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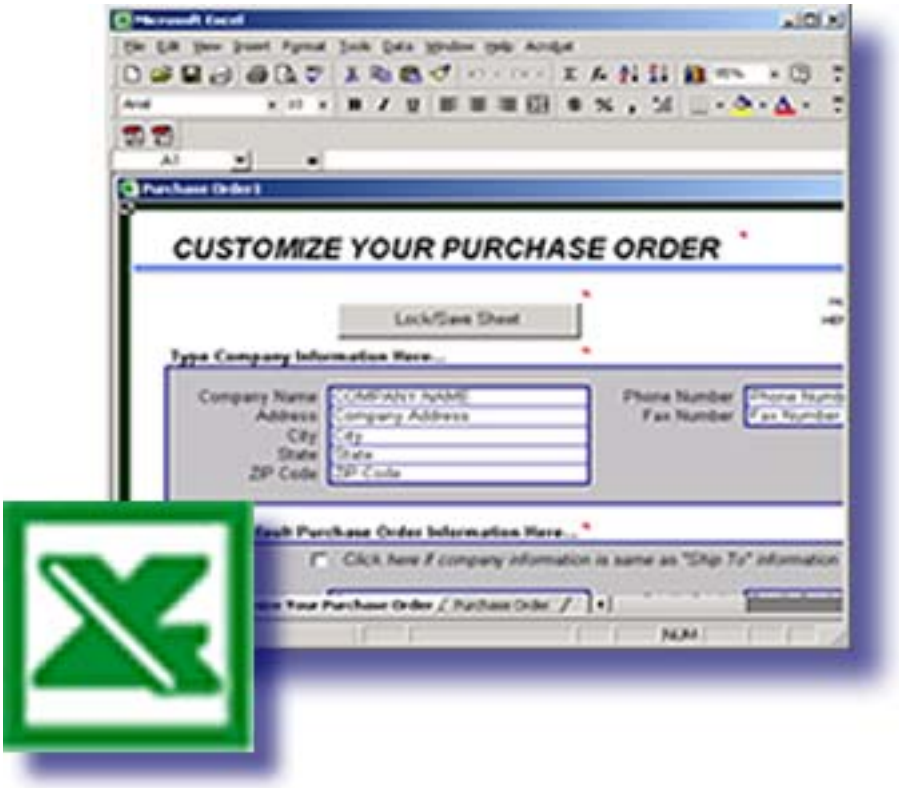
MS Office XP Manuals for our SAISD Community

Your Guide to:

Microsoft Excel XP



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Direct any questions, comments or corrections to mguhlin@saisd.net. Your assistance will be greatly appreciated.

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Topics Page

What is Excel XP?

Microsoft Excel XP is the spreadsheet application included in the Microsoft Office suite of programs. The different Office component programs are designed to work together, so you will see may techniques that can be applied to other Office applications.

What should you consider before beginning?

Plan Ahead!

The key to using a spreadsheet successfully is planning. It is critical to do a thorough hog of pre-planning before creating a spreadsheet. This allows the user to explore the options of gather data, and deciding on the method of delivery of this data to their audience (spreadsheet, graph or chart).

Once these factors have been identified, the user can begin to create a spreadsheet that will deliver helpful and informative content to the reader.

Beginning Basics

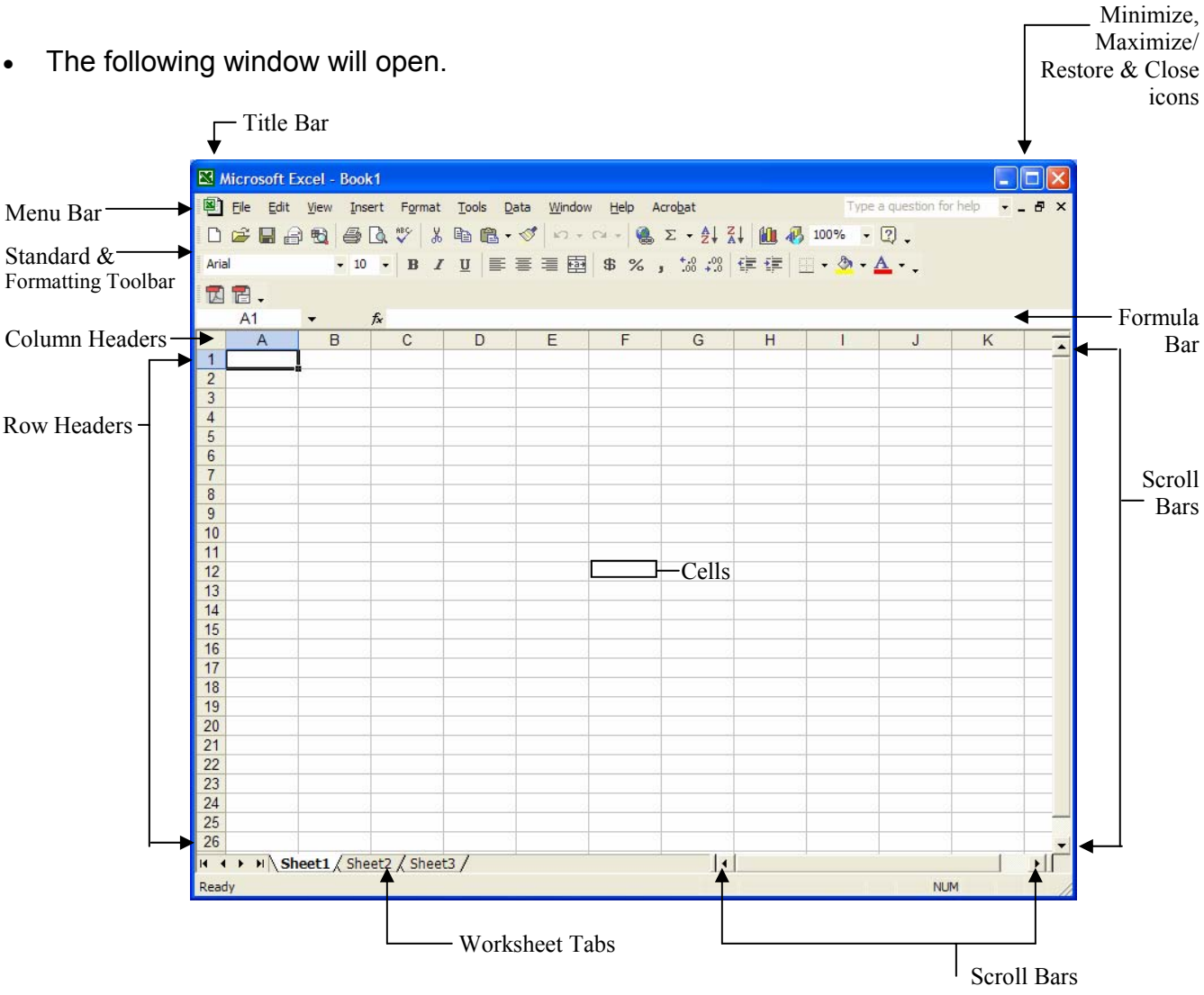
Opening Excel XP

- Start the Excel XP program by clicking on the Excel icon. This icon may be found in the Microsoft Office Shortcut bar, a desktop shortcut, or from the Start Button/Programs/ Microsoft Excel location.

MS Excel XP

Parts of the Excel XP window

- The following window will open.



Title Bar ..... Shows the user the name of the document, the program running currently in the window and the Minimize, Maximize/Restore and Close icons.

Menu Bar ..... The horizontal bar that is located below the title bar. It contains the names of all of the drop-down menus and maybe built in or customized.

Standard Toolbar ..... Contains buttons or icons of standard commands (Save, Print, Copy and Paste, …)

Formatting Toolbar ... Contains buttons or icons of commands that will change the appearance of text, tables, and images.

Column Headers ..... Each column begins with a letter and is a vertical line of cells.

Row Headers ..... Each row begins with a number and is a horizontal line of cells.

Cells ..... The area where the column and row intersect. To name a cell, use for the column (a letter), and then the row (a number). Cell A1 is located in Column A, Row 1.

Worksheet Tabs..... A Workbook or entire Excel file is save in sections named worksheets. To move from one "page" to another "page" in the workbook, click on the tab for each of the worksheets.

Minimize icon ..... When clicked, this icon will minimize or shrink the appearance of the screen. The program can be opened by clicking on a button now located on the Start taskbar (located at the bottom of the screen).

Maximize icon ..... When clicked, this icon will expand the program window until it fills up the entire screen.

Restore icon ..... When clicked, this icon will change back to the previous window size.

Close icon ..... When clicked, this icon will close the program and document. The user will be warned to save their file.

Formula Bar ..... Will show the name of the active cell and also its contents.

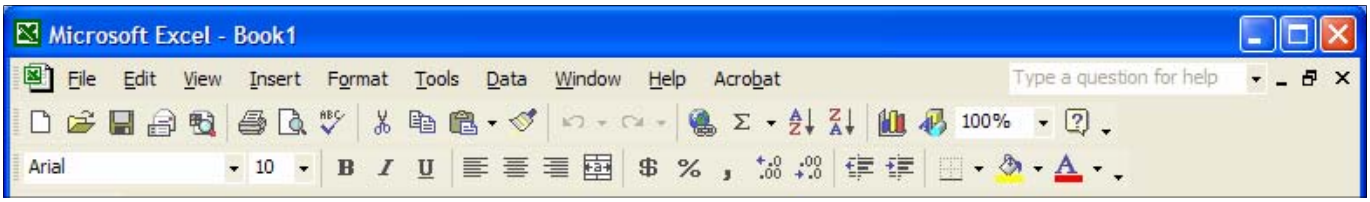
Scroll Bars ..... Located on the right side and bottom side of the page. Allows movement up and down or side to side in the document.

How to get help in Excel XP

- MS Excel has grown over the years into a complicated program that allows the user a variety of different ways to produce an unlimited amount of products. Often commands that were found in certain locations or on certain toolbars have been moved in the newer version of MS Excel XP.

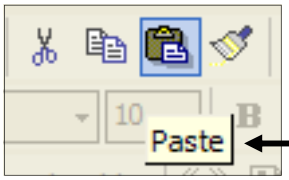
- To make production easier on the user, there are several ways to find help on a variety of topics.

Help options found on the Menu Bar/Toolbar Area



Screen Tips

- These are little yellow boxes that appear when the user points to any icon on the toolbar. The name of the icon will be displayed for several seconds.



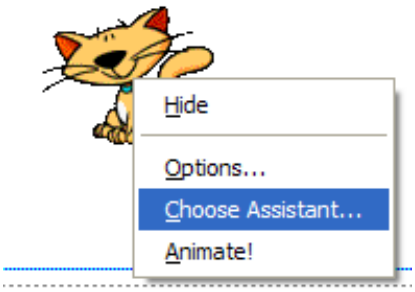
[1] A screen tip for the Paste icon

The Office Assistant

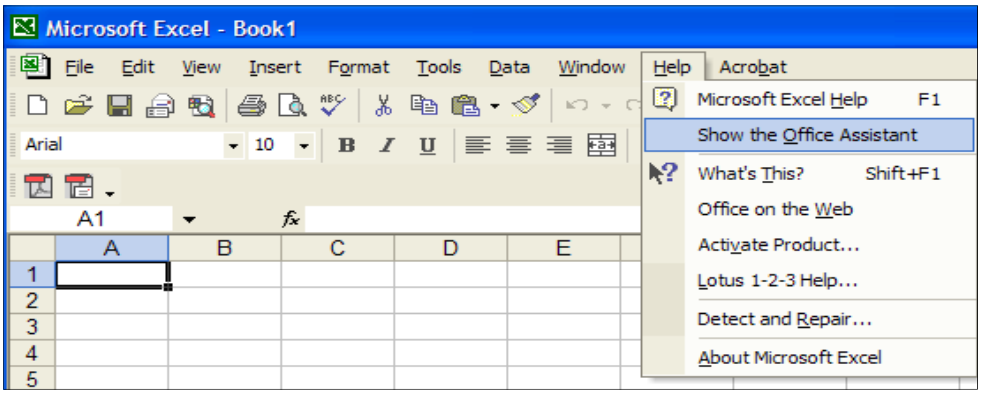
- A little animated character that will provide help

- It can be changed to other characters by right clicking on the figure and picking the option, Choose Assistant.

