

ABC Unified School District  
Technology Professional Development Program

# Introduction to Excel



Information & Technology  
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# Introduction to Excel

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## *WHAT IS EXCEL*

Excel is a spreadsheet application that is part of the Microsoft Office program. It is designed to help you work with numerical data such as budgets, inventory, and any other application where calculations are needed. Excel is one of the most powerful spreadsheet programs on the market today.

## *WHAT IS A SPREADSHEET*

A spreadsheet is a collection of information, usually numerical, organized in a grid with columns and rows. When the proper formulas are entered Excel will compute the values automatically. What makes computerized spreadsheets so special is that they allow you to manipulate information with lightning speed and no effort.

## *LAUNCHING EXCEL*

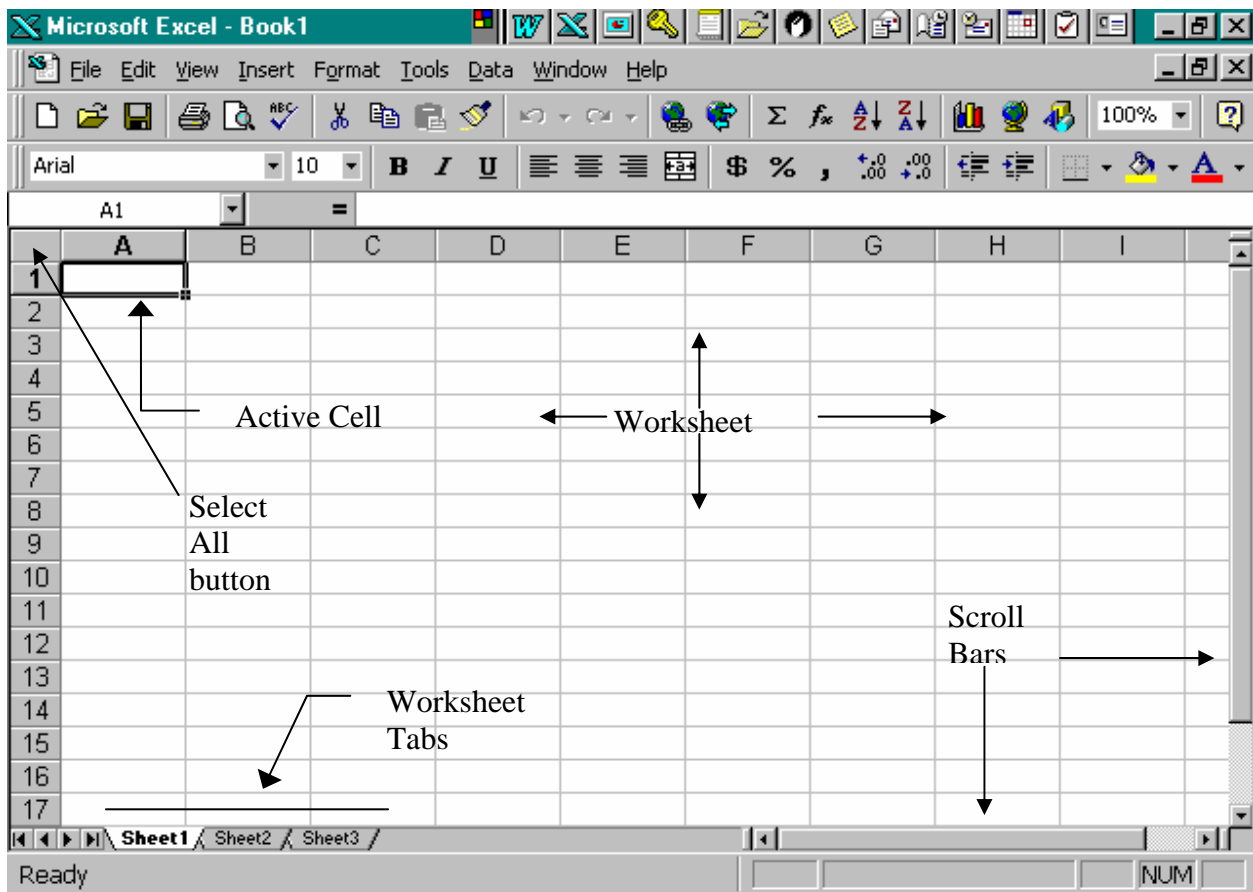
1. On your Windows desktop click on the **Start** button.
2. From the menu that appears, go up to **Programs**.
3. Find and click on the **Microsoft Excel** program to launch it.

