



# Excel 1: The Basics & Beginning Formulas Class Guide

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## Part 1: Excel Basics

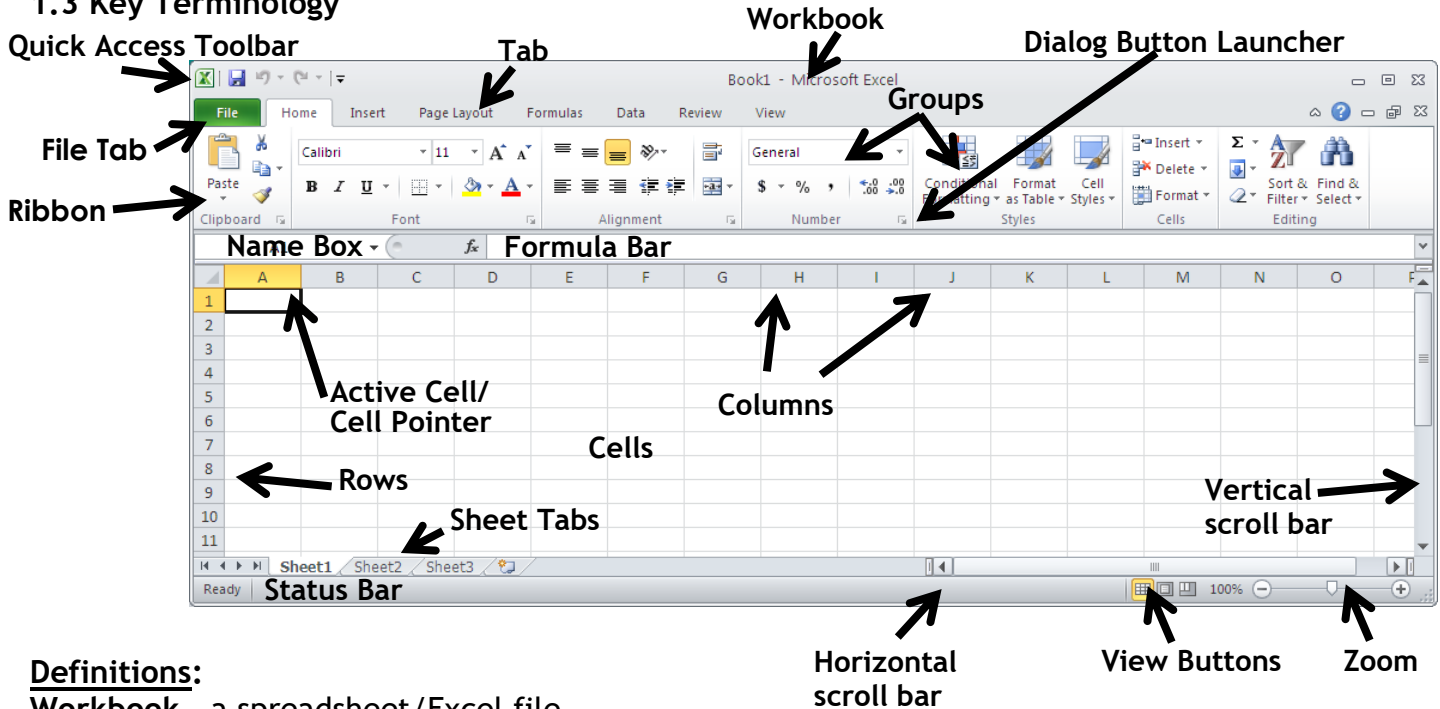
### 1.1 What is Excel?

Excel is a spreadsheet program you can use for budgets, charts/graphs, inventory tracking, calculations, reports, and spreadsheets of all types for personal or business reasons.

### 1.2 What we'll be using

We will be using Excel 2010. This version is similar to 2007, 2013, and 2016 but quite different from earlier versions. The .xlsx files are not compatible with pre-2007 versions. For example, to view Excel 2010 files in Excel 2003, you will need to make sure your version of Excel is fully patched and then download a free converter (<http://www.microsoft.com/downloads/>)...or save your file as an older version. We will talk about this further below.

