



# Introduction to Excel

## Accessing Microsoft Excel

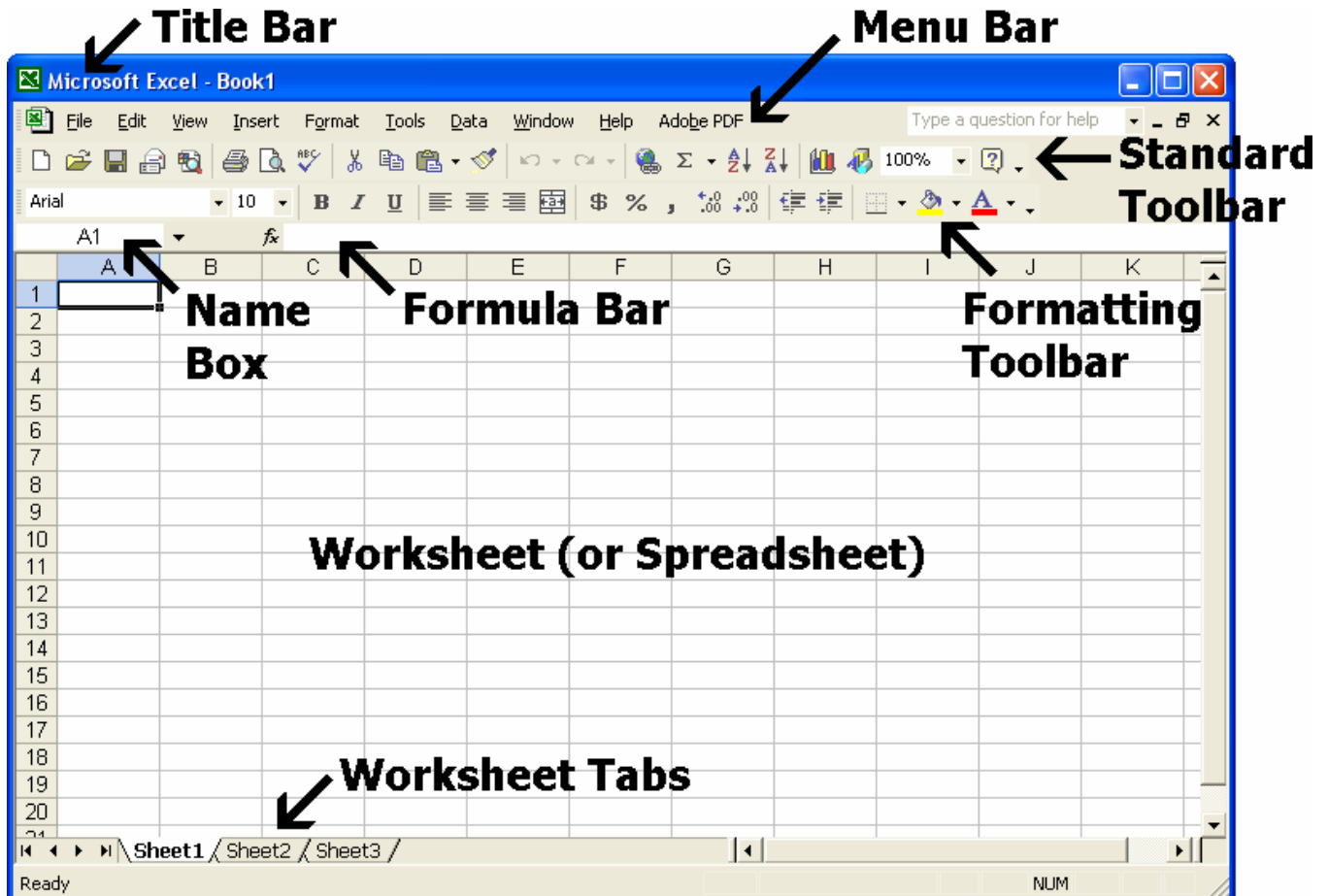
To access Microsoft Excel from your home computer, you will probably either use the Start menu to select the program or double-click on an icon on the Desktop.

To open Microsoft Excel 2002 from the computers in the computer lab at the library, simply click once on this button.