- To hide the assistant, right click on the figure and pick Hide



- If your Office Assistant is not visible.

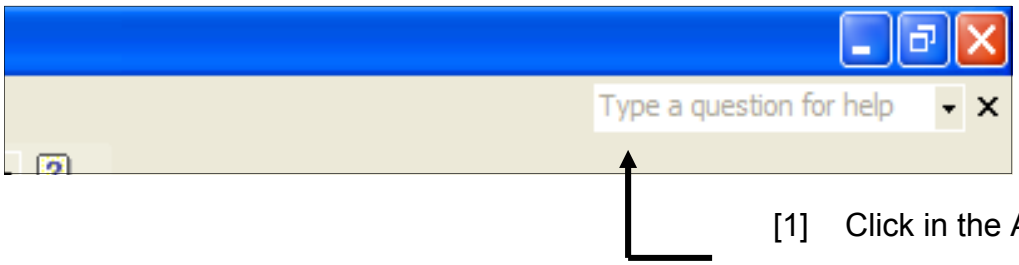


[1] Find the Menu Bar

[2] Click Help, Show the Office Assistant

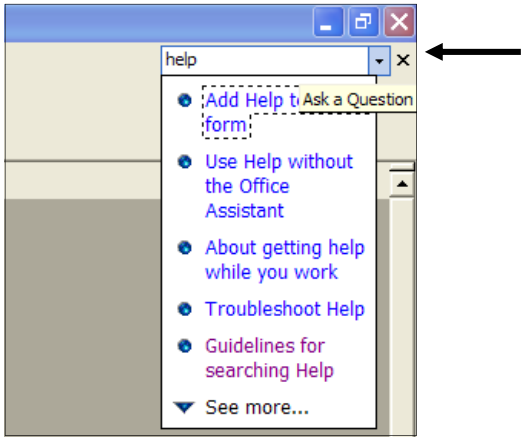
Ask a Question Wizard

- Located near the upper right-hand corner of your window.



[1] Click in the Answer area

[2] Type a question

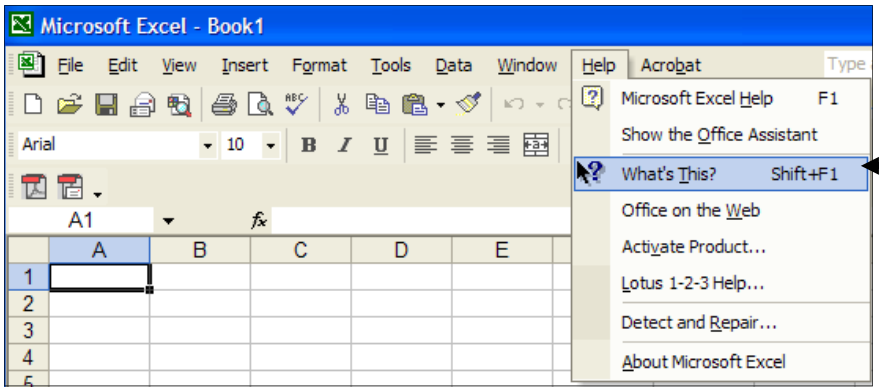


[1] Press Enter

[2] Choose your topic from the drop down

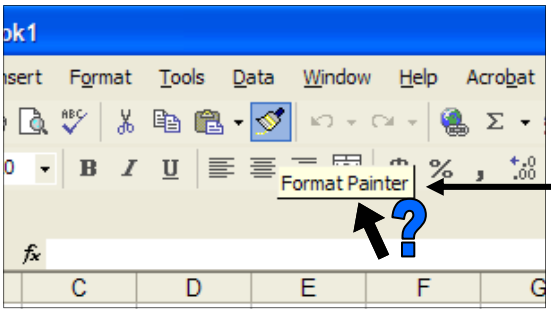
The What's This arrow

- By placing this arrow above an icon or an area of the screen, a helpful tips window will open giving you a definition of the object.



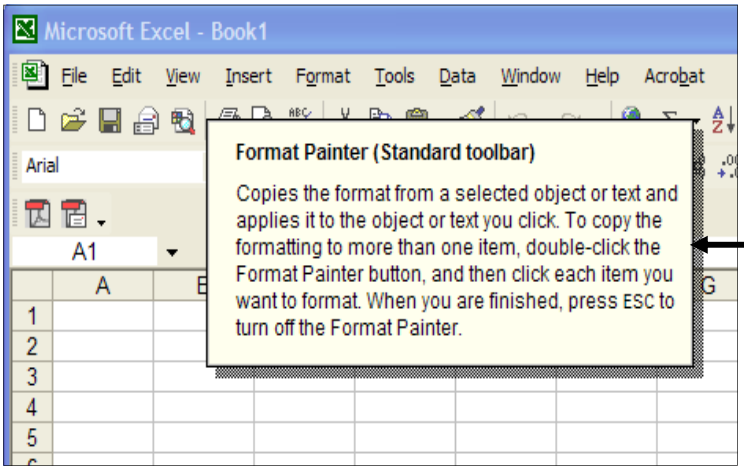
[1] Find the Menu Bar

[2] Click Help, What's This?



[1] Your cursor will change

[2] Place your cursor over an icon and click your mouse

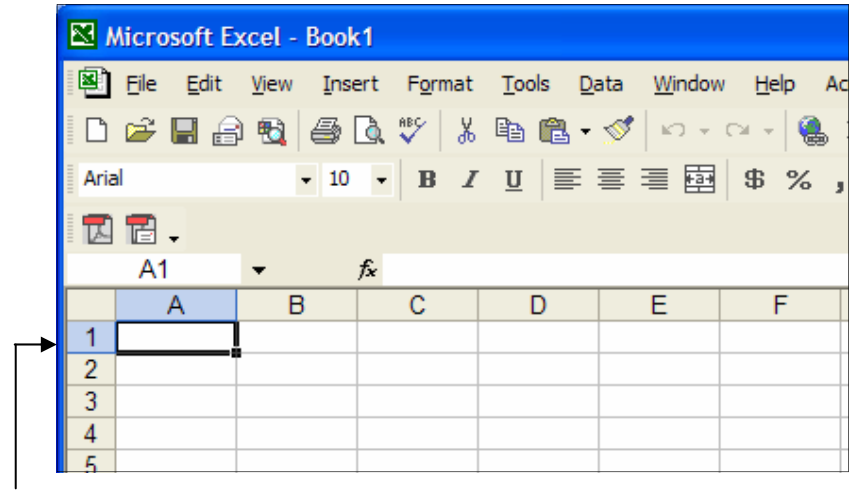


[1] A helpful hint window will open giving you the definition of the icon

Working with Worksheets

Entering data into a worksheet

- To enter data into a worksheet, choose what is called the “Active Cell”.



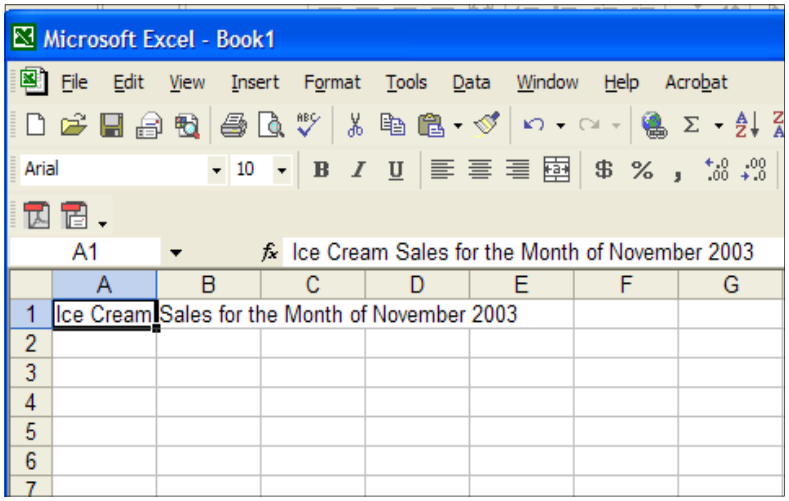
[3] The Active Cell “A1”

[1] An active cell is surrounded by a thick border.

[2] Both the active cell’s Column and Row header are now highlighted in blue instead of gray.

Note: To navigate around your worksheet, use either the point and click with your mouse or the arrow keys on your keyboard.

- Type in the data (text characters, numbers, mathematical signs, formulas, …)



[1] Click in the active cell

[2] Type in the data

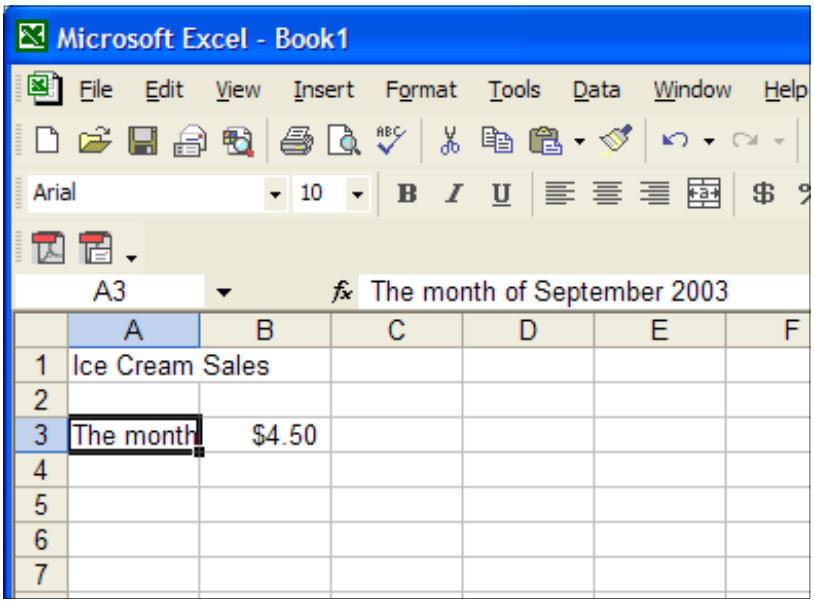
[3] Press Enter when completed

Note: If a mistake is made, press Backspace to erase the data.

If you have already pressed Enter, click in the Formula bar and change the data.

Formatting problems with data entry

- When entering text:

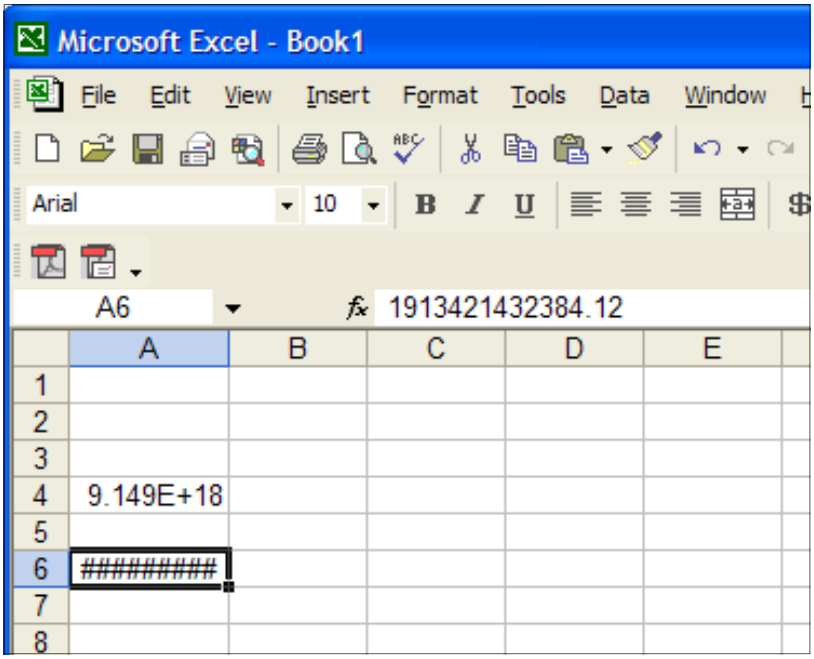


[1] If the text is to long the words may extend into another column. See how the text in A1 extends into B1

[2] If the neighboring cell has data, the text will be truncated to fill in only the width of the column. See how most of the text in A1 is not show due to the content in B1.