### 1.3 Key Terminology



#### Definitions:

**Workbook** - a spreadsheet/Excel file

**Worksheet** - part of a workbook

**Cell** - a location in a worksheet where you can type letters, numbers, dates, formulas, etc.

- It is created wherever a column (which is labeled by a letter...A, B, C, etc.) and a row (labeled by a number...1, 2, 3, etc.) intersect.
- Your Excel spreadsheet is actually a bunch of grid lines that make up cells. These grid lines do not print out (unless you force them to).

**Cell Reference** - identifies the location of a cell; It is composed of the Column letter and Row number. For example, the cell in the upper left hand corner of the worksheet where Column A and Row 1 intersect is cell A1.

**Active Cell/Range** - the cell(s) you will be typing in, formatting, etc.

**Cell Pointer** - the black outline of the active cell/range

**Formula Bar** - the long white box on top of the worksheet that displays whatever is in the Active Cell

## Part 2: The Data

### 2.1 Moving Around and Entering Data

When a cell is active—AKA *selected*—any actions you take from typing to formatting will affect that cell. Here are the steps to entering data in a single cell:

1. Select the cell by...
  - a. clicking on it with your mouse.
  - b. using **Enter** to move down. (opposite movement = **SHIFT+Enter**)
  - c. using **Tab** to move to the right. (opposite movement = **SHIFT+Tab**)
  - d. using the **4 Arrow keys** to maneuver around.
  - e. Using **CTRL+G/F5** to Go To a specific cell
2. Once you're where you want your data to go, type it in the cell directly or in the Formula Bar.
3. When you're done typing press **Enter**, **TAB**, click on the checkmark in the Formula Bar, or click somewhere else on your spreadsheet to "tell" Excel you're done.

Note: You can use **CTRL+HOME** to get to cell A1 at any time.

Class Exercise #1: On the Practice worksheet of the Excel1 Spreadsheets file...

1. Move around the sheet using the above methods.

### 2.2 Editing Your Cell

Once there is data in a cell, you can edit it:

1. Select the cell
2. Press **F2** or double-click the cell to get the cursor to appear
3. Make your changes (**Backspace** and **Delete** can be used to delete if necessary)
4. **Enter**, **TAB**, click on the checkmark in the Formula Bar, or click somewhere else

You can also replace or overwrite data in a cell:

1. Select the cell
2. Type in the new data
3. **Enter**, **TAB**, click on the checkmark in the Formula Bar, or click somewhere else

Class Exercise #2: On the Practice worksheet...

1. Type your first name in cell D4 then hit Enter, hit Tab, click somewhere else, or click the checkmark.
2. Now go to D4 (if you're not still there), and type in your last name. What happens? Utilize editing tools to get both your first and last name in the cell.

Note: You can always use the **ESC** key if you're typing in a cell and decide you don't want to revert back to the way it was before you're done **Enter**, **TAB**, or clicked on the checkmark.

### 2.3 Selecting a Range of Cells

You can select a range of cells so you can perform an action on several cells at the same time. Here are a few ways to do this:

- Left click and drag your mouse from one cell to another
- Click one cell, press and hold **SHIFT**, click another cell
- Click one cell, press and hold **SHIFT**, use the arrow keys to expand the selected area
- Click a *column* letter to select an entire column
- Click a *row* number to select an entire row
- Click the gray rectangle above the number 1 and to the left of letter A to select the entire spreadsheet (or press **CTRL+A**)
- Select your entire data area by clicking on cell A1 and then pressing **CTRL+SHIFT+END**
- Select a cell or range, press and hold **CTRL**, then select another cell or range of cells that are not necessarily contiguous to where you started