## Anatomy of an Excel Window

When you open up Microsoft Excel 2002, the window should look like this:



## Parts of a Worksheet

Excel files are called "workbooks." These workbooks are made up of individual worksheets, also called spreadsheets, which contain the information you enter. The main parts of a worksheet are labeled here:






The diagram shows an Excel worksheet titled "My 2005 Household Budget" with columns A through E and rows 1 through 15. The active cell is E15. Labels with arrows point to various parts of the worksheet: "Row Headings" points to the row numbers, "Columns" points to the column letters, "Column Headings" points to the header row (row 3), "Rows" points to the row numbers, "Cells" points to individual data cells, and "Active Cell" points to the selected cell E15.

	A	B	C	D	E
1	<b>My 2005 Household Budget</b>				
2					
3			<b>January</b>	<b>February</b>	<b>March</b>
4	<b>Income:</b>	<b>Job 1</b>	\$2,100.73	\$2,100.73	\$2,100.73
5		<b>Job 2</b>	\$ 230.00	\$ 150.00	\$ 215.00
6					
7	<b>Various Expenses:</b>	<b>Rent</b>	\$ 750.00	\$ 750.00	\$ 750.00
8		<b>Electric</b>	\$ 50.15	\$ 49.85	\$ 49.10
9		<b>Phone</b>	\$ 32.00	\$ 32.00	\$ 32.00
10		<b>Internet</b>	\$ 56.95	\$ 56.95	\$ 56.95
11		<b>Car Payment</b>	\$ 220.00	\$ 220.00	\$ 220.00
12		<b>Credit Card</b>	\$ 432.54	\$ 255.31	\$ 101.88
13		<b>Total</b>	\$1,541.64	\$1,364.11	\$1,209.93
14					
15		<b>Extra</b>	\$ 789.09	\$ 886.62	\$1,105.80

Worksheets consist of individual cells formed by the intersection of columns and rows. The active cell is the cell that is currently selected. Each cell has a "cell address" of a column heading (letter) and a row heading (number), such as "A1" or "E15."

## Excel Mouse Pointers

As you move the mouse pointer across an Excel window, you may notice some unfamiliar shapes in addition to the Arrow and the I-Beam. The other mouse pointer shapes you will see when using Microsoft Excel are:

- 
**Selection** – Appears the majority of the time when the mouse pointer is moving over a worksheet; Used to select cells
- 
**Auto Fill** – Appears when the mouse pointer is above the lower right corner of a cell; Used to copy the contents of a selected cell into other cells, or to complete a sequence beginning with a certain cell
- 
**Move** – Appears when the mouse pointer is over a selected cell's border; Used to move a cell or range of cells to another place in the worksheet
- 
**Column Resize** – Appears when the mouse pointer is over the border between two columns; Used to resize columns
- 
**Row Resize** – Appears when the mouse pointer is over the border between two rows; Used to resize rows

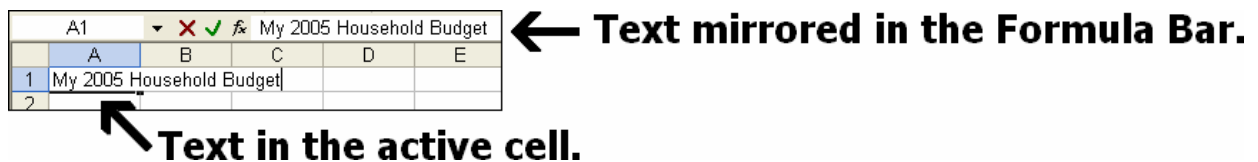
## Editing a Worksheet

Although you are entering information with the keyboard and mouse, editing a worksheet differs from editing a word processing document in a number of ways:

- Information is entered into each cell individually.
- Although the contents of a cell may overflow into the next cell if the next cell is empty, all of the data is contained in that first cell.
- Text does not automatically word wrap.
- The number of characters you can type into one cell is limited.
- Numbers are not automatically treated as textual information and follow their own special rules.
  - Numbers align to the right side of the cell.
  - When the number typed is longer than the width of the column, it will appear as a series of pound signs (#####) or in scientific notation (4.63435E+18).
  - Initial zeros will be dropped (042 → 42).
  - Some number entries will be converted to pre-set formats, such as date (8-27 → 27-Aug).

### Entering Data

To add information to a worksheet, you must first click on the cell into which you wish to enter the data. This selects the cell and makes it active. Then you can begin typing. Whatever you type will appear both in the active cell and in the Formula Bar above the worksheet, as shown here:



After you type information into a cell, press either the Enter key to move down a row or the Tab key to move one cell to the right.

