# 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. We'll be using Excel 2010 in class today. This version is similar to 2007, 2013, and 2016.

1.2 Key Terms
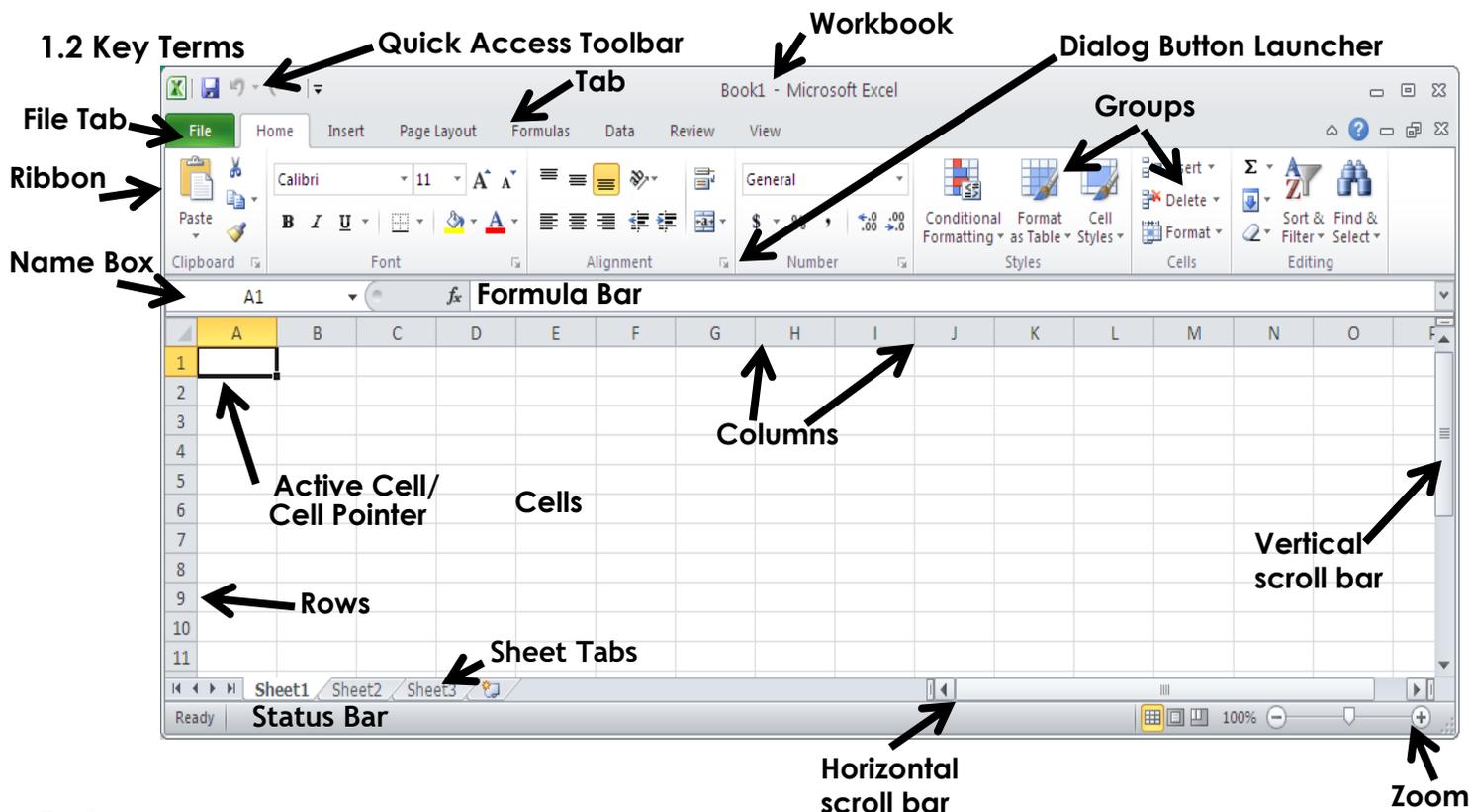
Definitions:

Workbook – an Excel file; can be composed of numerous worksheets

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: Data & Formatting
2.1 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 cell:
1. Select the cell by…