[3] This problem can be fixed by changing the width of the column or using the Text control/text wrap option. *See the next section*

- When entering numbers:



[1] If the number is to long, it may be displayed in either scientific notation (A4) or as a series of number signs (A6).

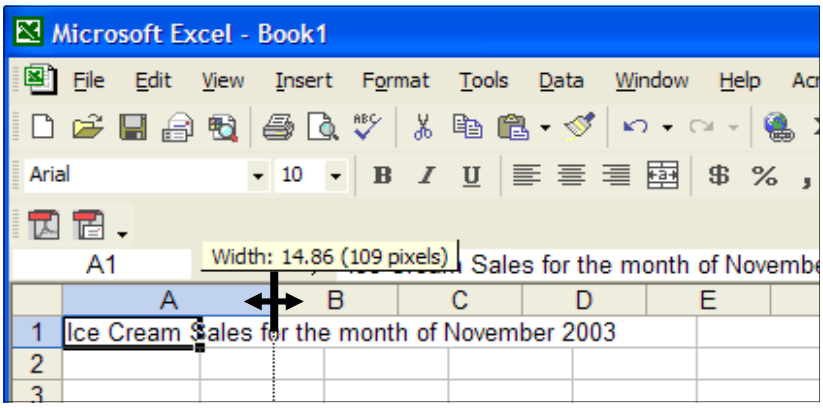
[2] The problem with the number signs can be fixed by changing the width of the column. *See the next section*

Changing the appearance of Columns and Rows

- While entering the content of the worksheet, you may have to change the appearance of columns, and rows.

Resizing Column widths

Manually:

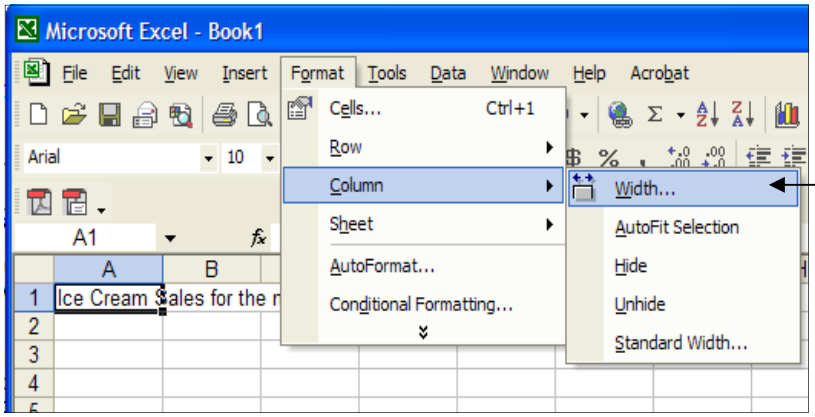


[1] Place the cursor in-between the column headers

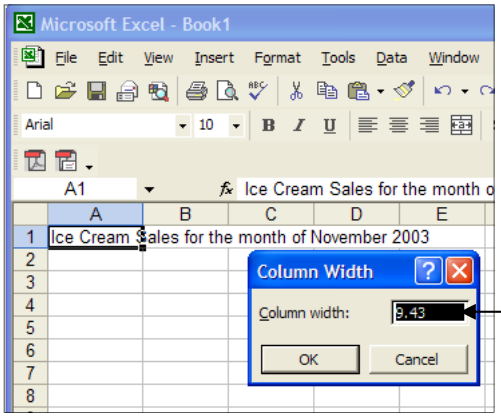
[2] Your cursor will change into a two sided arrow

[3] Click and drag your cursor to widen the column width.

By using the Menu bar option:



[1] On the Menu bar, click on Format, Column, Width

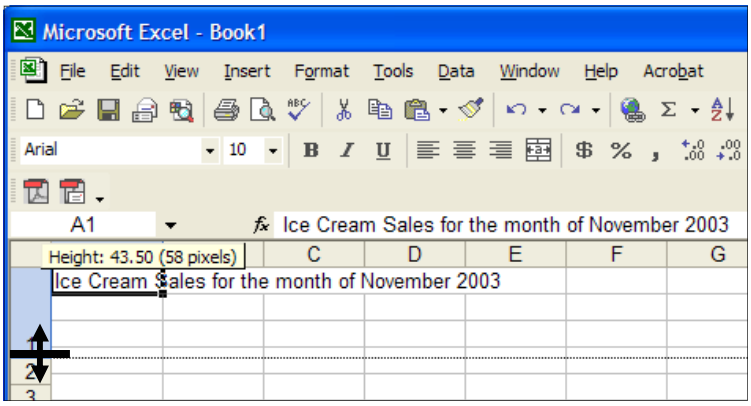


[1] In the Column Width window, type in the number of the new column width

[2] Click OK

Resizing Row widths

Manually:

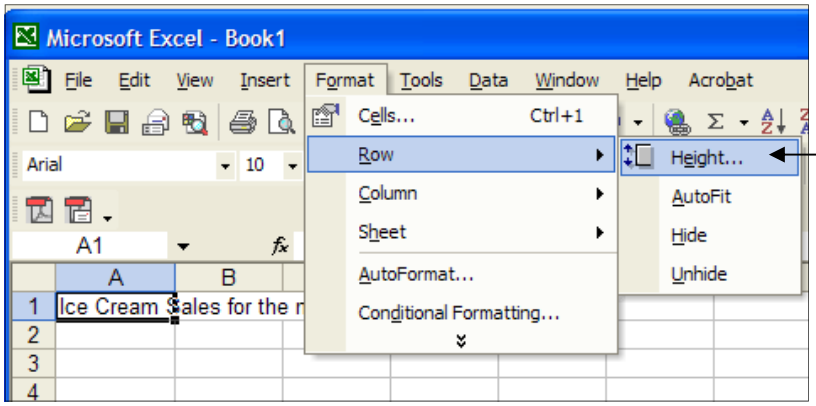


[1] Place the cursor in-between the Row headers

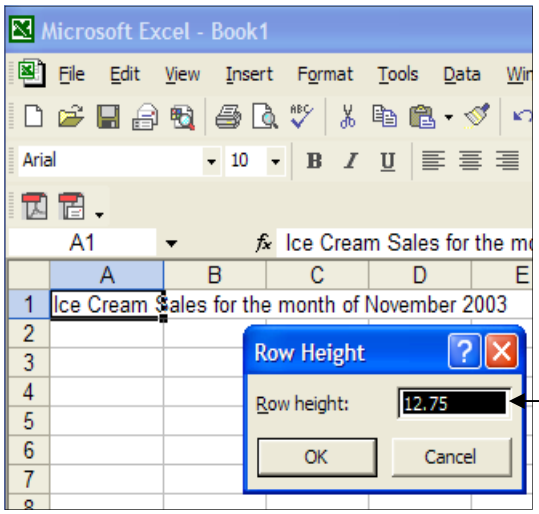
[2] Your cursor will change into a two sided arrow

[3] Click and drag your cursor to widen the column width.

By using the Menu bar option:



[1] On the Menu bar, click on Format, Row, Width



[1] In the Column Width window, type in the number of the new column width

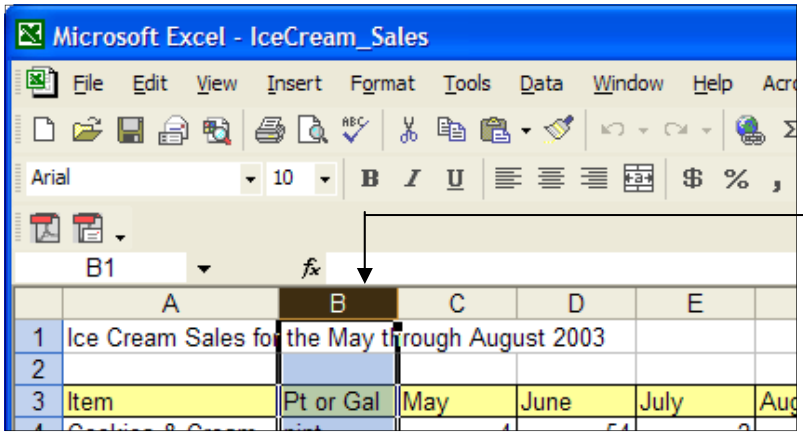
[2] Click OK

Inserting and Deleting Columns and Rows

- While entering the content of the worksheet, you may have to add or delete columns and rows.

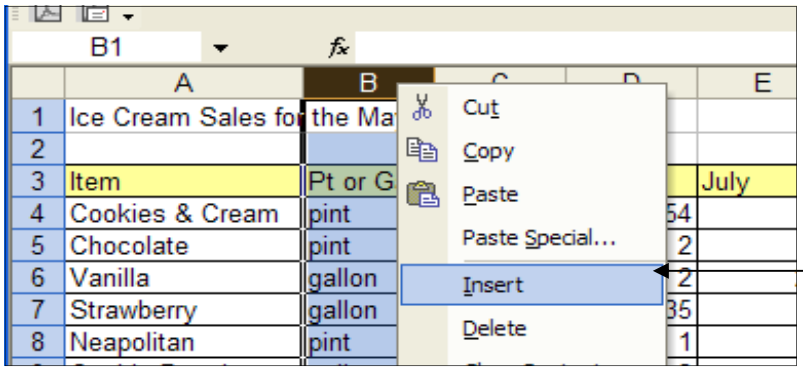
Inserting new Columns

By using the Drop Down menu:



[1] Click on the Column header to highlight the entire column

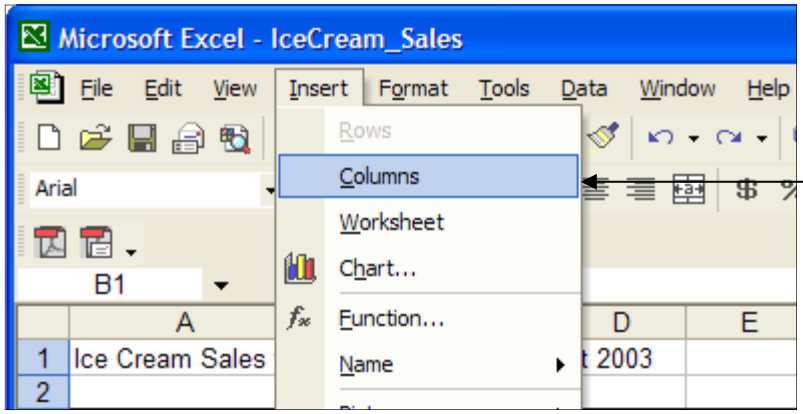
[2] Right click your mouse on top of the columns' letter.



[1] From the drop down menu, choose the option Insert.

[2] The new column will now appear to the right of the selected column.