**Class Exercise #3: On the Practice worksheet...**

1. Use the above methods to select ranges.

**2.4 Formatting Your Cell & Other Editing Tools**

There are *numerous* ways you can format your cells once you've selected a cell or cells:

1. Use dozens of options on the **Home** tab of the Ribbon.
2. Right click on the area you want to change and utilize the shortcut options there including:

- **Font Name** - type of font selected
- **Font Size** - change the size of text
- **Borders** - drawn them in on any sides of the area selected
- **Fill Color** - change the background color
- **Font Color** - change the text color



3. Familiar Microsoft Office Edit commands work in Excel for individual cells or cell ranges (using the **Clipboard** group, keyboard shortcuts, or right-clicking) including:

CTRL+X = Cut

CTRL+V = Paste

CTRL+Y = Redo

CTRL+C = Copy

CTRL+Z = Undo

**NOTE:** When a cell or range of cells is selected for copying or cutting, the whole area will have a moving line around it until you pasted a cut area. For copying, the moving line will remain until you double-click off of the area or press **ENTER**.

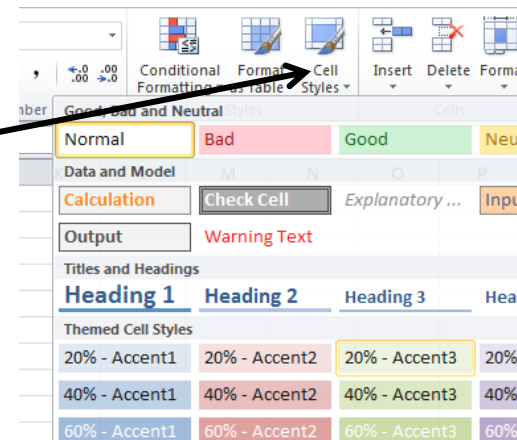
4. You can handily grab a cell or range and cells by...

- Select the area you want to move
- Move your mouse the edge of the area until it becomes this symbol:
- Left click and drag the cell(s) to the new area.



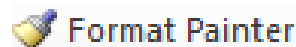
5. **Cell Styles** are built in sets of formatting features that may include font size, bold, cell color, etc. To access Cell Styles...

- Select the cell or cells you want to change
- Click on Cell Styles
- Choose your preferred style.

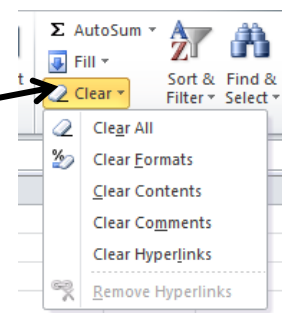


6. **Format Painter** can aid you in easily copying one cell's formatting to another:

- Select the cell with the formatting you desire
- Click on the **Format Painter** button on the left side of the **Home** tab of the Ribbon
- Click on the cell(s) you want to change.



7. **Clear** lets you delete various parts of a cell using the Clear drop down list on the far right of the **Home** tab.

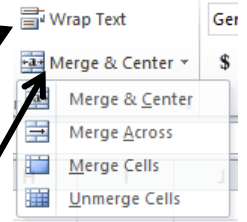
**Class Exercise #4: On the Practice worksheet...**

1. Use the above formatting features on various cells on the sheet.

## 2.5 Manipulating Cells, Rows, & Columns

You can add new cells, rows, and columns as needed or stretch and expand your existing ones.

- **Wrap Text** - Excel likes to keep all data you enter in one long line. You can force it to wrap the text to new lines by clicking **Wrap Text** in the **Alignment** group.
- **Line Break** - Sometimes you need to do a line break within a cell. Do this by typing **ATL+Enter**.
- **Merge & Center** - Will combine the highlighted cells in to one giant one and center the text. There are also options to merge without centering. Access this feature in the **Alignment** group. The button toggles it on and off.
- **Alignment** - Excel aligns text on the left and numbers on the right. Alter this with...