Ways to Select a Single Cell	Selecting a Bunch of Cells
Click on the cell with the mouse	Left click and drag your mouse from one cell to another
Press **Enter** to move down (or **Shift+Enter** to move up)	Click one cell, press and hold **Shift**, click another cell
Press **Tab** to move to the right (or **Shift+Tab** to move to the left)	Click one cell, press and hold **Shift**, use the **4 arrow keys** to expand the selected area
Use the **4 arrow keys** on the keyboard to maneuver around	Click a *column* letter to select an entire column
Press **CTRL+G/F5** to Go To a specific cell	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+Shft+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

2. Once you're where you want the data to go, type it in the cell directly or in the **Formula Bar**.
3. When you're done typing press **Enter**, press **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: *On the Yearly Expenses worksheet of the Excel 1 Spreadsheets file…*
1. Move around the sheet and select cells using the above methods.
2. Eventually add the word "Expenses" in cell A1.

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. Press **Enter**, press **Tab**, click on the checkmark, 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. Press **Enter**, press **Tab**, click on the checkmark, or click somewhere else

> Class Exercise: _On the Yearly Expenses worksheet..._
> 1. Add the word "Yearly" before Expenses in cell A1.

Note: You can always use the **ESC** key if you're typing in a cell and wish you hadn't started. Revert back to the way it was before by typing **ESC** before doing Enter, Tab, etc.

2.3 Formatting Your Cell & Other Editing Tools

There are _numerous_ ways you can format your cells once you've selected a cell or cells including these choices:

- Use dozens of options on the **Home tab** of the Ribbon.

- 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
    - **Fill Color** – change the background color
    - **Font Color** – change the text color
   - **Borders** – draw them in on any sides of the area selected

> Class Exercise: _On the Yearly Expenses worksheet..._
> 1. Use the above formatting tools to spiffy up the Yearly Expenses sheet.
> 2. Be sure to add All Borders around A2 to F15.

- **Number Formatting -** You can easily format data as a number type using the **Number** group on the **Home tab**.
  Here are some descriptions (From http://www.msoffice.us/Excel/2010Data_Types.htm):
    - **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.
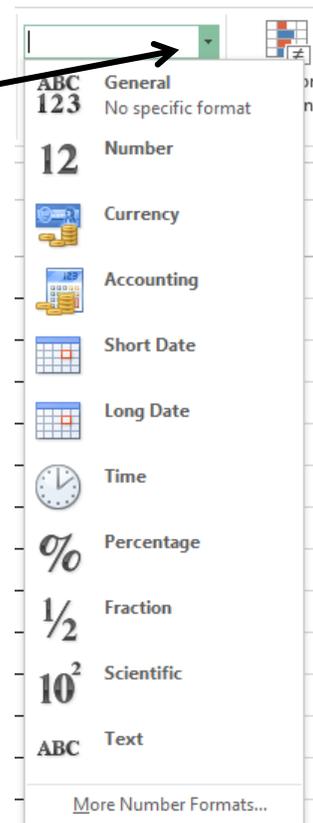
- o **Percentage** - Enables you to choose the number of decimal places; always displays a percent sign.
- o **Fraction** - Enables you to choose from among nine fraction formats.
- o **Text** - When applied to a value, causes Excel to treat the value as text (even if it looks like a value). This feature is useful for such items as numerical part numbers and credit card numbers.

Class Exercise: *On the Yearly Expenses worksheet…*
1. Select cells **B3 to F15**
2. Change the formatting from **General** to **Currency**.

Class Exercise: *On the Giant Spreadsheet worksheet…*
1. Select **Column C**
2. Change the Number formatting from **General** to **Short Date**.
3. Click on the drop-down arrow next to Date in the Number Group of the Ribbon
4. Click **More Number Formats**
5. Explore the different types of date formats then click **Cancel**

- 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**.

- You can handily grab a cell or range and cells by…
  - o Selecting the area you want to move
  - o Moving your mouse the edge of the area until it becomes this symbol
 - o Left clicking and dragging the cell(s) to the new area.

Class Exercise: *On the Yearly Expenses worksheet…*
1. Use the above Edit commands and 4-arrow cursor to move/edit cells.