By using the Menu Bar:



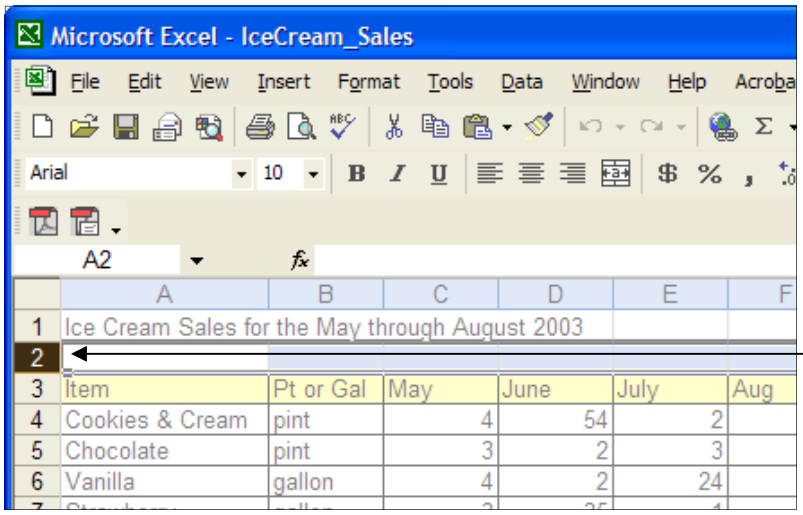
[1] Click on the Column header

[2] On the Menu bar, click on Insert, Columns

[3] The new column will now appear to the right of the selected column.

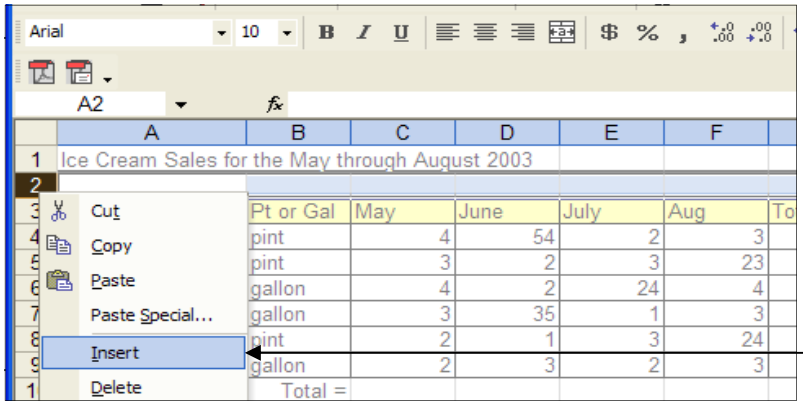
Inserting new Rows

By using the Drop Down menu:



[1] Click on the Row header to highlight the entire row

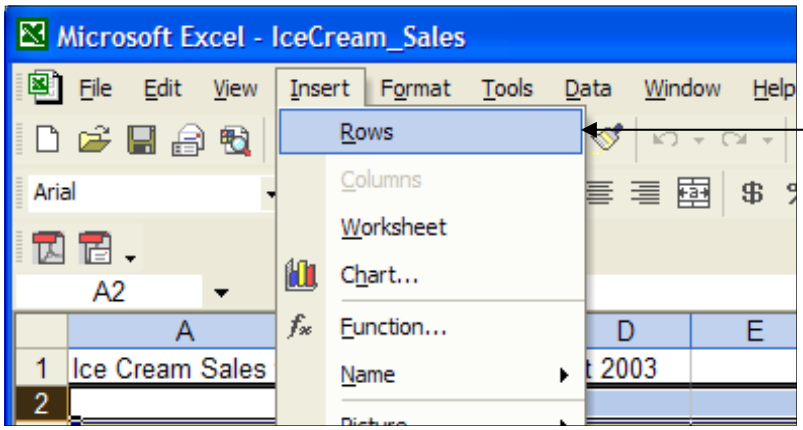
[2] Right click your mouse on top of the row's number.



[1] From the drop down menu, choose the option Insert.

[2] The new row will now appear on top of the selected row.

By using the Menu Bar:



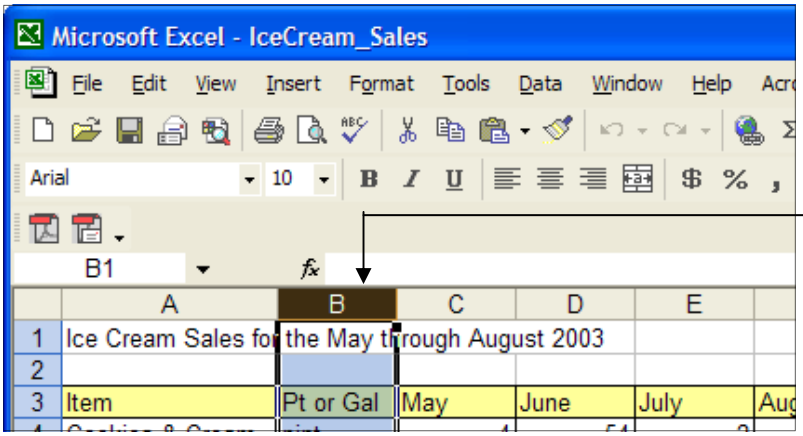
[1] Click on the Row header

[2] On the Menu bar, click on Insert, Rows

[3] The new row will now appear on top of the selected row.

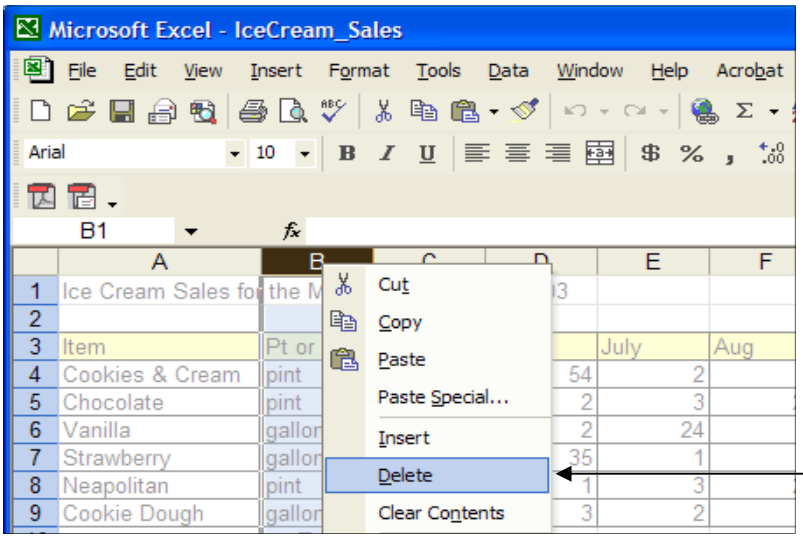
Deleting Columns

By using the Drop Down menu:



[1] Click on the Column header to highlight the entire column

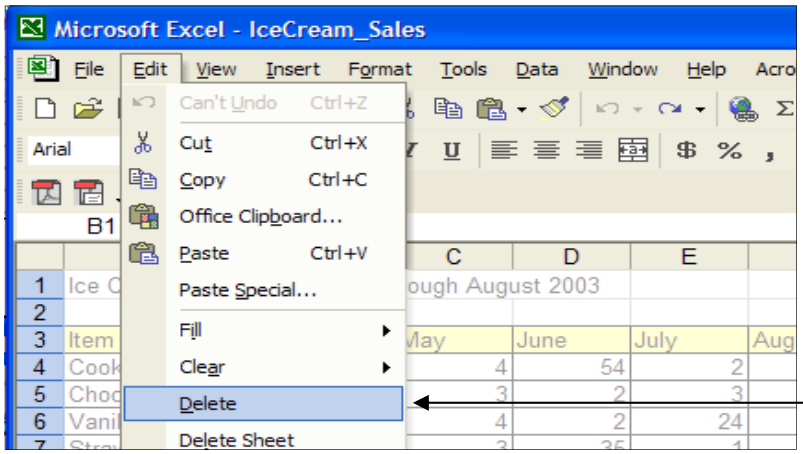
[2] Right click your mouse on top of the columns' letter.



[1] From the drop down menu, choose the option Delete.

[2] The selected column will now disappear.

By using the Menu Bar:



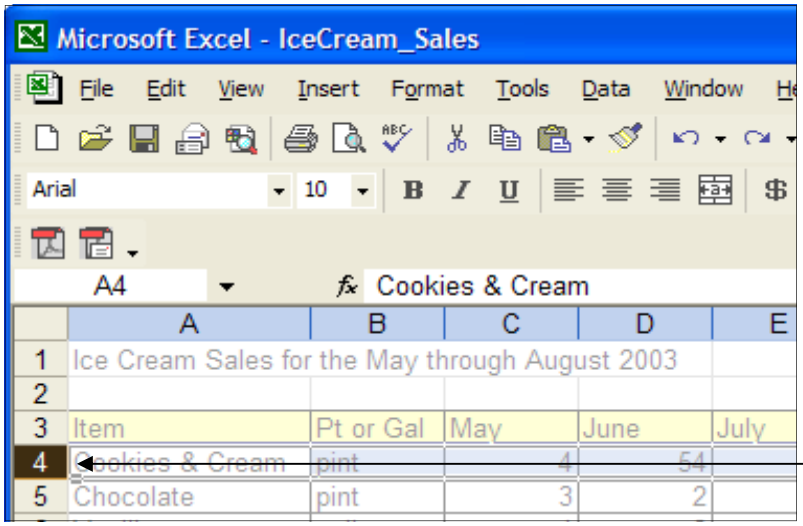
[1] Click on the Column header

[2] On the Menu bar, click on Edit, Delete

[3] The selected column will now disappear.

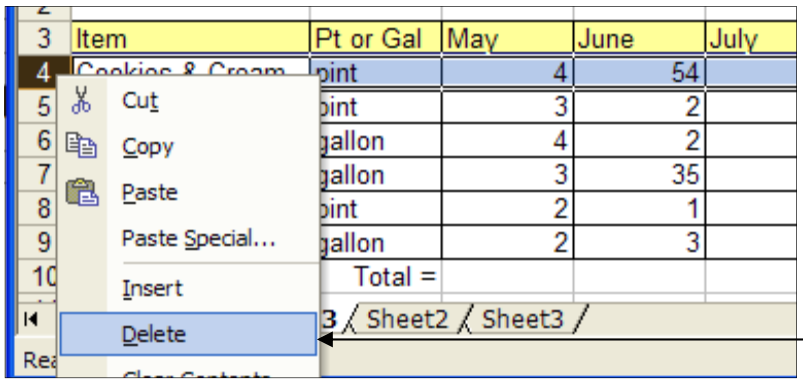
Deleting Rows

By using the Drop Down menu:



[1] Click on the Row header to highlight the entire row

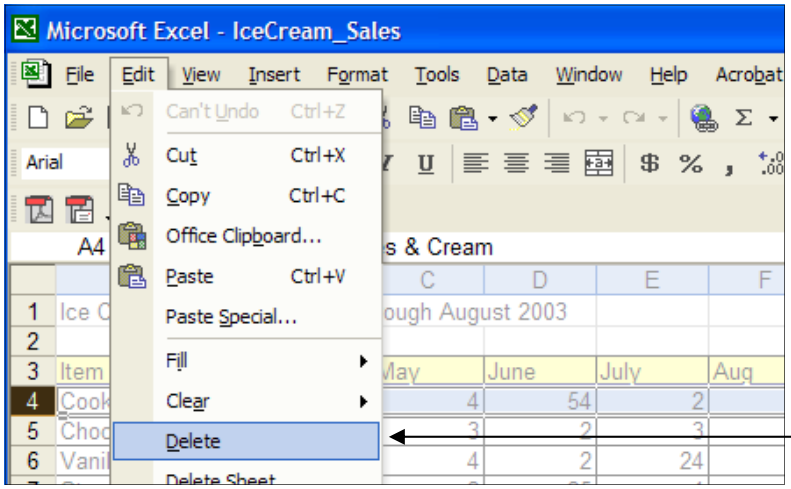
[2] Right click your mouse on top of the row's number.