# Introduction to Excel

## *UNDERSTANDING THE EXCEL SCREEN*

Learning Excel will be easy once you understand what is on the screen and how to use it. It may appear a little intimidating at first, but with practice you will find that using Excel 97 is a very user friendly program that is both powerful and fun to use.

The Excel screen is divided into many sections. You have control as to how they display or even if they should display. A typical Excel 97 screen after installation may look like this:



### **FORMULA BAR**

The Formula Bar displays the cell contents and can be activated to edit a cell. The cell reference is displayed on the left-hand side of the formula bar.



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## CELL POINTER (INSERTION POINT)

Within the document window you will see rectangles. These rectangles are identified as **CELLS** (The intersection of a column and a row). A cell address is determined by the column and row intersection (for example, C4). One of these cells is highlighted with a dark border around it. This highlighted cell is the **active cell**. The active cell represents the **Insertion point** (your cursor) indicating where text or data will appear when you type.

Row number and column letter light up the so you can easily see exactly which cell is currently the "active cell".

## MOUSE POINTER

A cross represents your **Mouse Pointer** when in the worksheet area. You can quickly move your cursor to a new position by positioning the **cross** in a new cell, and clicking the left mouse button.

## SCROLL BARS

On the right side of the Document Window is the **Vertical Scroll Bar**. By clicking your mouse on the up or down arrow boxes you can scroll vertically through your document. At the bottom of the Document Window is the **Horizontal Scroll Bar**. By clicking on the left or right arrow boxes you can scroll horizontally through your document. Your cursor however will remain in the same cell. The Horizontal Scroll bar also displays tabs for each sheet in the workbook. By clicking on a sheet tab, you can display another worksheet stored in the current workbook.

## STATUS BAR

At the very bottom of the screen is the **Status Bar**. It shows command prompts and other indicators such as **CAPS**, **NUM**. When Excel is ready to accept information or commands, the word **'Ready'** appears in the left corner of the status bar.

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## SPREADSHEET TERMINOLOGY

**ROW/COLUMNS:** COLUMNS are assigned letters across the top of the spreadsheet. ROWS are assigned numbers down the left-hand side of the spreadsheet. Excel has a total of 256 columns (A..IV) and 65,536 rows.

**CELL:** A CELL is the point where a column and a row intersect. Each cell is identified by a cell address made up of the column and row that it intersects (ie: B3).

**TEXT ENTRY:** A TEXT ENTRY or LABEL is non-numeric data such as names and addresses. Labels generally begin with a letter. They are usually entered as row or column headings. Occasionally, numbers, such as zip codes, phone numbers are also treated as text. Text entries are left justified within a cell by default.

**NUMERIC ENTRY:** A NUMERIC ENTRY or VALUE is a number, formula, function, or cell reference to a number in another cell. Values are data that will be calculated in some way. By default numeric entries appear right justified in a cell.

**FORMULA:** A FORMULA is a mathematical statement that calculates numbers. A formulas generally begins with a number or a =, +, (, \$, -.

**RANGE:** A RANGE is a group (block) of cells that is adjacent to one another. These cells can cover several rows or columns or a combination of both.