- **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** or if that is not visible, click on the expanding arrow in the Styles area.
  - Choose your preferred style
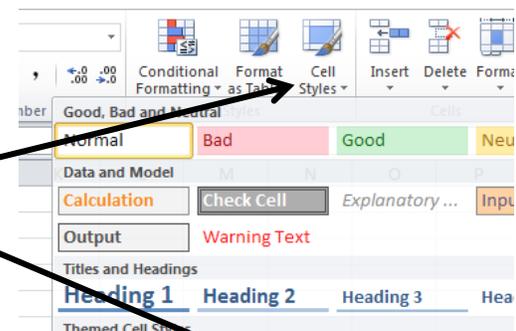
Class Exercise: *On the Yearly Expenses worksheet…*
1. Use Cell Styles to format cells A1 to F1
2. Then do a different style for A2 to F2
3. And another for A3 to F15
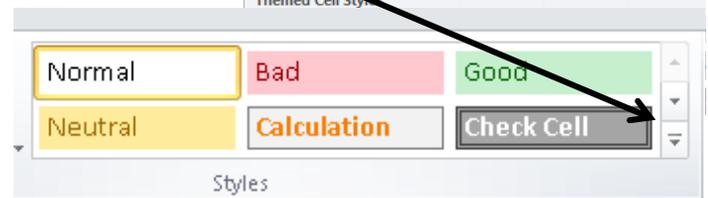
Format Painter can aid you in easily copying one cell's formatting to another:
- Select the cell with the formatting you desire
- Click on the **Format Painter button** on the left side of the **Home tab** of the Ribbon   🧹 Format Painter
- Click on the cell(s) you want to change.

Class Exercise: *On the Giant Spreadsheet worksheet…*
1. Select cell B3 and change its formatting
2. Click Format Painter
3. Click on cell A9 to copy the formatting.

- **Clear** lets you delete various parts of a cell using the **Clear** dropdown list on the far right of the **Home tab**.
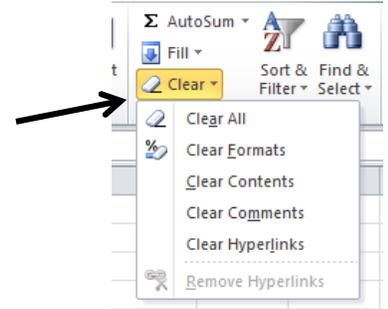
Class Exercise: *On the Giant Spreadsheet worksheet…*
1. Select Rows 2-9
2. Click **Clear** and then **Clear Formats**

2.3 Manipulating Cells, Rows, & Columns

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

Class Exercise: *On the Giant Spreadsheet worksheet…*
1. Select Column A
2. Click **Wrap Text**

- **Line Break** – Sometimes you need to do a line break within a cell. Do this by typing **ALT+Enter**.

Class Exercise: *On the Giant Spreadsheet worksheet…*
1. Select cell A1
2. Press **F2** (or another method) to get the cursor at the end of the text
3. Press **ALT+Enter** and type "last, first" and press **Enter**

- **Merge & Center** – will combine the highlighted cells into one giant cell 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.

Class Exercise: *On the Yearly Expenses worksheet…*
1. Select cells A1 to F1
2. Click the *arrow* next to **Merge & Center** and choose **Merge Across**
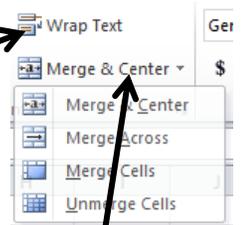
- **Alignment** – Excel aligns text on the left and numbers on the right. Alter this, along with vertical alignment, with the line buttons in the **Alignment** group.

Class Exercise: *On the Yearly Expenses worksheet…*
   1. Select Row 2 and click on the Center alignment button in the Ribbon.

- **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 of the widest column/row (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: *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**.

Class Exercise: *On the Yearly Expenses worksheet…*
   1. Use a method above to insert a column *to the left* of column E (Phone).
   2. Notice the Add Format button that appears to the right of the new column. Keep the formatting as is.
   3. Type "Rent" in cell E2.
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.
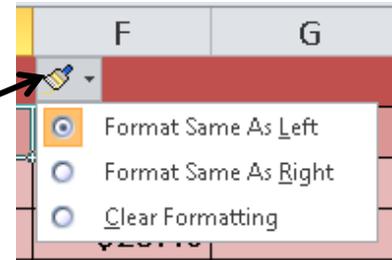
- **Deleting Columns & Rows** – You can easily delete a bunch of columns or rows all at once. Simply highlight them then…
Method #1: Right click then left click on **Delete**.
Method #2: Click the **Delete button** or **the word Delete** (and then **Delete Sheet Rows/Columns**) on the right side of the **Home tab**.