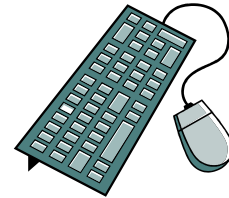
To change the contents of a cell for which you have already entered information, you have three options:

1. To delete the current contents without adding any new data, click on the cell and press the Delete key.
2. To delete the current contents and replace it completely with new data, click on the cell and type the new information.
3. To edit the current contents without deleting all of the data (for example, to correct a spelling error or typo), double click on the cell and make your changes.

## Worksheet Navigation

Moving from one cell to another within a worksheet can be accomplished by clicking on a new cell to make it active, or you can use various keys on the keyboard:

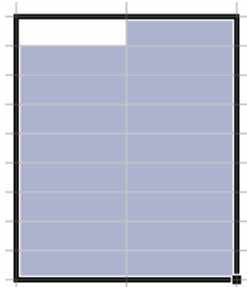
<u>Enter</u>	Move down to the next row
<u>Shift + Enter</u>	Move up to the previous row
<u>Tab</u>	Move to the right by one cell
<u>Shift + Tab</u>	Move to the left by one cell
<u>Arrow keys</u>	Move one cell in each direction
<u>Home</u>	Move to the beginning of the row



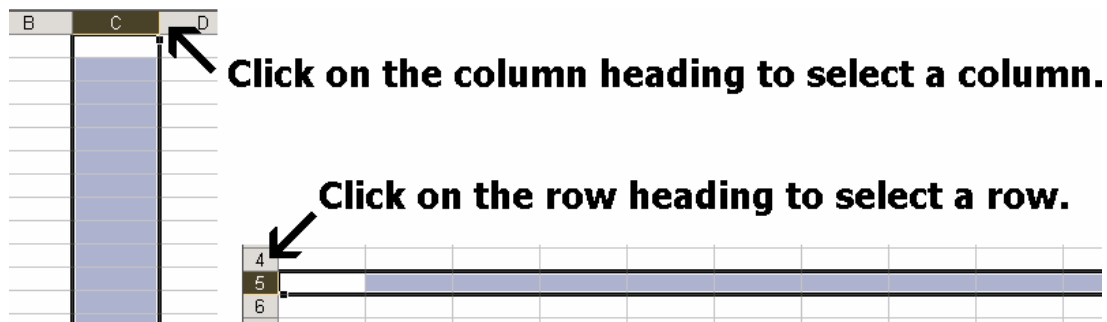
## Selecting Cells

A single click on a cell selects it and makes it the active cell, allowing you to enter information.

If you want to move or copy or change the formatting (font, alignment, etc.) of multiple cells at once, you will need to select that entire range of cells. To select a range of cells, click on the first cell in the range, then drag using the Selection mouse pointer (☞) until the rest of the cells are selected. Thick black lines will border the range of cells, the first cell will be white, and the rest of the cells will be shaded, as shown to the right.



An entire row or column of cells can be selected by clicking on the row or column heading, as shown here:



## Moving Cells

A cell or range of cells can be moved from their original location to a new location within the worksheet by following these steps:

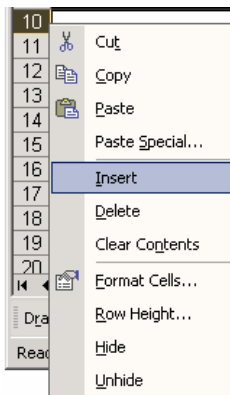
1. Select the cell or cells you wish to move, as discussed above.
2. Move the mouse directly over the thick black line bordering the cell or cells.
3. When you see the Move mouse pointer (↻), click and drag the selected cell or cells to the new location.

## Inserting and Deleting Columns and Rows

After beginning to edit your worksheet, you might need to add new columns or rows in the middle of cells you have already filled with data. To do this, follow these steps:

**1. Click on the row or column heading immediately after where you want the new row or column to appear.**

7	Various Expenses:	Rent	\$ 750.00	\$ 750.00	\$ 750.00
8		Electric	\$ 50.15	\$ 49.85	\$ 49.10
9		Phone	\$ 32.00	\$ 32.00	\$ 32.00
10		Internet	\$ 56.95	\$ 56.95	\$ 56.95
11		Car Payment	\$ 220.00	\$ 220.00	\$ 220.00
12		Credit Card	\$ 432.54	\$ 255.31	\$ 101.88
13		Total	\$ 1,541.64	\$ 1,364.11	\$ 1,209.93
14					
15		Extra	\$ 789.09	\$ 886.62	\$ 1,105.80



**2. Right click on the row or column you selected in Step 1 and choose "Insert" from the shortcut menu.**

**3. The new row or column will appear in the worksheet.**

9		Phone	\$ 32.00	\$ 32.00	\$ 32.00
10		Internet	\$ 56.95	\$ 56.95	\$ 56.95
11					

**4. Click on the Insert Options icon to choose a formatting option.**

Remember to select the row below where you want the new row to appear or the column to the right of where you want the new column to appear.