	A	B	C	D	E	F	G	H	I	J	K
1											
2											
3		NAME		EXPENSE							
4											
5		MARY		\$ 350.00							
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## ***MANAGING WORKBOOKS***

All Excel 97 files are called *workbooks*. Think of a workbook as a folder. This folder can contain one or more *worksheets*.

When you start Excel, a workbook named **Book 1** is automatically displayed. **Book 1** is a new, unsaved workbook ready for you to input data into one or more worksheets.

### **WORKSHEETS WITHIN WORKBOOKS**

Worksheets are the pages within the workbook. A workbook can contain one or more worksheets. The worksheets within a workbook are typically related to one another in some way. Each worksheet in a workbook is initially called Sheet 1, Sheet 2, etc. You can give each worksheet a more descriptive name to help you navigate through your workbook more easily.

### **NAMING A WORKSHEET**

To rename your worksheets double-click on the current sheet name (Sheet 1). The sheet name highlights. Type a new name for your worksheet.

### **ADDING OR REMOVING SHEETS IN A WORKBOOK**

If you need additional sheets in a workbook you can add them by using the **INSERT - WORKSHEET** commands in the main menu.

To remove extra worksheets, make sure the worksheet you want to remove is displayed. Use the **EDIT - DELETE SHEET** commands from the main menu.

## ***SELECTING CELLS***

In order to make any changes to existing text or data, you must first select the cells to be changed.

1. Place the pointer at the beginning of the group of cells you want to select.
2. Hold down the **LEFT** mouse button and "**DRAG**" the mouse until all cells needed are highlighted.
3. Release the button.

## ***INSERTING DATA INTO A CELL***

1. Place the cursor in the cell where you want the data inserted.
2. Type in the data.
3. Press **ENTER** or an arrow key.

## ***DELETING DATA FROM A CELL***

1. **DELETING SINGLE CELLS**
  - a. Place the cursor on the cell whose contents you wish to delete.
  - b. Press the **DEL** key and then **ENTER**.
2. **DELETING A RANGE OF CELLS.**

If using the mouse, drag the mouse over the cells you wish to select. Once selected, use the **EDIT** menu and select **CLEAR**.

## ***EDITING INDIVIDUAL CELL ENTRIES***

- ◆ Select the cell whose data is to be changed. **TYPE** the new information into the formula bar and press **ENTER**. The new information will replace the old.
- ◆ Use the **ESC** key to cancel what you started to type. This is usually done when you start typing and realize that the cell pointer is not in the correct cell.
- ◆ Use the **EDIT key (F2)**. This will activate the cell. Your cell cursor appears in the cell. You may then use the left or right arrow keys to move the cursor to the location where data is to be inserted or deleted.

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## ***ENTERING SIMPLE FORMULAS***

Formulas are mathematical statements that perform calculations. All formulas begin with a number or a special character (+, =, \$, @). When entering formulas always refer to the **CELL REFERENCE** containing the number rather than the number itself. In this way, when the number within the cell changes, the formula will still provide accurate results.

In most cases the formula will contain cell references and one or more arithmetic operators to perform math. The arithmetic operators used by Excel are as follows:

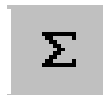
- () : parentheses used for grouping
- : a negative number (negation)
- ^ : used for exponentiation
- \* and / : multiplication and division
- + and - : addition and subtraction

When entering formulas, follow these rules:

1. Place the cell pointer in the cell you want the result of the formula to appear.
2. In most cases begin the formula with an equal sign (=) followed by the cell reference containing the value to be calculated. Other characters that may be used in formulas are: 0 1 2 3 4 5 6 7 8 9 . + = - ( @ # \$.
3. Type in the appropriate operator (+, -, \*, /) followed by another cell reference to be used in the calculation. Continue until the formula is complete, & press **ENTER**.

## **SUMMING UP NUMBERS**

One of the most important tasks of a spreadsheet is the ability to add columns or rows of numbers. It is important to know how to enter simple formulas to add, subtract, multiply, or divide numbers found in cells anywhere in the worksheet.