[1] From the drop down menu, choose the option Delete.

[2] The selected row will now disappear.

By using the Menu Bar:



[1] Click on the Row header

[2] On the Menu bar, click on Edit, Delete

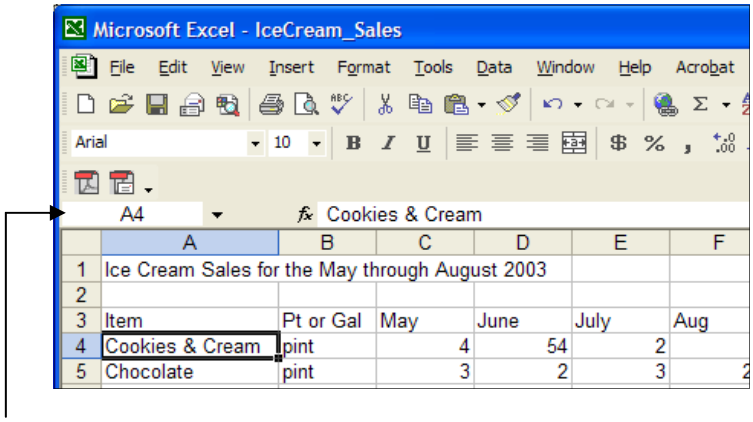
[3] The selected row will now disappear.

Changing the appearance of Cells

- After entering data, you might want to change the appearance of cells (single cells, series of cells, by column or by row).

Selecting Cells

Single Cells:

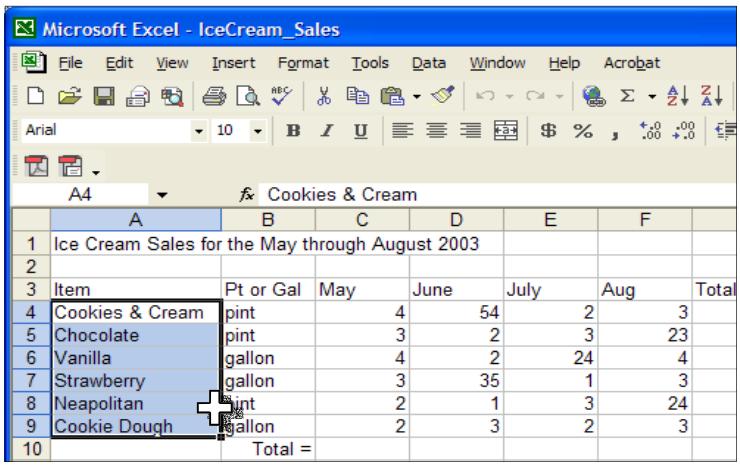


[1] Place the cursor on top of the cell

[2] Click once. That cell will now become the active cell

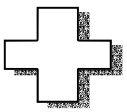
[3] The cell reference is located in the Formula bar.

Series of Cells:



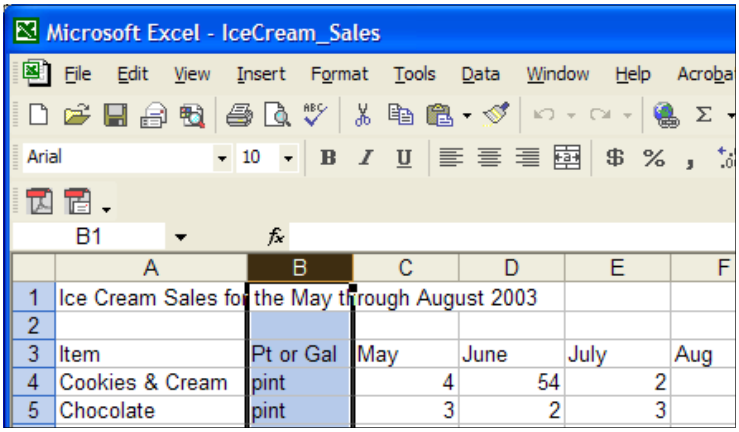
[1] Select an active cell. This will be the starting place of your selection.

[2] Click and drag your mouse to select the region. Your cursor will change into a white “plus” sign.



[3] Release your mouse at the end of the section.

By column:

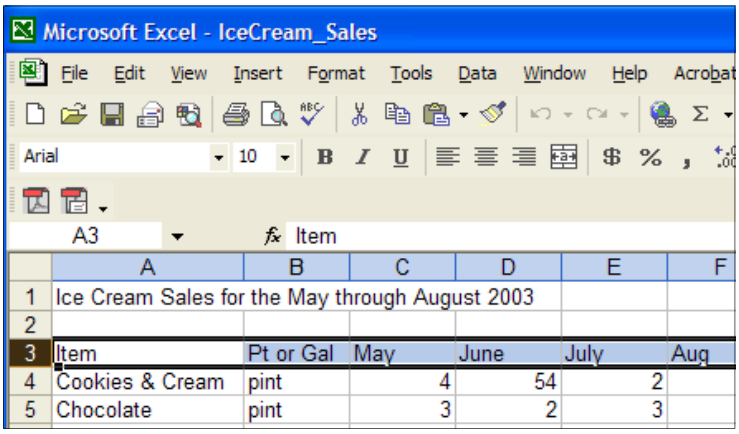


[1] Click on the Column header

[2] The entire column will now change to a light blue.

[3] The Column header containing the letter will change to a dark gray.

By row:

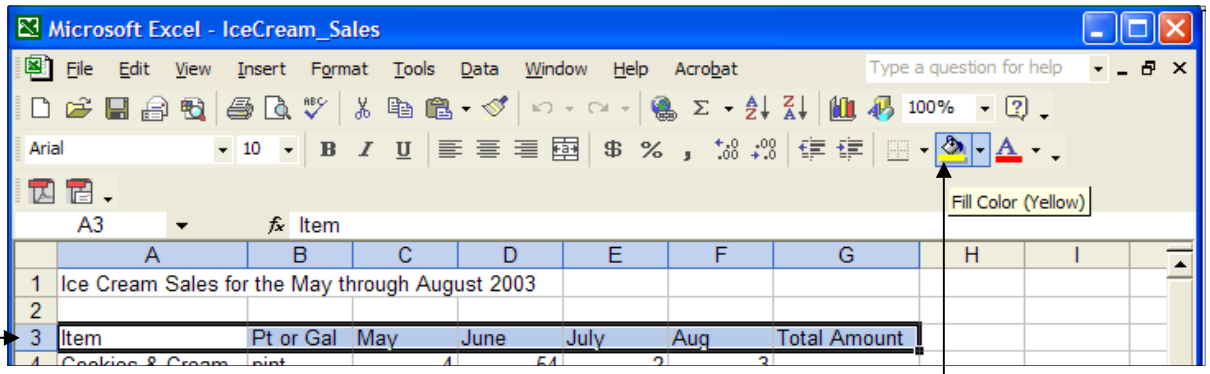


[1] Click on the Row header

[2] The entire row will now change to a light blue.

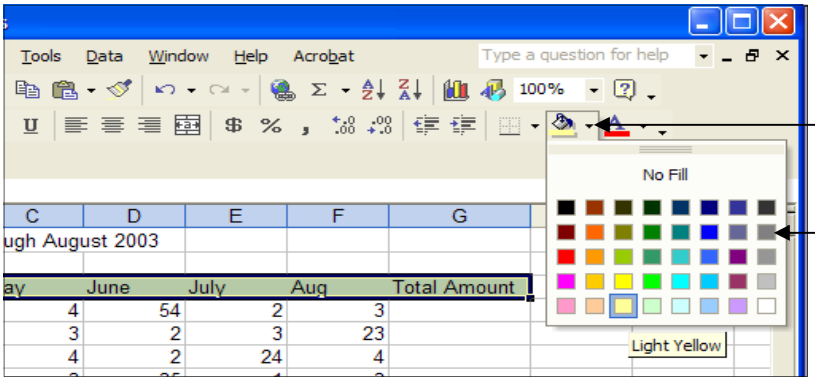
[3] The Row header containing the number will change to a dark gray.

Adding color to cells



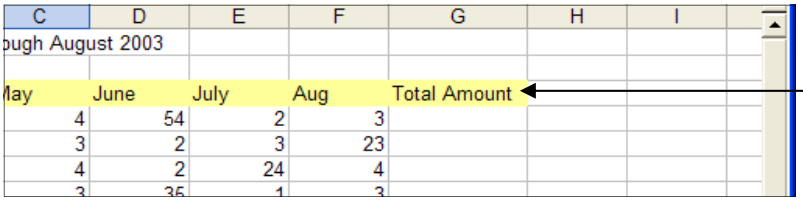
[1] Select the region of cells

[2] Locate and click on the Fill Color icon on the Formatting Toolbar



[1] Click on drop down arrow next to the icon

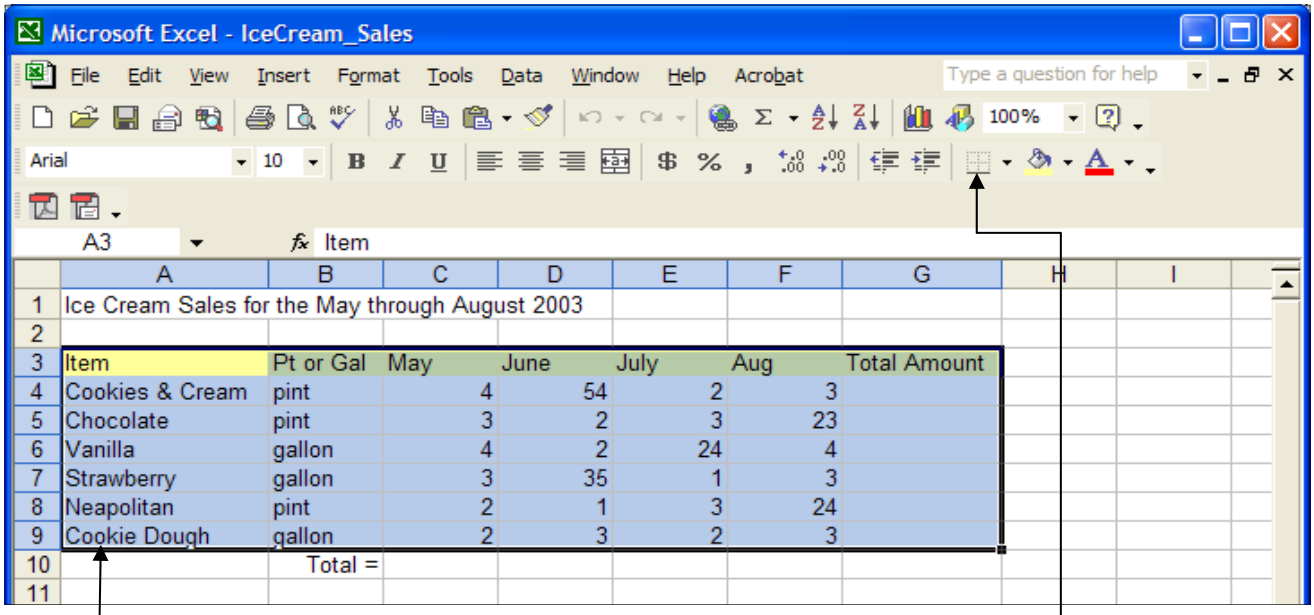
[2] Choose a color from the drop down menu



[1] Click once on the worksheet to unselect the region.