### Stretching Columns and Rows -

Method #1: Grab the border of the row or column in the row numbers/column letters area of the worksheet. When the mouse turns into a black line with arrows pointing left and right, drag the column/row to your desired width/height.

Method #2: Double-click on the black line dividing the columns/rows at the top/right of the worksheet. This *should* stretch the column/row to the exact width (which is called Auto-Fit).

Method #3: Highlight the column(s)/row(s) and click **Format**→**Column Width/Row Height** on the **Home** tab. Now you can specify an exact measurement.

### Class Exercise #5: On the *Giant Spreadsheet* worksheet...

1. Widen columns A-F using at least one of the above methods.

- **Inserting Columns & Rows** - You may find later that you need to insert a column or row in your worksheet.
  - Method #1: Right click on the Column Letter to the right of where you want the column to go OR right click on the Row Number below where you want the new row to go. Then left click on **Insert**.
  - Method #2: Select a cell below a row you want inserted or to the right of a column. Click on **Insert**→**Insert Sheet Rows/Columns** on the **Home** tab.

**NOTE**: You can insert multiple columns or rows by first highlighting the number of columns/rows you want to add to the right/below where you want the new columns/rows, then do either method.

- **Deleting Columns & Rows** - You can easily delete a bunch of columns or rows all at once. Simply highlight them then...
  - Method #1: Right click then left click on **Delete**.
  - Method #2: Click the **Delete** button or the word **Delete** (and then **Delete Sheet Rows/Columns**) on the right side of the **Home** tab.
- **Hiding Columns & Rows** - You can block columns or rows from view to make it easier to read and compare data or possibly to hide some areas of your spreadsheet when printing or saving as a PDF file. Highlight the columns/rows you want to hide then...
  - Method #1: Right-click on the area and left click on **Hide**
  - Method #2: Click on **Format**→**Hide & Unhide**→**Hide Columns** or **Hide Rows**

To Unhide columns/rows, highlight the two columns/rows that surround the hidden area.

Method #1: Right-click on the highlighted area and left click on **Unhide**

Method #2: Click on **Format**→**Hide & Unhide**→**Unhide Columns** or **Unhide Rows**

## 2.6 Number Formatting

You can easily format data as a number type using the **Number** group on the **Home** tab. Here are some descriptions:

- **General** - The default format; it displays numbers as integers, decimals, or in scientific notation if the value is too wide to fit into the cell.
- **Number** - Enables you to specify the number of decimal places, whether to use your thousands separator (for example, a comma) to separate thousands, and how to display negative numbers.
- **Currency** - Enables you to specify the number of decimal places, to choose a currency symbol, and to display negative numbers. This format always uses the system thousands separator symbol (for example, a comma) to separate thousands.
- **Accounting** - Differs from the Currency format in that the currency symbols always line up vertically, regardless of the number of digits displayed in the value.
- **Date** - Enables you to choose from a variety of date formats and select the locale for your date formats.
- **Percentage** - Enables you to choose the number of decimal places; always displays a percent sign.
- **Fraction** - Enables you to choose from among nine fraction formats.
- **Text** - When applied to a value, causes Excel to treat the value as text (even if it looks like a value). This feature is useful for such items as numerical part numbers and credit card numbers.


(From [http://www.msoffice.us/Excel/2010Data\\_Types.htm](http://www.msoffice.us/Excel/2010Data_Types.htm))

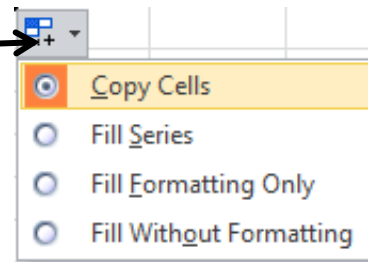
Class Exercise #6: *On the Yearly Expenses worksheet...*

1. Select cells **B3 to F15**
2. Change the formatting from **General** to **Currency**.

## 2.7 Autofill

Autofill allows you to easily copy what's in a cell (whether it would be formatting and/or text) AND/OR you can complete a list (called a series) such as the months of the year. You can activate Autofill by...