Class Exercise: *On the Giant Spreadsheet worksheet…*
   1. Select Rows 2-9
   2. Use a method above to delete those rows

- **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**

Class Exercise: *On the Giant Spreadsheet worksheet…*
1. Select Columns C and D
2. Use a method above to hide those columns.
3. Then Unhide them using an unhide method above.

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 until it 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.
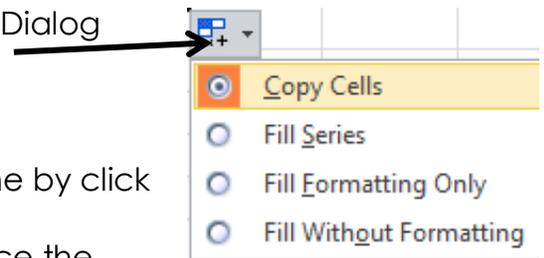
Class Exercise: *On the Yearly Expenses worksheet…*
1. Type "January" in cell A3 and tell Excel you're done by click the checkmark or pressing Tab.
2. Grab the bottom right-hand corner of the cell (once the mouse turns into a little black +).
3. Left-click and drag the mouse down to cell A14.
4. In cell A15 type an "O" to see that October will be automatically entered if you wanted it to—that is called **AutoComplete**. Just press **ESC** to get rid of it.

Class Exercise: *On the Yearly Expenses worksheet…*
1. Type "500" into cell E3 and tell Excel you're done typing.
2. Use Autofill to copy $500.00 into cells E4-E14

Part 3: AutoSum
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 Σ 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 **######**. 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).

Class Exercise: *On the Yearly Expenses worksheet…*
1. Type the word "Total" in cell A15
2. Click on cell B15
3. Click AutoSum
4. Make sure the inserted formula is **=sum(B3:B14)**…if it's not, type that in.
5. Press **Enter**, **Tab**, checkmark, etc.
6. Be sure you're on B15 and use **Autofill** to copy and paste in the formula in cells C15 to G15.
7. Use AutoSum in cell G3.
8. Use Autofill from cell G3 down to G14.
9. Make row 15 and column G BOLD.
10. Fill in the open expenses cells: 400 for food, 150 for gas, 35.15 for both open phone cells

Part 4: Printing & Saving
4.1 Printing Pretty
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.

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

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

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

TIP #4: **Headers/Footers** can easily be added to printed sheets from Page Setup

TIP #5: You can print the gray gridlines from Page Setup as well

TIP #6: Don't forget that you can always save your spreadsheet as a PDF for other people to print easily. See below.

Class Exercise: *On the Giant Spreadsheet worksheet...*
1. Click on the **Page Layout** tab in the Ribbon
2. Click **Print Titles**
3. Click the **Collapse Dialog** button next to *Rows to repeat at top*
4. Select Row 1
5. Click the **Collapse Dialog** button again to get back to the Page Setup window.
6. Click the **Header/Footer** tab.
7. Select **Page 1 of ?** from the Header dropdown list.
8. Click **OK**
9. Click the **File** tab and choose **Print**
10. Change Scaling to **Fit All Columns on One Page**
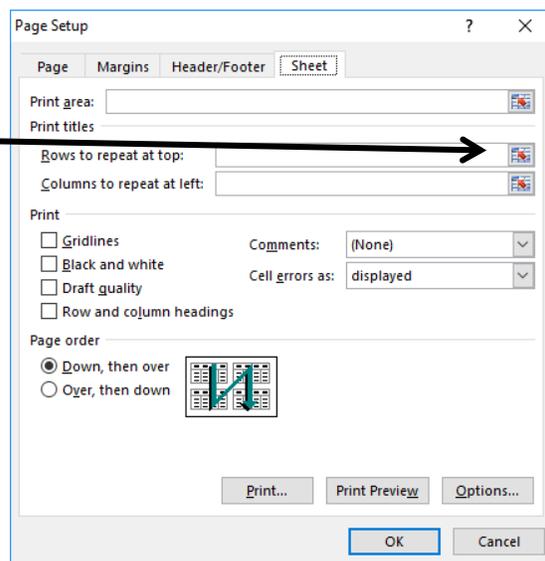
4.2 Saving & Converting