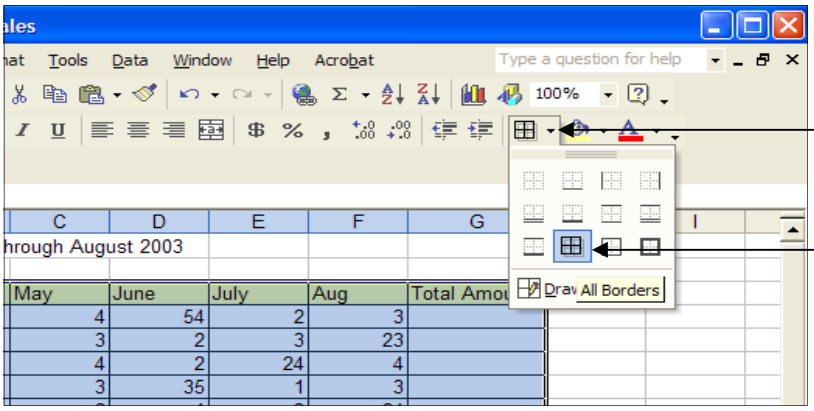
[2] The area should now have a background of your chosen color.

Adding borders to cells



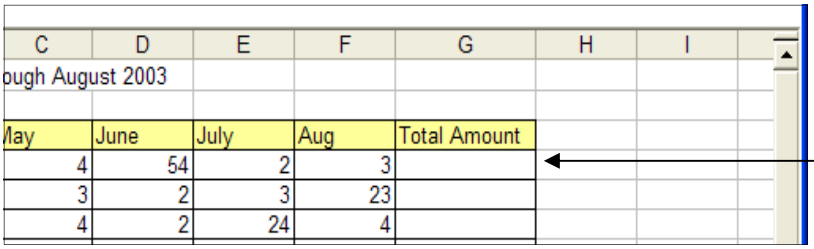
[1] Select the region of cells

[2] Locate and click on the Borders icon on the Formatting Toolbar



[1] Click on drop down arrow next to the icon

[2] Choose a border style from the drop down menu



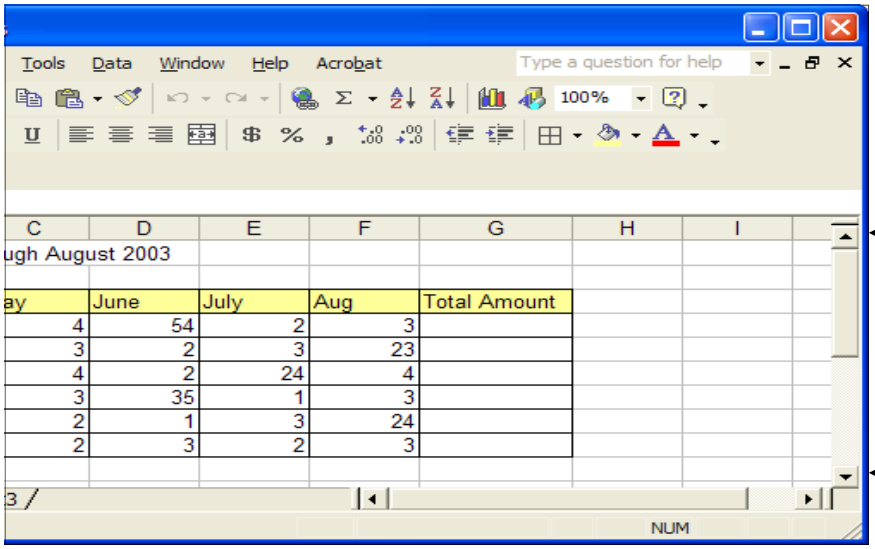
[1] Click once on the worksheet to unselect the region.

[2] The area should now have a border of your chosen style.

Navigating a worksheet and/or workbook

- After entering all of your data, you may not be able to see the entire work area. By using the scroll bars, you can scroll and see different areas of your worksheet.

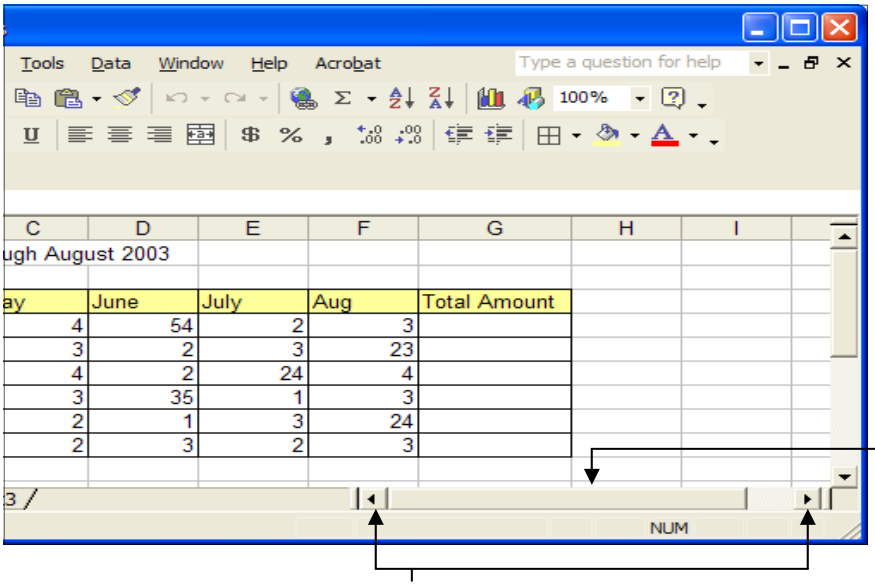
Scrolling up and down



[1] Locate either the arrows or scroll box on the right of the window

[2] Click and drag to move the worksheet up and down.

Scrolling left and right

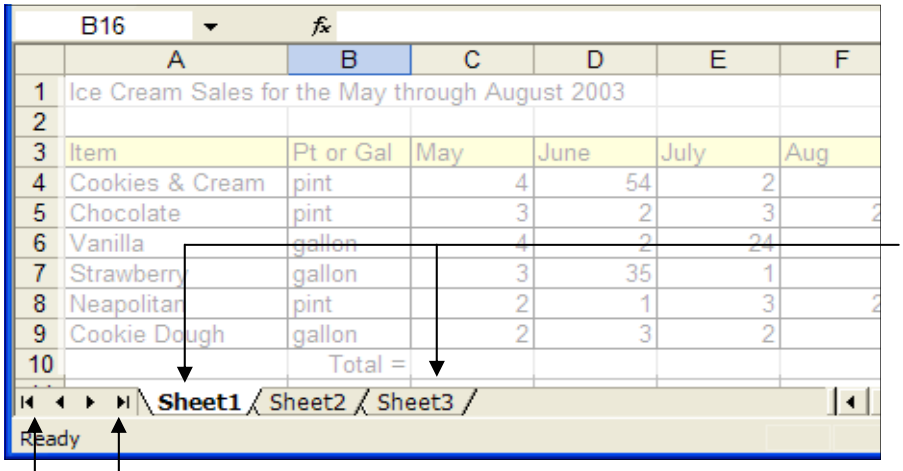


[2] Click and drag to move the worksheet up and down.

[1] Locate either the arrows or scroll box on the bottom right of the window

- Your data may even be located on a different worksheet saved inside the workbook. To navigate between worksheets, use the worksheet tabs.

Switching between worksheets



[1] Locate the worksheet tabs on the bottom left of the window. Click on the tabs to switch to another worksheet.

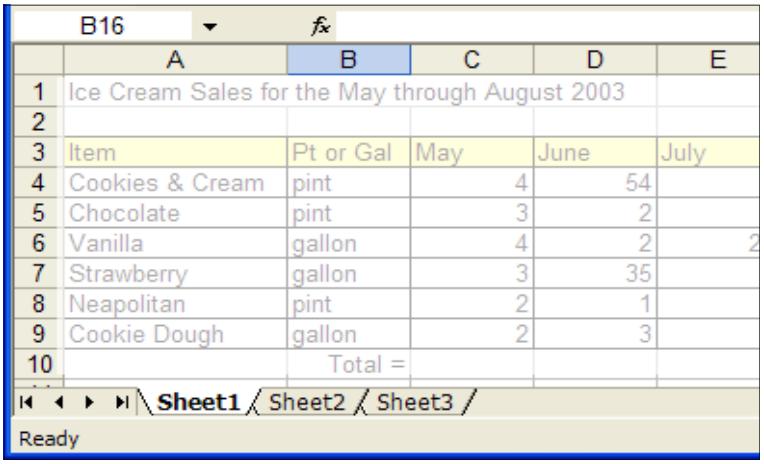
[2] If you have several worksheets saved in your workbook, their tabs may be hidden from view. Use the Browser buttons to "flip" through your worksheets.

Inserting, deleting, naming, and moving a worksheet

- Use the information in this section to help with the organization of data in your workbook. *For example, by naming your worksheets after the months of the year you would be able to keep track of the amount of expenses and when the occur.*

Inserting a worksheet

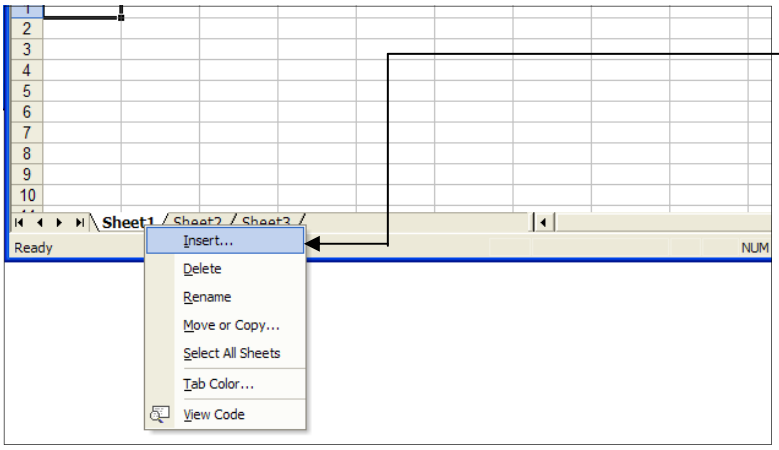
By using the worksheet tabs:



[1] Click once on a worksheet tab.

Do not click twice.

[2] The sheet's name will be in boldface.



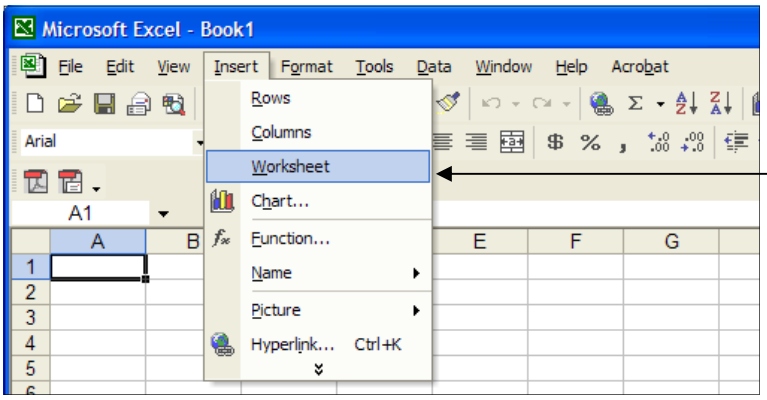
[1] Right click over the sheet's name.

[2] Choose the option Insert from the drop down menu.

[3] From the Insert window *(not pictured),* choose Worksheet.

[4] Click OK.

