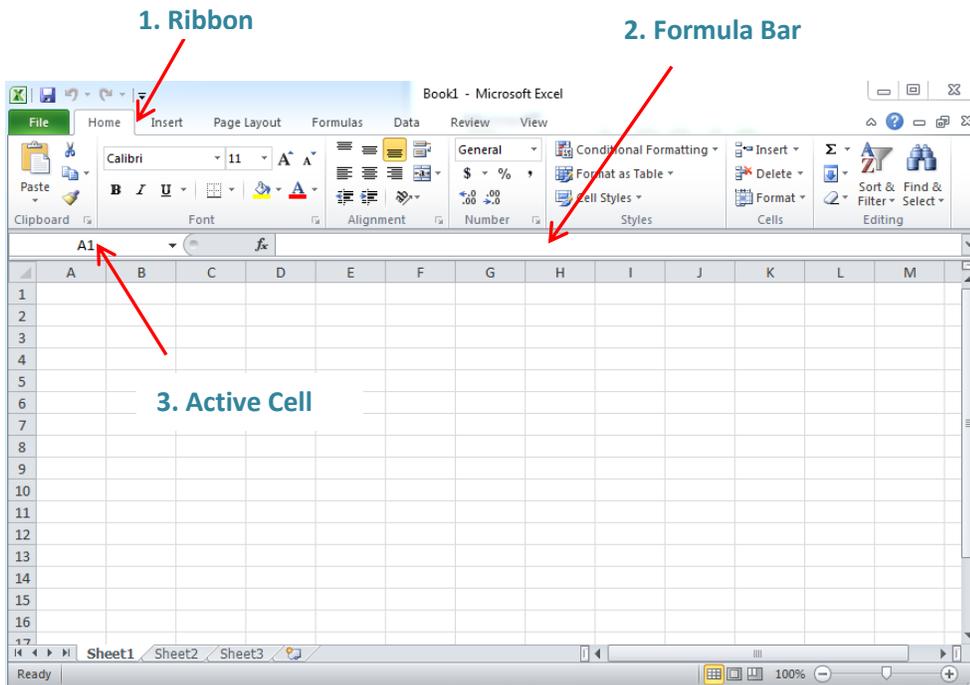# Microsoft Excel 2010 Basics

Excel's spreadsheets and formulas offer ways to explore data. First familiarize yourself with the essential features of Excel.

1. Ribbon

2. Formula Bar

3. Active Cell

1. Ribbon: Each menu listed in the ribbon at the top of the spreadsheet contains its own set of tools. The key tools in the **File** menu are Save, Print, Open and New. The **Home** menu contains font and cell formatting options and the data sorting and filtering tool. The **Insert** menu allows you to insert charts, tables, images, links and other objects into your spreadsheets. **Page Layout** has margin, orientation and other display tools. Use the **Formulas** menu to set up functions and formulas. The **Data** menu sorts, filters and further explores the data in your spreadsheets. Use the **Review** menu to add comments, set protections and spell check. The **View** menu will freeze panes, zoom in and out, and toggle between windows.

2. Formula Bar: The Formula Bar displays any formula or function set up for the selected cell. To set up a formula, select a cell and type the formula directly into the formula bar, or use the **Formulas** ribbon to choose a function or formula for the cell.

3. Active Cell: This box indicates which cell is the active cell. To jump to another cell, type the column and row number of the cell directly in this box, or click on the desired cell.

Practice Creating a Spreadsheet
Open Excel, click on File, then click on New. There are a number of templates available here if you are creating a specific type of spreadsheet and do not want to start from scratch. To practice creating a spreadsheet, we will start with a blank workbook. Make sure Blank Workbook is selected at the top and then click on Create at the right. We are going to create an order of books. In Column A, enter the titles of the books. In Column B, enter the names of the authors. In Column C, enter the prices of the books. Here is the data:

