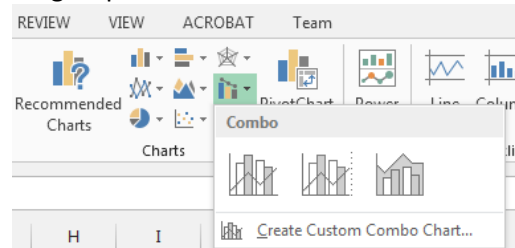


Figure 3 - Charts and chart subgroups

## Creating a basic chart automatically

1. Select the data you want to use

Spending for July		
	Spending	
15	Entertainment	55
30	Eating Out	52
70	Shopping	110
8	Gas	90
45	Savings	40
55	Other	90
10	Total Spending	437
30		

Figure 4 - Select your data

2. Go to the **INSERT** ribbon tab
3. Select the chart you want to use in the *Charts* group
4. Choose a chart from the dropdown menu

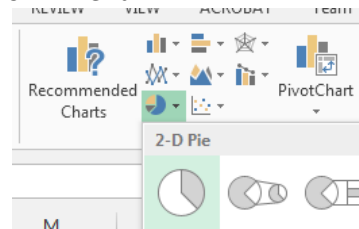



Figure 5 - Choosing a chart

- Your chart will appear in your worksheet, you can click and drag your chart to move it around your worksheet.

- Please Note: If your chart does not fit on your worksheet you can cut and paste it into a new one. To do this right click on the chart and select  , enter the new



 worksheet and right click and select  your table is now displayed in the new worksheet



Figure 6 - A pie chart made using Excel

## Creating a chart manually

Although creating a chart in Excel 2013 is easy and intuitive, you can create charts using the same method in earlier versions.

- Go to the **INSERT** ribbon tab
- Select the chart you want to use in the *Charts* group
- Choose a chart from the dropdown menu
- A blank chart space will appear in your worksheet
- Go to the **DESIGN** tab
- Click *Select Data* in the *Data* group
- The *Select Data Source* dialogue window will appear
- You can either type in the cell locations you want to use or click, drag, and select the cell you want to include in your chart
- A preview of your chart will appear
- You can select the or deselect series in the dialogue window
- Press *OK* when you are happy with your charts

## Modifying your charts data

After you make a chart you can still change what data is used in it

To do this:

- Click on your chart
- Look at the data you chart is based off of and notice the colored borders surrounding your data
- Click and drag these borders to change the data represented in the chart.

Bear Island Pancakes Location Income (in thousands) for FY 2013					
Location	Q1	Q2	Q3	Q4	Lines
Bear Island	613	602	604	697	

Figure 7- The colored borders representing data to be included in chart

## Select Data

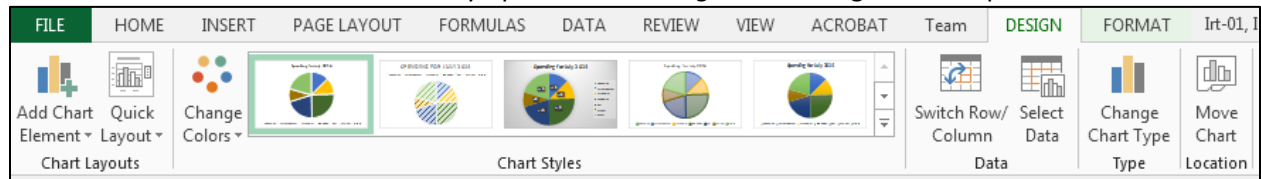
If you ever encounter a problem with your data when making your chart, the easiest way to see what went wrong is to open the select data dialogue window.

## Basic chart formatting

There are lots of formatting options in Excel to use for charts, you can change chart styles, chart colors, add borders, change fonts and much more. There are two locations where you will do most of your formatting: the Design and Font ribbon.

### The Design Ribbon

This ribbon is where you will find options to change your chart style, colors, chart type, layout and add chart elements. You can hover over any option in the *Design* ribbon to get a description of the function.