By using the Menu Bar;

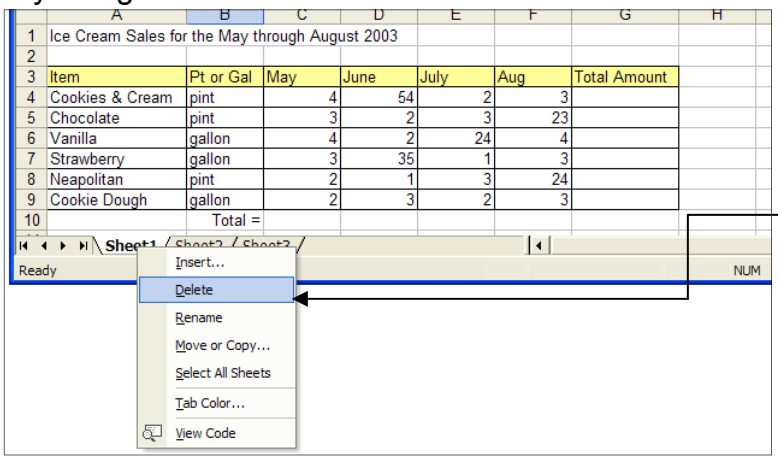


[1] On the Menu bar, click on Insert, Worksheet.

[2] The new worksheet will appear on top of the previous worksheet.

Deleting a worksheet

By using the worksheet tabs:

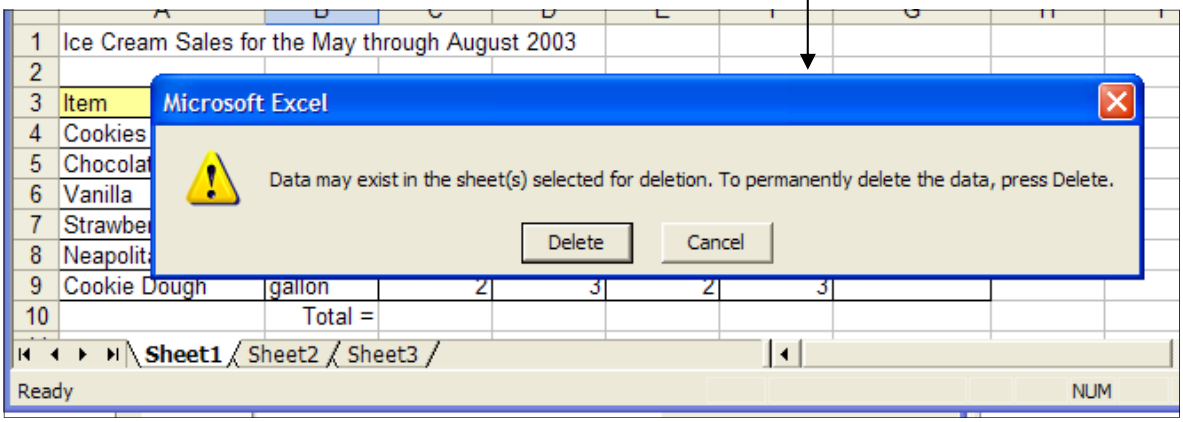


[1] Click once on a worksheet tab.

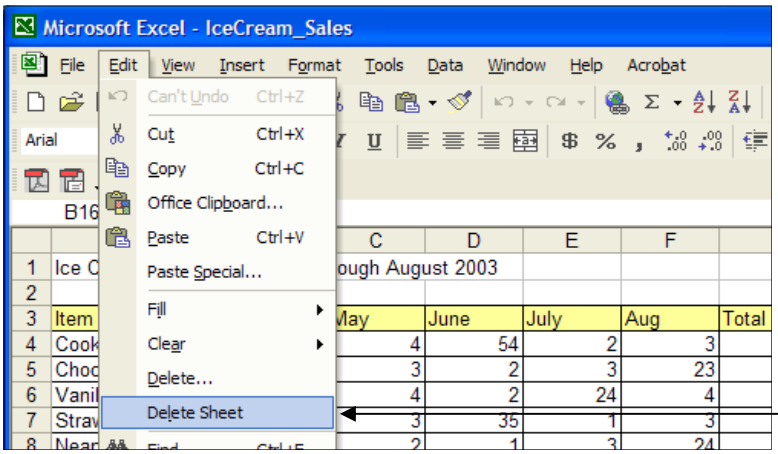
[2] Right click over the sheet's name

[3] Choose the option Delete from the drop down menu.

[4] If the worksheet contains data, a warning dialog box will appear. Choose Delete.



By using the Menu Bar;

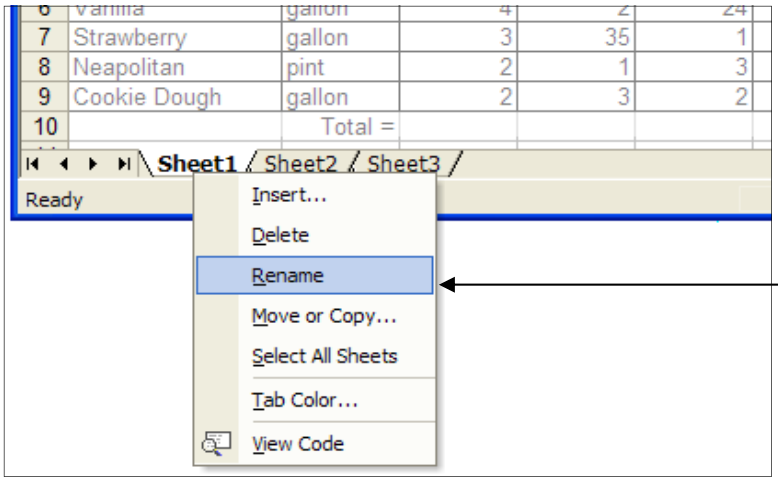


[1] On the Menu bar, click on Edit, Delete Worksheet.

[2] If the worksheet contains data, a warning dialog box will appear *(not shown)*. Choose Delete.

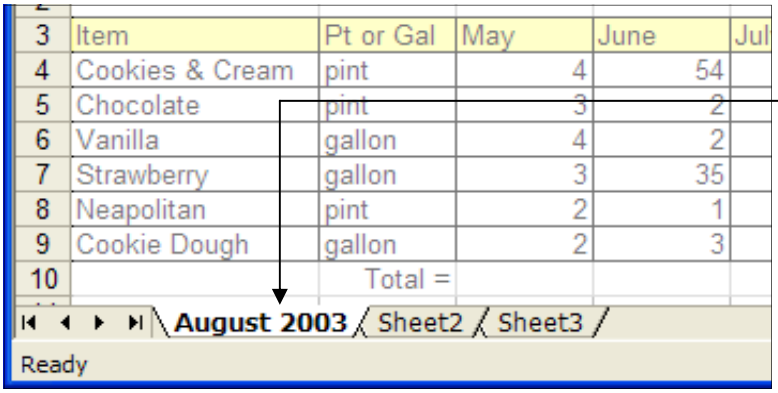
Naming a worksheet

By using the worksheet tabs:



[1] Right click over the sheet's name.

[2] Choose the option Rename from the drop down menu.

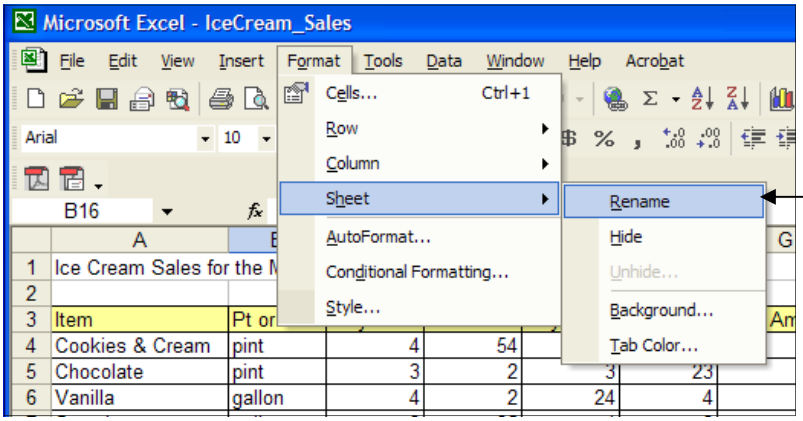


[1] The sheet's name will now be in boldface *(not shown)*

[2] Click and press Backspace. Type in the new name.

[3] Press Enter to save the changes.

By using the Menu Bar;



[1] On the Menu bar, click on Format, Sheet, Rename .

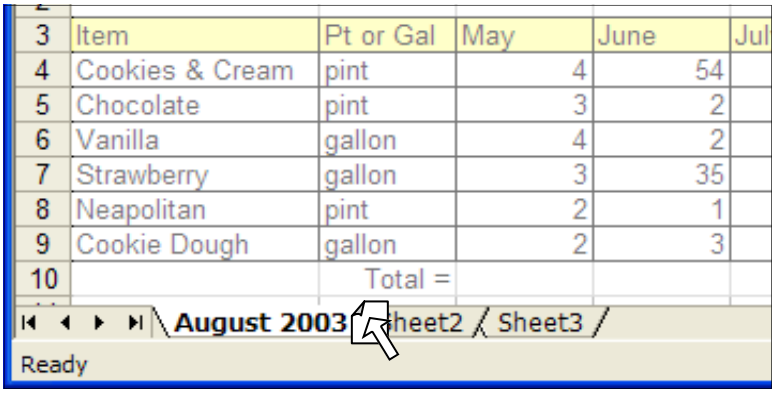
[2] The sheet's name will now be in boldface

[3] Click and press Backspace. Type in the new name.

[4] Press Enter to save the changes.

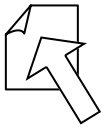
Moving a worksheet

By using the worksheet tabs:



[1] Click on top of the sheet that you want to move.

[2] Your cursor will change to an white arrow and paper.



[3] Click and drag the worksheet to the new location *(not shown)*

[4] Release your mouse button.

Using Formulas

- Formulas are a powerful way to calculate and analyze the data in your worksheet.
- Formulas will always begin with the equal "=" sign and may use cell references instead of numbers.

Simple Formulas

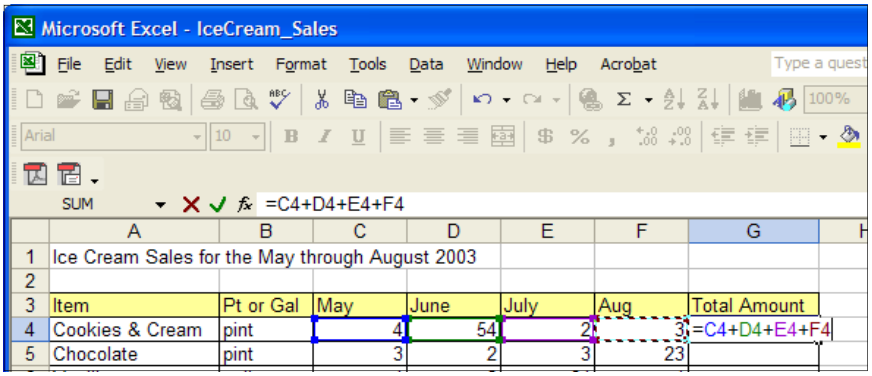
- Formulas can come in either relative cell references (location of the data will change as the formula is copied) or absolute (location of the data will not change when the formula is copied) cell references.
- Mathematical symbols are used to calculate data. Addition "+", Subtraction "-", Multiplication "*", and Division "/".
- All formulas start with the equal sign "=".
- The colon sign ":" will apply the calculation to all cells between the references.
- All formulas may be edited in Formula Bar (located at the top of the worksheet).

Errors found in Formulas

- The following errors appear when a formula cannot be properly calculated or shown

#######	Number signs -	The column is to narrow and cannot display the entire number.
#VALUE!	#VALUE! -	The formula contains a cell that cannot be used in the calculation (i.e. contains text).
#NAME?	#NAME? -	The formula contains a cell reference that was not recognized (i.e. cell reference may be typed incorrectly).
#REF!	#REF! -	The formula contains a cell that does not or no longer exist.