  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.
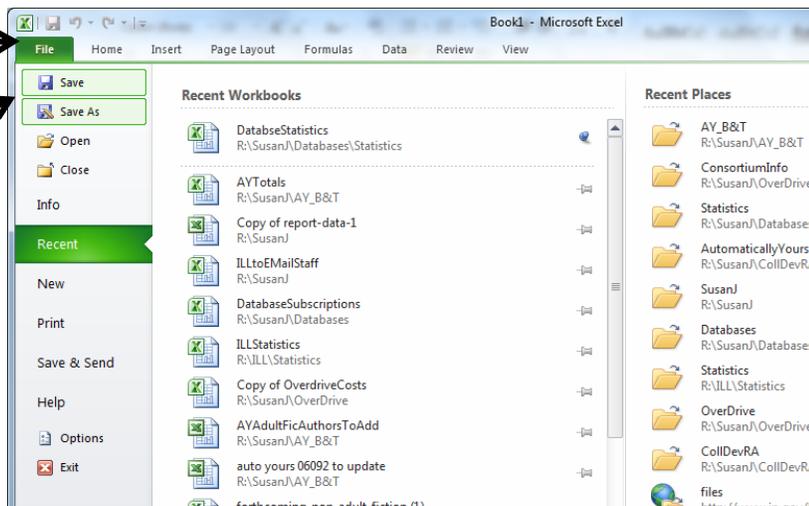
TIP #1: Click on the pushpin to the right of an item in **Recent** workbooks to make it always visible. The same goes for Recent Places.

TIP #2: To convert your workbook to another format:

- Click on **File**
- Choose **Save As**
- Select the appropriate *Save as type* option
  - o 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.
  - o 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**
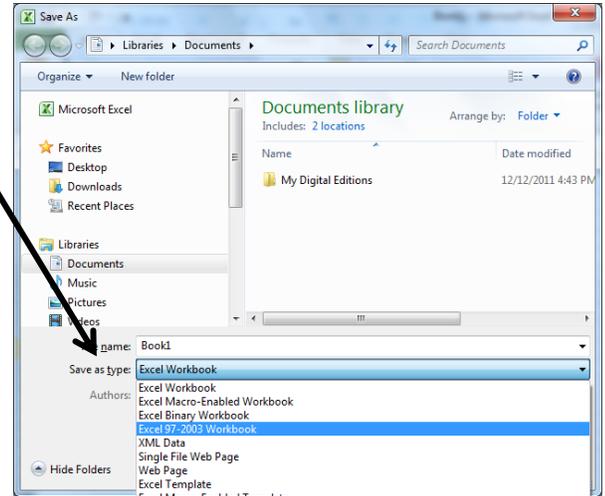
Class Exercise: *In the Excel 1 Class Spreadsheets workbook…*
  1. Click **File** and **Save As**
  2. Change the Save as type to PDF and click **Save**.
  3. A PDF file should now open. Close it and go back to Excel.

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.

Class Exercise: *In the Excel 1 Class Spreadsheets workbook…*
  1. Click the *bottom* **X** in the upper right corner of the Excel window. This closes the workbook file but leaves Excel running.
  2. Click on **File** and then **Open** to open the Excel 1 Class Spreadsheets workbook that is saved on the Desktop.

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 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 - Lists all of the library's computer classes and includes the Excel guides and class spreadsheets.

www.gcflearnfree.org - A great collection of tutorials on a wide array of subjects including Microsoft Excel 2000-2016.

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/ - Free cheat sheets for most Office programs

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.

Thank you for coming!
Please fill out a program survey before leaving.
http://www.greenwoodlibrary.us/programming-survey
or go to www.greenwoodlibrary.us →Services & Programs → Adult Programming Survey
not Computer Survey

Program Attended: Excel 1