- Highlighting the cell/cells you want to use
- Moving your mouse to the very bottom right hand corner.
- You're set when the mouse pointer turns into a little black plus sign: 
- Left click and drag however long you need to.
- If you want, you can get specific using the Autofill Dialog Box options by clicking on the little black arrow.



Class Exercise #7: *On the Yearly Expenses worksheet...*

1. Type "January" in cell A3 and tell Excel you're done by click the checkmark or pressing Tab.
2. Grab the bottom right-hand corner of the cell (once the mouse turns into a little black +).
3. Left-click and drag the mouse down to cell A14.

## Part 3: Formulas & Functions

### 3.1 AutoSum

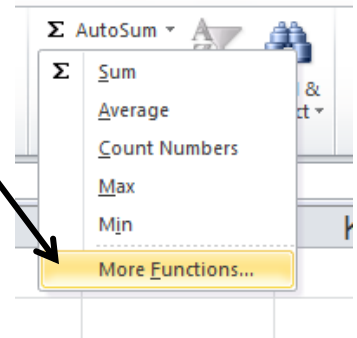
This handy tool allows you to add up a row or column easily. Simply put your cell pointer where you want the answer to go then click on AutoSum  $\Sigma$  on the **Home** tab.

**NOTE #1:** As you incorporate functions such as AutoSum into your spreadsheet, you may find that instead of the result of the function you see ##### instead. This means that your column is not wide enough to show an entire number/date. Simply widen your column and you should see your result.

**NOTE #2:** You can easily copy and paste formulas throughout your spreadsheet which can potentially save you time as you set up your spreadsheet. You can also use **Autofill** to copy.

**NOTE #3:** You can use a : to select a range of cells for your functions. Sometimes you may only want certain cells. You can do this by separating the Cell References by , (commas).

You can get to all functions in Excel by clicking on **AutoSum**→**More Functions** or by clicking on the **Formulas** tab of the Ribbon.



**Class Exercise #8:** *On the Yearly Expenses worksheet...*

1. Click on cell B15.
2. Click AutoSum.
3. Make sure the inserted formula is =sum(B3:B14)...if it's not, type that in.
4. Do Enter, Tab, checkmark, etc.
5. Be sure you're on B15 and use **Autofill** to copy and paste in the formula in cells C15 to F15.
6. Use AutoSum in cell F3.
7. Use Autofill from cell F3 down to F14.

### 3.2 Average

Average does just what it says...it returns the average number from a range of cells. It is =**average()** although you can also find it off of the AutoSum menu.

**Class Exercise #9:** *On the Yearly Expenses worksheet...*

1. Click on cell B17.
2. Type in =average(b3:b14) or click on AutoSum's arrow and then Average (make b3:b14 is in the parenthesis—you can left click and drag your mouse over the cells).
3. Press Enter, Tab, checkmark, etc.
4. Be sure you're on B17 and use **Autofill** to copy and paste in the formula in cells C17 to F17.