### Inserting Chart Elements

Here you can add or remove specific elements to your chart such as title, legend, gridlines and data labels.

To insert an element:

1. Click on your chart
2. Go to the **DESIGN** tab
  - Alternatively you can click **+** that appears on the upper right corner of your graph to access this menu
3. In the *Chart Layouts* group click on *Add Chart Element*
4. A drop-down menu will appear with different elements to add
5. Hovering over a specific element will show sub categories of that element
6. You can hover over a specific choice to preview your selection
7. If you want to customize your element further you can click on *More Options* for that specific element
8. Click on the element you want to use

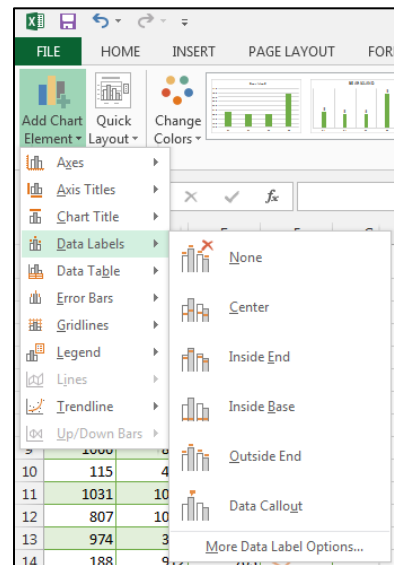
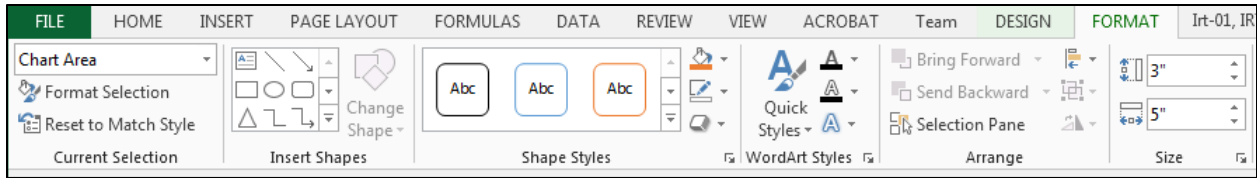


Figure 8 - Adding a chart element

### The Format Ribbon

In this ribbon is where you can find options to change individual elements of your graph. You can hover over any option in the *Format* ribbon to get a description of the function.



## Sparklines

Sparklines are a tiny information graphic that represents trends or variations in collected data. There are three types of sparklines:

- **Line** represents the selected worksheet data as a connected line showing whose vectors display their relative value
- **Column** represents the selected worksheet data as tiny columns
- **Win/Loss** represents the selected worksheet data as a win/loss chart whereby wins are represented by blue squares that appear above the red squares representing the losses

### Creating a Sparkline

To create a sparkline:

1. Select the cells you want to use in your sparkline
2. Go to the **INSERT** tab in the ribbon, locate the *Sparklines* group and select the sub type you want to use
3. The *Create Sparklines* window will appear, select your cell or cell range that you want your sparkline to appear in and press **OK**



Figure 9 - The sparkline tool

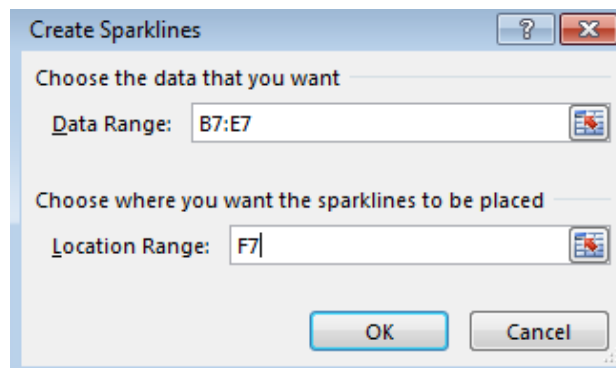


Figure 10 - Sparkline dialogue window


Your sparkline is now displayed

Earnings in millions						
	Quarters					
Region	Q1	Q2	Q3	Q4		
North	298	625	565	579		
South	660	546	186	594		
West	454	605	553	526		
East	228	265	247	347		

Figure 11 - Sparklines


## Deleting Sparklines

To remove a sparkline:

1. Click on your sparkline
2. Go to the **DESIGN** tab
3. In the *Group* group select  Clear
4. Your sparkline is now removed

## Using Quick Analysis to make Charts

The quick analysis toolbar give easy access to formatting, charts, functions, pivot tables and spark lines.