The Underground Railroad by Colson Whitehead $16.17
The Wolf Road by Beth Lewis $15.91
Hillbilly Elegy by J.D. Vance $16.79
The Nix by Nathan Hill 16.77
Pumpkin Flowers by Matti Friedman 16.68
Before the Fall by Noah Hawley $17.89
Swing Time by Zadie Smith 16.20
Moonglow by Michael Chabon $17.39
Dark Matter by Blake Crouch 16.19
Evicted by Matthew Desmond 17.03
The Gene by Siddhartha Murkherjee $21.20
The Trespasser by Tana French $15.88
The Nest by Cynthia D'Aprix Sweeney 17.85
Grunt by Mary Roach 16.71
Valiant Ambition by Nathaniel Philbrick 21.00
Truevine by Beth Macy 14.00
Kill 'Em and Leave by James McBride $18.30
Here I Am by Jonathan Safran Foer $14
The Girls by Emma Cline $17.52
Barkskins by Annie Proulx 18.54
Morning Star by Pierce Brown 16.99
The Girl in the Red Coat by Kate Hamer $16.17
Born to Run by Bruce Springsteen 19.50
Homegoing by Yaa Gyasi 16.56
The Mathews Men by William Geroux 17.28
All the Birds in the Sky by Charlie Jane Anders 15.99
Dimestore by Lee Smith 14.85
A Hundered Thousand Worlds by Bob Proehl $17.10
Miss Jane by Brad Watson 18.49
I'm Supposed to Protect You From All This by Nadja Spiegelman $16.30
To the Bright Edge of the World by Eowyn Ivey 19.87
The Wangs Vs. the World by Jade Chang 16.87
Messy by Tim Harford 19.59
You Will Not Have My Hate by Antoine Leiris 13.68
American Housewife by Helen Ellis 16.32
The Longest Night by Andria Willliams 18.53
Orphan X by Gregg Hurwitz 17.82

Once you have entered all the data, try calculating the total price. Choose any empty cell, then click on AutoSum (in the Editing group of the Home ribbon). Make sure all the values in column C are selected. The formula bar should read =SUM(C1:C37). Hit Enter on the keyboard. The total price appears in the cell you chose.
Next, let's find out the average price of a book in this order. Choose another empty cell. This time click on the small dropdown arrow to the right of AutoSum. Click on Average. Make sure the formula bar reads =AVERAGE(C1:C37). Hit enter on the keyboard. The average price appears in your chosen cell.

Sorting Data

Open the Excel sorting practice workbook. This is a list of high school T-shirt orders with the buyers' names, sizes, homeroom numbers and payment methods. The list is fairly lengthy and we want to be able to see the category labels as we scroll through the worksheet. Click on cell A3. Hold down Shift and press Space to select the whole row. Under the View ribbon, click on Freeze Panes. Choose the first option (freeze panes) to freeze all the data above the selected row. Now when you scroll through the worksheet, the column names remain at the top. Click on cell A3 again. Try selecting a whole column by holding down Ctrl and pressing Space. Let's say you realize cell A3 should read 220-A. To edit the cell, click on it and then press F2. Now you can make changes without replacing all the data.

Let's sort the data by T-shirt size, to make this worksheet easier to use. Click on cell A3. Under the Home ribbon, click on Sort & Filter, then click on Custom Sort. Click on the Sort By dropdown and choose T-shirt size, then click on OK. This groups T-shirt sizes together and alphabetically sorts the groups. We can also alphabetically sort the last names within each group. To do this, click on cell A3 again. Click on Sort & Filter, then click on Custom Sort. Click on Add Level. Click on the Then By dropdown and click on Last Name. Click on OK.

Some people placed more than one order. You could consolidate their listings using the Merge & Center tool. Click on the first Ackerman order in cell C3. Hold down shift and click on the last order in cell C5. This selects the three instances of Ackerman. Under the Home ribbon, click on Merge & Center. Now you should only see Ackerman listed once, taking up three cells. Try doing the same thing for the first name.

Functions

Switch to the Excel budget practice worksheet. This shows six months of expenses broken down by category. We can use functions to calculate the totals and averages to fill in the blanks. First, let's total up the amount spent on rent. Click on cell J9. Under the Home ribbon, click on AutoSum. Excel will guess the range that you want to calculate. You can edit the function in the formula bar. We do not want the Average column included in this calculation, so edit the function to end at cell H9. The formula bar should read =SUM(C9:H9). Press Enter on the keyboard. The total should read 2670. Since the rest of the total column will use the same type of function covering the same range in their respective rows, we can "fill down" the function into the cells below. To do this, select cell J9, then move your mouse to the bottom right corner of the cell. Your cursor should become a + symbol. Click and hold down, then drag the mouse down until you get to cell J31. Release the mouse and all the sums appear. Use this method to calculate the monthly totals in the house, car, charges, and personal sections. Then calculate the grand totals at the bottom of the worksheet.

To calculate the average amount spent on rent, click on cell I9. Under the Home ribbon, click on the dropdown arrow on the right side of the AutoSum button. Click on Average. Confirm that the formula bar shows the range you wish to calculate and press Enter on the keyboard. Let's say we want all the numbers to appear with the dollar sign and two decimal points. Hold down Ctrl and press A to select all the data. Next, hold down Ctrl and Shift, then press the $ key. All values change to the currency format. Right click on a cell and click on format cell to see more formatting options.

Questions? Contact Adult Services at askref@elmwoodparklibrary.org or 708-395-1217.