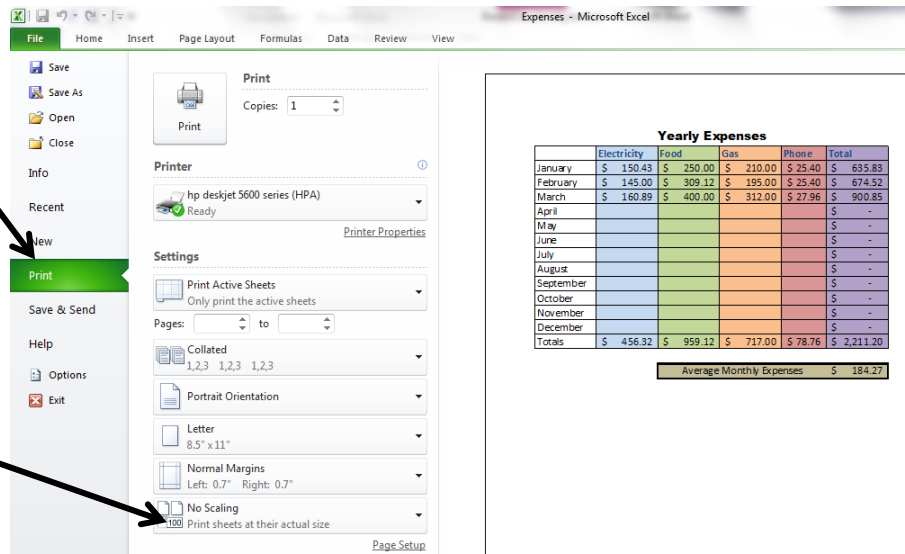


## Part 4: Printing & Saving

### 4.1 Printing Prettily

Before printing an Excel spreadsheet, ***always*** look at the print preview before printing. You can do this by clicking on **File** and then **Print**. The print preview shows up on the right. You can play around with the Settings of the Print screen to get your spreadsheet printed the way you want.

**NOTE #1: Scaling** can be very helpful for fitting your spreadsheet nicely onto an 8½” x 11” sheet of paper. It is usually the bottom Print option.



**NOTE #2:** If you find that there is a lot of blank columns or rows that are included in the Print Preview, go back to your document and press **CTRL+END** to see the end of the print area. You may find that there is one cell you typed it accidentally that needs to be cleared/deleted.

**NOTE #3:** You can **Print Titles** (AKA have header rows repeated at the top of each page) easily from the **PAGE LAYOUT** tab when you’re looking at your worksheet. Click **Print Titles**, choose the rows (or columns) you want to repeat, and click **OK**.

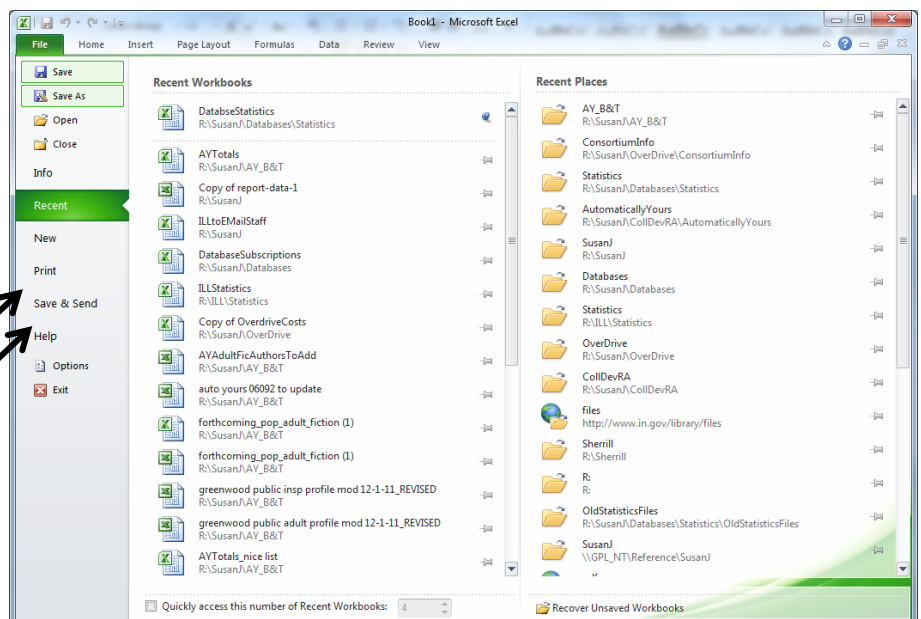
**NOTE #4:** Don’t forget that you can always save your spreadsheet as a PDF for other people to print easily. See below.