Delete a row or column by selecting it, right clicking on the selected row or column, and choosing "Delete" from the shortcut menu that appears.

## Changing Column Width and Row Height

Sometimes the size of a cell will be either too large or too small for the information it contains. Cell dimensions can be altered to better fit your data.

To change the width of a column, move the mouse pointer to the right hand border of the column you want to resize, as shown to the right. When you see the Column Resize mouse pointer ( $\leftrightarrow$ ), click and drag the column border left or right to a new location. Or, double click on the border to automatically resize the cell to fit your data (called AutoFit).

	A	B
1	My 2005 Household Budget	
2		
3		
4	Income:	Job 1
5		Job 2
6		
7	Various Expenses	Rent

To change the height of a row, click and drag with the Row Resize mouse pointer ( $\updownarrow$ ).

## Using AutoSum

Programs like Microsoft Excel were originally created to store, organize, and work with numbers. The AutoSum tool allows you to quickly and easily add (or sum) a column or row of numbers in your worksheet.



To use the AutoSum tool, follow these steps:

Rent	\$ 750.00
Electric	\$ 50.15
Phone	\$ 32.00
Internet	\$ 56.95
Car Payment	\$ 220.00
Credit Card	\$ 432.54
Total	

**1. Locate the row or column of numbers you wish to add. Click on the empty cell at the end of the row or column, to select it and make it active. This is where the sum will appear.**

**2. Click on the AutoSum button ( $\Sigma$ ), located on the Standard Toolbar.**

	A	B	C	D
1	<b>My 2005 Household Budget</b>			
2				
3			<b>January</b>	
4	<b>Income:</b>	<b>Job 1</b>	\$ 2,100.73	
5		<b>Job 2</b>	\$ 230.00	
6				
7	<b>Various Expenses:</b>	<b>Rent</b>	\$ 750.00	
8		<b>Electric</b>	\$ 50.15	
9		<b>Phone</b>	\$ 32.00	
10		<b>Internet</b>	\$ 56.95	
11		<b>Car Payment</b>	\$ 220.00	
12		<b>Credit Card</b>	\$ 432.54	
13		<b>Total</b>	=SUM(C7:C12)	
14			SUM(number1, [number2], ...)	
15				

**3. Flashing dotted lines will appear around the row or column of numbers to be added, and the function that calculates the sum will appear in the cell you selected.**

**5. If the flashing dotted lines are not around the correct cells, click on the first cell that should be included, then drag until all of the correct cells are selected.**

\$ 750.00
\$ 50.15
\$ 32.00
\$ 56.95
\$ 220.00
\$ 432.54
\$ 1,541.64

**6. Either press the Enter key on the keyboard or click on the AutoSum button ( $\Sigma$ ) a second time to display the sum.**






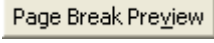

**NOTE:** The information stored in the cell is the formula, not the computed value. If you click on the cell again, you will see the formula in the formula bar above the worksheet.


## Printing Worksheets

Microsoft Excel worksheets often don't fit well on an 8.5 x 11-inch piece of paper, so it is important to use the Print Preview to see how your worksheet will look when printed before you actually print it. Access this feature by clicking on the Print Preview toolbar icon (🖨️).



In the Print Preview, you will see a number of buttons above a smaller version of the first page of your worksheet:

	Moves you from page to page if there are multiple pages.
	Allows you to zoom in and out.
	Opens the Print dialog box to print the worksheet.
	Opens the Page Setup dialog box (see below).
	Displays margin lines, which you can click and drag to adjust.
	Allows you to view and easily change page breaks.
	Closes the Print Preview and returns you to the worksheet.