If, however, you want to add numbers found in a range of cells you can use the Sum function button found in the toolbar. This button provides a shortcut to adding a range of cells.

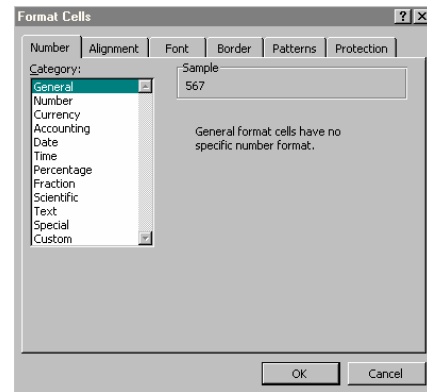
1. Place the cell pointer in the cell where you want the result to appear.
2. Click the **Sum** button. A border surrounds the cells above or to the left of the active cell.
3. If these happen to be the cells you want to add, click **Enter**. If not, then use your mouse to drag and highlight the range of cells you want to add, then click **Enter**.



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## ***FORMATTING THE WORKSHEET***

Formatting allows us to change the appearance of the worksheet. We can change the way text and values appear in the cells. We can change their size, position, and color. You can add borders around cells to enhance their appearance. All cell formatting is accomplished through the **Format - Cells** dialog box. This dialog box contains several folder tabs enabling you to apply several formats all at once.



You can also control formatting by using the **Formatting Toolbar**. If the formatting toolbar is not currently visible, you can activate it by using the **VIEW - TOOLBARS** option. This displays the **Toolbars** dialog box. Click on the formatting toolbar checkbox to display or hide the toolbar.

### **FORMATTING NUMBERS and DATES**

By default numeric entries are entered in general format. This means the number is displayed in the same format it was entered. Excel offers a variety of predefined formatting options for numeric entries. You may want your numeric entries to display currency, or commas, or a specified number of decimal places. You can also format numbers to display a specific date or time format.

1. Select the cells containing the numbers you want to format.
2. From the Main Menu select **FORMAT**
3. Click on **CELLS**. The **Format Cells** dialog box appears.
4. Select the **Numbers** tab if necessary to display the numbers options.
5. Select from the category list the type of number format you want. A list of predefined formats for the category selected appears on the right.
6. Select the desired format.
7. Click on **OK** or press **ENTER** to apply the formatting.

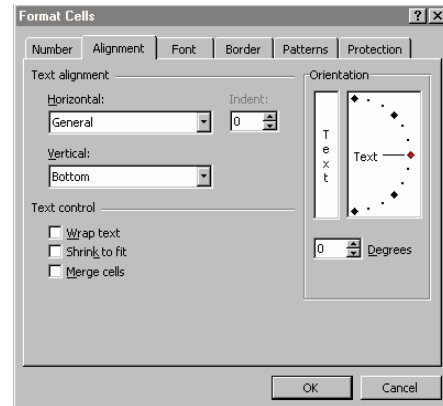
Numbers can also be formatted quickly using the formatting options from the Toolbar. It contains most of the more commonly used formats such as currency, commas, percents, and decimal places

**NOTE:** If you manually narrow the column so the formatted number cannot fit, a series of pound signs (#####) may appear. You can correctly display the formatted value by increasing the column width.

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## ALIGNING CELL CONTENTS

You can format cell entries to appear left aligned, centered, or right aligned. You can also format the text to wrap within a cell if the text is lengthy. Excel also allows you to alter the orientation of the text. It can be formatted to appear vertical or sideways.



1. Select the cell or range of cells whose data you wish to align.
2. From the Main Menu select **FORMAT**
3. Click on **CELLS**. The *Format Cells* dialog box appears.
4. Select the **Alignment** tab if necessary to display the alignment options.
5. Click on the alignment desired

**Horizontal** -- aligns text/numbers left, right, centered within the cell.  
**Vertical** -- aligns text/numbers up/down within the cell.  
**Orientation** - lets you flip text sideways or a specific number of degrees.  
**Wrap** -- wraps text according to the width of the cell.  
**Shrink** - Shrinks text to fit within the cell's current width. If cell width changes, text increases or decreases accordingly.  
**Merge** - Combines cells from several rows or columns into a single cell.