To access the toolbar select your group of cells that you wish to analyze and a  symbol will appear in the lower right hand corner of your selected cells, by clicking on it you will open the quick analysis toolbar. There are five categories in the quick access toolbar: formatting, charts, totals, tables, and sparklines, for this workshop we will cover formatting, charts, and sparklines. The options under these categories change depending on what kind of data is selected (i.e. dates, numerical, labels etc.). You can hover over an option for a preview of click on one to apply it.

### Formatting

The formatting menu allows quick access to some commonly used formats to allow the reader to quickly scan for data that is exceptional, by highlighting the commands in the menu you can preview your formatting.

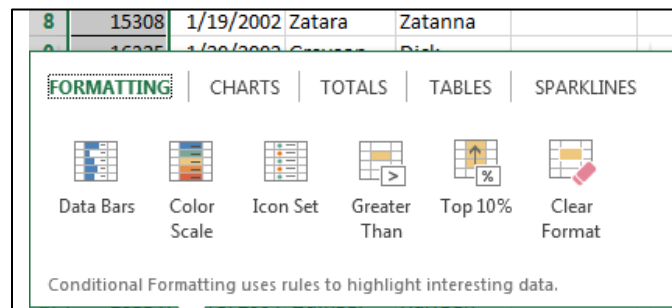


Figure 12- Formatting Quick Analysis

### Charts

The Charts tab gives you three recommended charts to choose from depending on what data you highlighted as well as an option to display all other charts. By highlighting over an option you can preview a chart before you choose it. You can edit a chart you make from the Quick Analysis tool the way you would edit a normal chart.

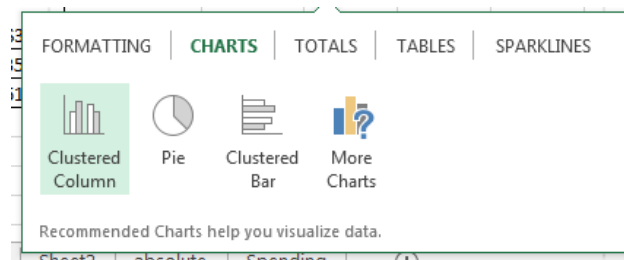
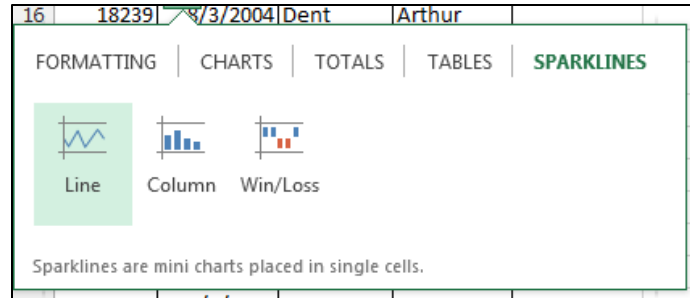


Figure 13 - Charts tab

### Sparklines

The sparklines tab gives quick access to creating small single cell graphs quickly. You can always go back the design tab in the ribbon to further edit your sparkline.



FileFigure 14 - Sparkline tab

### **Inserting a Chart into other Microsoft Office Programs**

Inserting a chart into Word or PowerPoint is very simple, all you have to do is copy your chart and paste it into an open document. After your chart is included you will find that you can still edit your chart using the *Design* and *Format* tabs in the ribbon.

### **Printing your Chart**

In Excel 2013 you can print your chart alone without setting a print area. To do so select your chart and go to *File > Print* and a preview will display your chart alone to be printed.