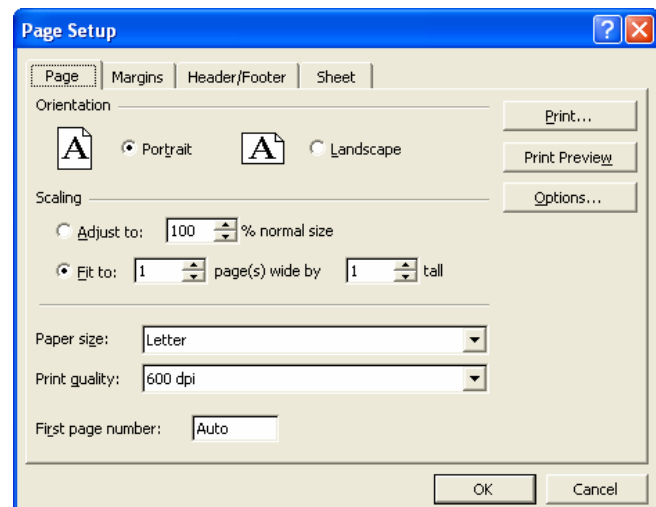
Once you are certain that everything is the way you want it, either click on the  button in the Print Preview or select the Print... command from the File menu.

## Page Setup

In order to make your worksheet look its best when printed, there are a number of Page Setup options you can use: paper size, orientation, margins, header and footer, and page breaks. To change these settings, click on the Setup... button in the Print Preview or select the Page Setup... command from the File menu. The Page Setup dialog box has four tabs:

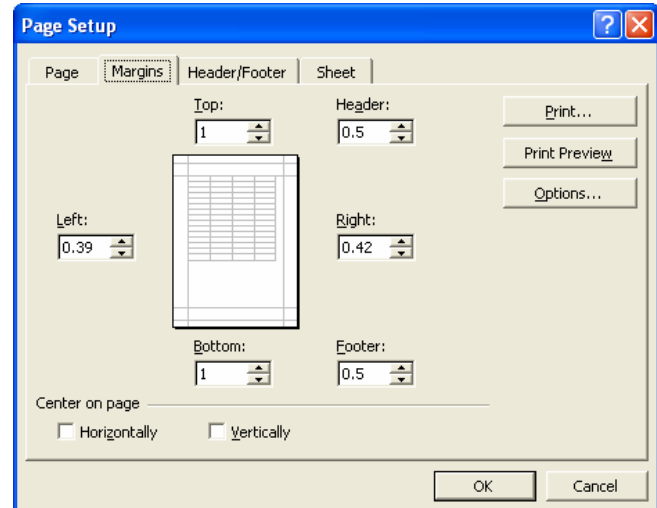
### Page Tab →

- Choose between portrait and landscape orientation.
- Shrink or enlarge your worksheet by a percentage.
- Fit your worksheet into a certain number of pages.
- Choose paper size.
- Decide which number page numbering will start on.



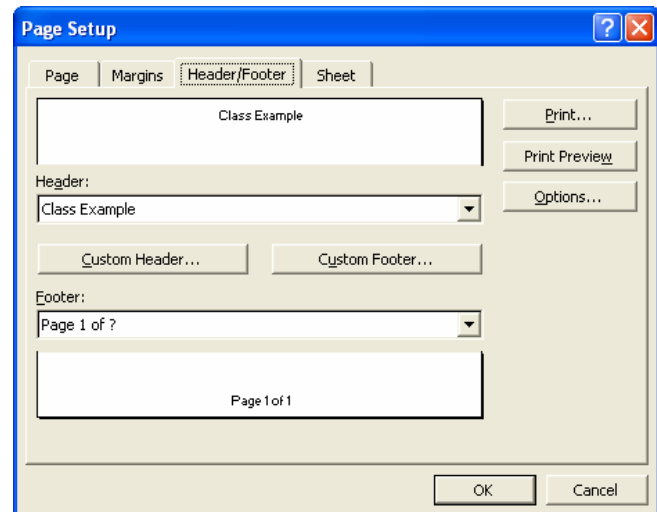
## Margins Tab →

- Set the left, right, top, and bottom page margins. Type numbers or use the up and down arrows.
- Choose the position at which the header and footer will be located on the page.
- Center the worksheet horizontally, vertically, or both on the page.