6. Click on **OK** or press **ENTER** to apply the formatting.

## CHANGING FONTS

1. Select the cell, range, or the entire worksheet.
2. From the Main Menu select **FORMAT**
3. Click on **CELLS**. The *Format Cells* dialog box appears.
4. Select the Font tab if necessary to display the font options.
5. Select the **Font** desired from the Font list. Select the **Size** from the Size list. Select the **Style** from the Style list. Select **Underlining** desired from the Underline drop-down list.
6. Click on **OK** or press **ENTER** to apply the formatting.

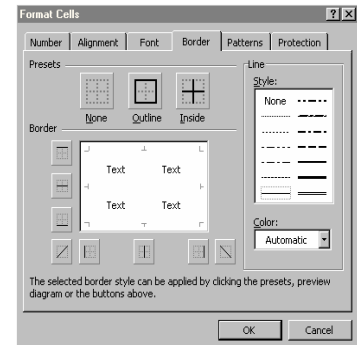
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## ADDING BORDERS and/or SHADING

Borders and shading can also enhance the appearance of a worksheet, as well as call attention to specific entries. The border option allows you to place horizontal and/or vertical line borders between and around cell entries. The Pattern option allows you to shade selected cells.

### To Add Borders

1. Select the cell(s) where you want the border to appear.
2. From the Main Menu, select **FORMAT**
3. Click on **CELLS**. The *Format Cells* dialog box appears.
4. Select the **Border** tab if necessary to display the border options.
5. Select the line style desired from the **Style** box.
6. Select an option from the **Presets** box (None, Outline, or Inside line), or select an appropriate border position by clicking the appropriate button in the Border section.

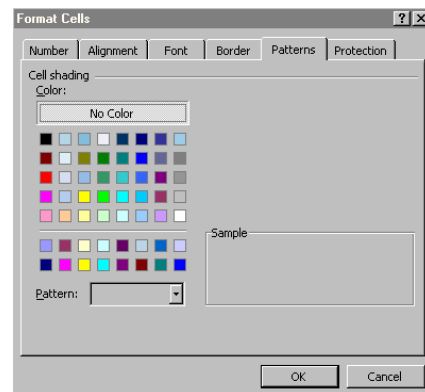


**Outline** -- to place a border completely around the selected cell(s).  
**Inside** - to place a border between all cells within the highlighted range.  
**Left, Right, Top, Bottom, Diagonal**-- to place a line to the left of, right of, above or below, or diagonally across each of the selected cell(s).

7. Click on **OK** or press **ENTER** to apply the border on the selected cells.

### To Add Shading Or Patterns

1. Select the cell(s) where you want the shading to appear.
2. From the Main Menu, select **FORMAT**
3. Click on **CELLS**. The *Format Cells* dialog box appears.
4. Select the **Patterns** tab if necessary to display the pattern options.
5. Select the appropriate option(s):



**Color:** Changes the color of the selected cell(s)  
**Pattern:** Add a pattern to the selected cell(s)

6. Click on **OK** or press **ENTER** to apply the pattern to the selected cells.

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## To Cancel Or Delete Borders And Shading

1. Select the cell(s) whose borders and/or shading you wish to remove.
2. From the Main Menu, select **FORMAT**
3. Click on **CELLS**. The *Format Cells* dialog box appears.
4. Select the Borders or Patterns tab to display the appropriate options.
5. In the **Borders** tab, click off the line styles you wish to remove. In the **Patterns** tab, set the color to **None**.
6. Click **OK** or press **ENTER** to apply.