### 4.2 Saving & Converting

Save, Save, Save! To protect yourself from losing data, always remember to save your workbook once you create a new one as well as when you make significant changes to your file. To save your workbook:

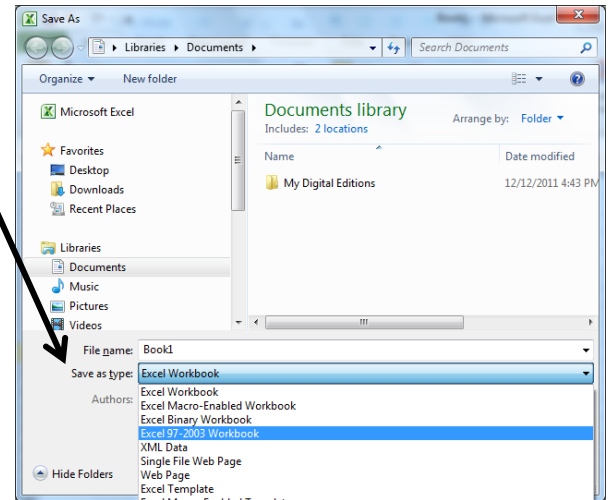
- Click on **File**
- Choose (1) **Save** to save the file as is with its current name and location OR (2) **Save As** to save the file with a new name, format\*, and/or new location.

**TIP:** Click on the pushpin to the right of an item in **Recent** workbooks to make it always visible. The same goes for **Recent Places**.



\*To convert your workbook to another format:

- Click on **File**
- Choose **Save As**
- Select the appropriate Save as type option
  - Saving as a **PDF** will make a static copy of your spreadsheet that anyone with free Adobe Reader software on his computer can open—he wouldn't need Excel.
  - Saving as **Excel 97-2003 Workbook** would allow users of the pre-2007 versions to easily open the file (but you may lose newer features of your workbook).
- Click **Save**



### 4.3 Reopening Your Workbook

You can open an existing file by going to the **File** tab and clicking on **Open**. If you don't see your file, make sure you are looking in the right folder.

### 4.4 Templates

Excel has built in templates that can save you a lot of time when making workbooks for common things such as invoices or forms. You can access the templates by going to the **File** menu and selecting **New**. Many of the templates are housed at Office.com.

## Part 5: Help!

### 5.1 MS Office Help



Excel has a help feature that can aid you in refreshing your memory on certain tasks or by even learning new tasks. Help can be reached at by clicking the Question mark in the upper right hand corner. You will most likely be directed to Office.com's online help, but there is an offline version if needed.

### 5.2 Additional Help

Below are some websites that might be of help to you:

[www.greenwoodlibrary.us/computer-class](http://www.greenwoodlibrary.us/computer-class) - Lists all of the library's computer classes and includes the Excel guides and class spreadsheets.

[www.inspire.in.gov](http://www.inspire.in.gov) - Click on the Testing & Education button near the middle of the page (then click on Career Tools and then Basic Computer Skills—you will need to create a free account)

[www.gcfllearnfree.org](http://www.gcfllearnfree.org) - A great collection of tutorials on a wide array of subjects including Microsoft Excel 2003-2016.

[www.free-training-tutorial.com](http://www.free-training-tutorial.com) - Free tutorial videos on Excel tasks (just be wary of clicking on the ads)

<http://spreadsheets.about.com/>



[www.customguide.com/cheat-sheets/](http://www.customguide.com/cheat-sheets/) - Free cheat sheets for most Office programs

[www.google.com/work/apps/business/products/sheets/](http://www.google.com/work/apps/business/products/sheets/) - You can use Google Sheets for free (after creating a Google account) to practice many of the Excel features we've used today.

You can also find help by searching for the function you want to use or the problem you're having using your favorite search engine.

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<http://www.greenwoodlibrary.us/programming-survey>

(or go to [www.greenwoodlibrary.us](http://www.greenwoodlibrary.us) → Services & Programs → Computer Survey)

Instructor's Name: Susan    Class: Excel 1