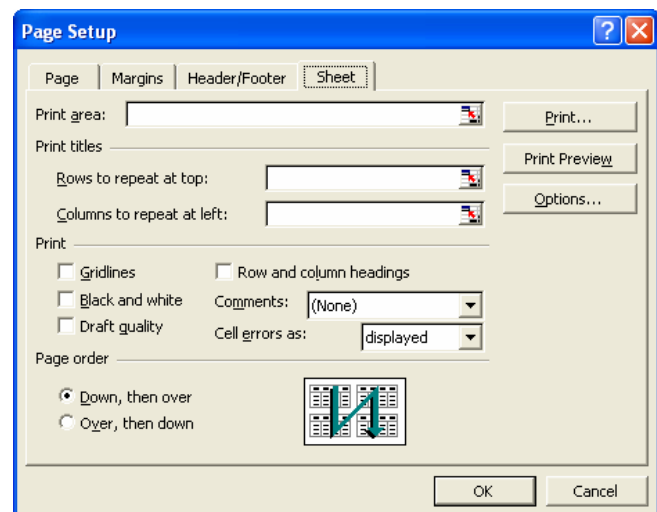
## Header/Footer Tab →


- Headers and footers are labels that appear at the top and bottom, respectively, of each printed page.
- Choose from pre-made headers and footers in the dropdown menus.
- Customize your own using the Custom Header... and Custom Footer... buttons.



## Sheet Tab →

- Select only a certain portion of the worksheet to print.
- Set certain rows or columns to repeat at the top of each printed page.
- Choose to print gridlines and row and column headings.
- Choose how cell errors appear.
- Change the order in which pages are printed.



**NOTE:** In the Page Setup dialog box's Sheet tab, use the  buttons to select which cells will be printed and which rows and columns will be repeated.

## Glossary of Terms

<b>Alignment</b>	The position of text or numbers within a cell. Text and numbers can be aligned to the right-hand side of the cell or the left-hand side of the cell, as well as centered in the middle of the cell.
<b>Block</b>	Also called a range, refers to a group of adjacent cells.
<b>Chart</b>	A user-friendly, graphic representation of numeric and textual data. Sometimes called a graph.
<b>Clipboard</b>	A place where text and numbers are temporarily placed after being cut or copied so that they can then be pasted where desired.
<b>Copy</b>	A command that allows you to make an exact copy of selected text or numbers to be placed in another cell within the same worksheet or on any cell within another worksheet.
<b>Cut</b>	A command that allows you to remove selected text or numbers from a cell so that you can place them in a different cell within the same worksheet or on any cell within another worksheet.
<b>Database</b>	A file containing large amounts of information organized into records, which contain individual pieces of information entered into fields.
<b>Default</b>	A predefined setting that is built into a program and will be present each time that program is run unless an alternative setting is specified.
<b>Dialog Box</b>	A box that pops up when you select certain commands, allowing you to select options and provide the computer with information to do the task.
<b>Edit</b>	To add, delete, or change information in a worksheet.
<b>File Name</b>	The name assigned to a workbook either automatically by the computer or by the user when saved.
<b>Font</b>	The visual design of characters. Also called a "typeface."
<b>Format</b>	The way text and numbers appear in a cell, and the way cells appear in the worksheet.

<b>Gridlines</b>	Lines that define the borders of columns, rows, and cells. Unless the option is selected, they will not print.
<b>Labels</b>	Text placed in cells, usually at the beginning of rows and columns, to identify data content of other cells.
<b>Point Size</b>	The height of a character. 72 points = 1 inch.
<b>Rename</b>	To change the name of a saved workbook.
<b>Sort</b>	To change the order of cells to alphabetical, numerical, or some other predetermined, sequential order.
<b>Shortcut Menus</b>	Menus that appear when an object or text is right-clicked with the mouse. They allow you to perform common functions more quickly.
<b>Textual Numbers</b>	Numbers that are not meant to be part of calculations, such as zip codes and phone numbers.

## Further Reading Suggestions

These books and videos, available from the library, will help you learn more about the various versions of Microsoft Excel and how to use them. The version of Excel used at the library, Microsoft Excel 2002, may be different than the version you use on other computers at home, work, or school. Ask a librarian for more titles.

### Microsoft Excel 5

Microsoft Excel 5 for the Macintosh Step by Step by Catapult, Inc.

### Microsoft Excel 2000

Excel 2000 for Windows for Dummies by Greg Harvey  
Learning Excel 2000, Volume 1: Beginning (VHS)

### Microsoft Excel 2002

Absolute Beginner's Guide to Microsoft Excel 2002 by Joe Kraynak

### Microsoft Excel 2003

Excel Hacks by David E. Hawley  
Formulas and Functions with Microsoft Excel 2003 by Paul McFedries  
Microsoft Office Excel 2003 by John Cronan