## ADJUSTING COLUMN WIDTH

The default column width is 8.43 characters. Long entries (longer than the defined column width) are either displayed in more than one cell or truncated (shortened). In either case the cell entry is still internally stored in only one cell and includes all characters originally entered. While the displayed value of an entry does not affect the way it is stored, you will probably want all text entries to appear in full. You will also want number entries to appear as they were entered. This can be accomplished by adjusting the width of the column or columns in which the entry appears. You may increase or decrease the width of a column in one of two ways:

### Manually Adjusting Column Width

1. Move the mouse pointer to the right border of the header (where the column letters appear) for the column to be adjusted. The pointer will become a *double-arrow cross*.
2. **Drag** the pointer to the right (to widen the column) or to the left (to narrow the column).
3. Release the mouse button.

### Auto Fit

Quickly adjust column width to the longest entry in the column. Move your mouse pointer to the column border. When you get the double-arrow cross, *double-click* your mouse. The column adjusts to accommodate the longest entry in the column.

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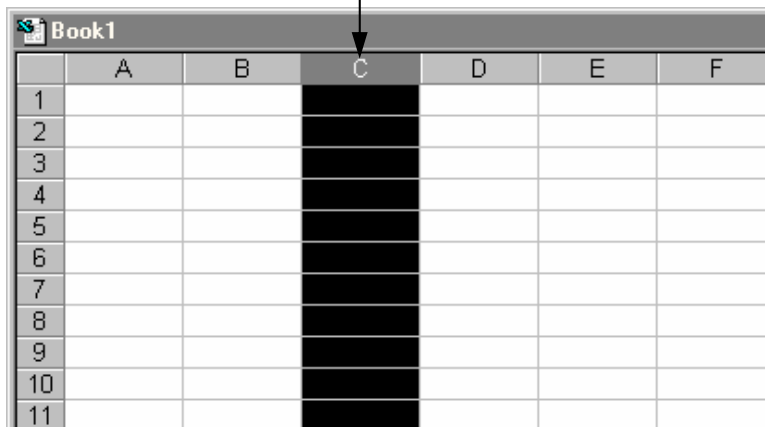
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## ***INSERTING ROWS AND COLUMNS***

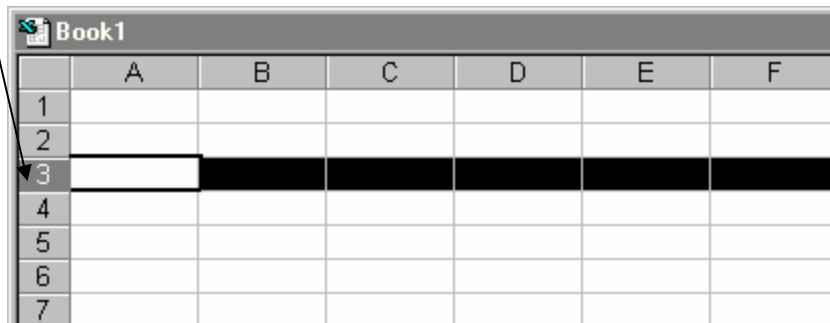
As you create worksheets you will often find that you need to alter the appearance of the worksheet by inserting or deleting rows and/or columns.

1. Select the entire column or row by clicking the worksheet column or row border (A, B, C, etc for columns; 1,2,3,etc for rows).
2. From the Main Menu select **INSERT**.
3. Click on the **ROWS** or **COLUMNS** command from the pull-down menu. A new row or column will be inserted above the selected row or to the left of the selected column.
4. Repeat for additional rows or columns.

Click here to select  
entire column



Click here  
to select  
entire row



## ***DELETING ROWS AND COLUMNS***

When data in a row or column is no longer needed, instead of deleting the cells, you can delete the entire row or column.

1. Select the entire column or row to delete by clicking the column or row heading.
2. From the Main Menu select **EDIT**.
3. Click on **DELETE**. The highlighted column/row with all its data will be gone.