Relative cell references



[1] Click in the cell to make it active

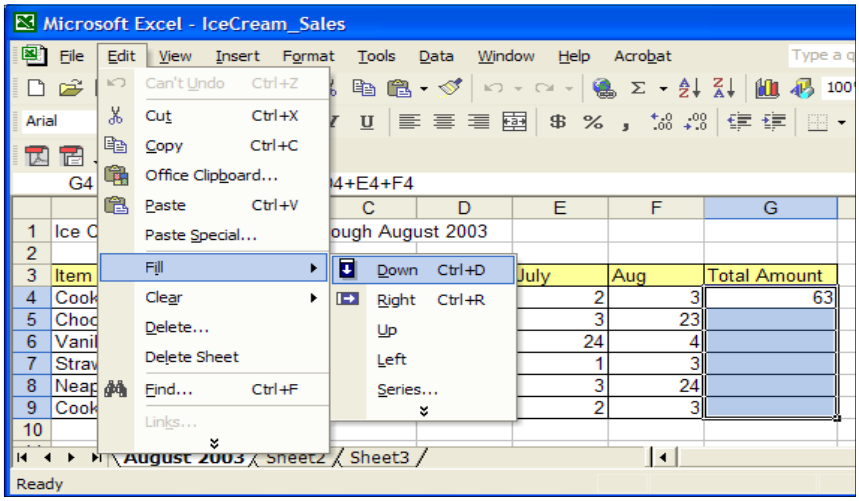
[2] Type in the formula

[3] Press Enter to complete the calculation

[4] To make corrections, click in the Formula bar.

Using Fill Option

- Use this option to copy a formula into a series of cells without retyping.



[1] Click in the cell that contains the formula

[2] Click and drag to highlight the area where you want the formula to be applied.

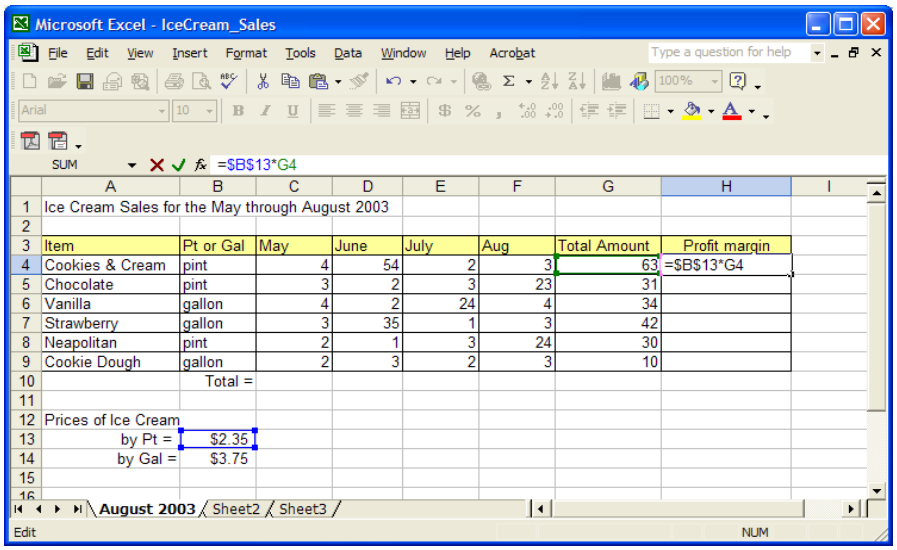
[3] On the Menu bar, choose Edit, Fill, Down

[4] Press Enter to complete the calculation.

Note: Depending on the area selected, pick a Fill option that fits the selection pattern *(Down, Right, Up, Left, Across Worksheets, Series, and Justify).*

Absolute cell references

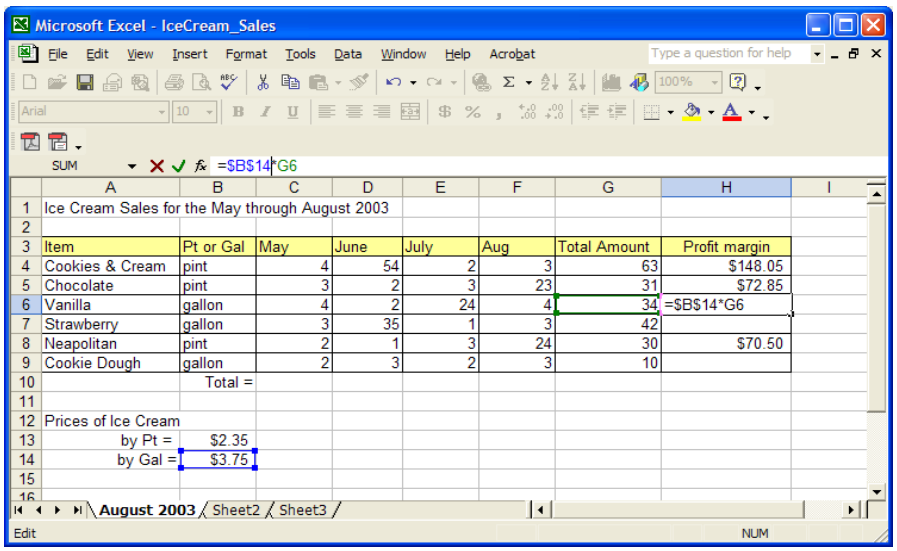
- Use this option if you have a cell reference that must remain the same.



[1] Enter the data that will remain fixed in a separate area

[2] Click in the cell that will contain the formula

[3] Use the dollar "$" sign before the column and/ or row reference to keep the cell location from changing.



[4] Complete the formula and press Enter.

[5] Select the series and used the Fill Option to copy the formula. Notice that the absolute cell reference will not change.

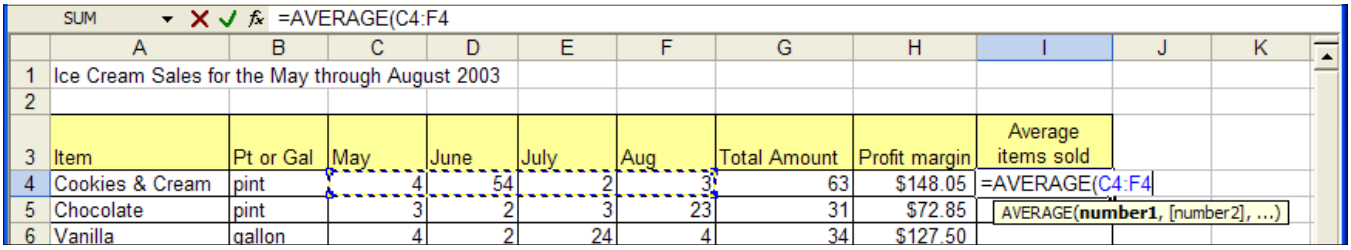
Functions

- Functions are formulas used to calculate data in your worksheet.
- Functions will always begin with the equal "=" sign and may use cell references instead of numbers.
- Enclose the data that will be used in the formula in parentheses ().
- Use the comma "," to separate cell references in a formula.
- Use the colon ":" to apply the function to the specific cells and the ones in-between (i.e. the function "=sum(A1:D1)" would read "equal the sum of the numbers in cell A1 through D1").

Types of Functions

=AVERAGE(A1:D1)	Average -	Will calculate the average of a list
=COUNT(A1:D1)	Count -	Will count the number of values in a list
=MAX(A1:D1)	Max -	Will find the largest number in a list
=MIN(A1:D1)	Min -	Will find the smallest number in a list
=SUM(A1:D1)	Sum -	Will all the numbers in a list
=ROUND(A1:D1)	Round -	Will round up a specific number

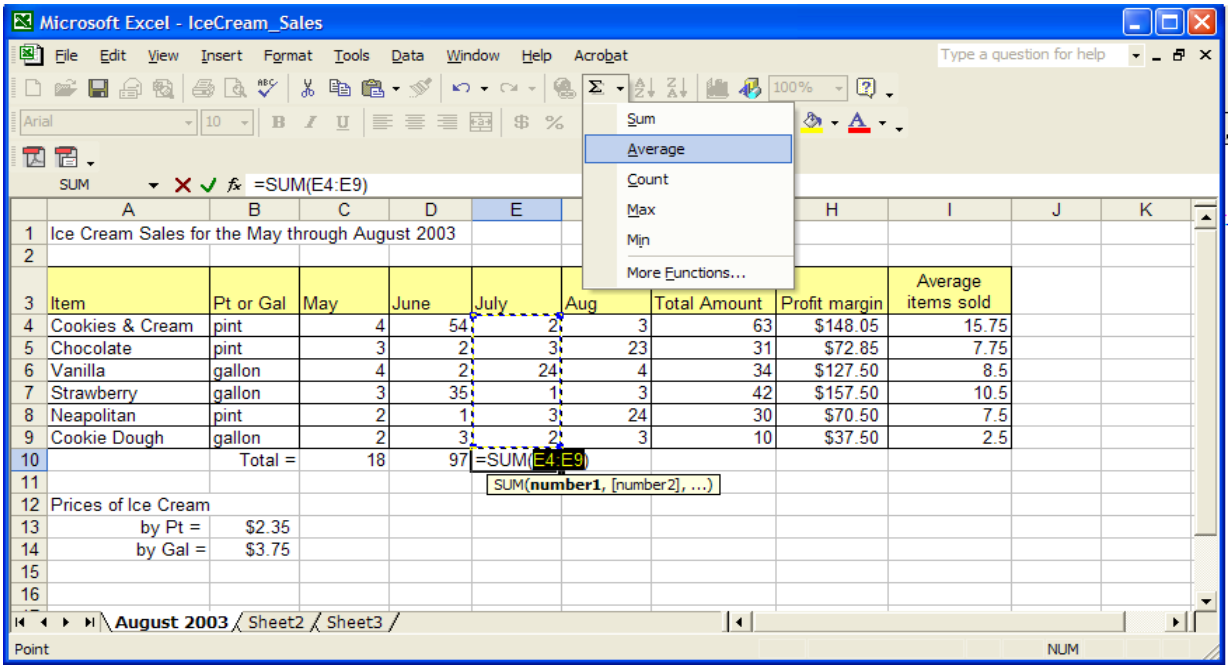
Example of the AVERAGE function



- The function reads as “equal the average of cells C4 through F4 or cells C4, D4, E4, and F4”.

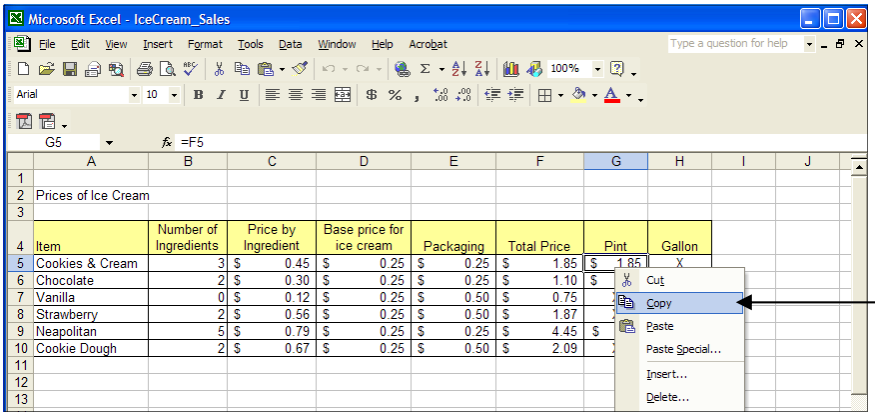
Using the AutoSum icon

- Click under a column of numbers and the AutoSum icon will automatically add the numbers shown above the cell.
- The selected range is a suggestion and can be changed by dragging your mouse through the range that you want and then pressing ENTER.
- There are other functions available (Average, Count, Max and Min). To use these functions, click on the drop down menu next to the AutoSum symbol.



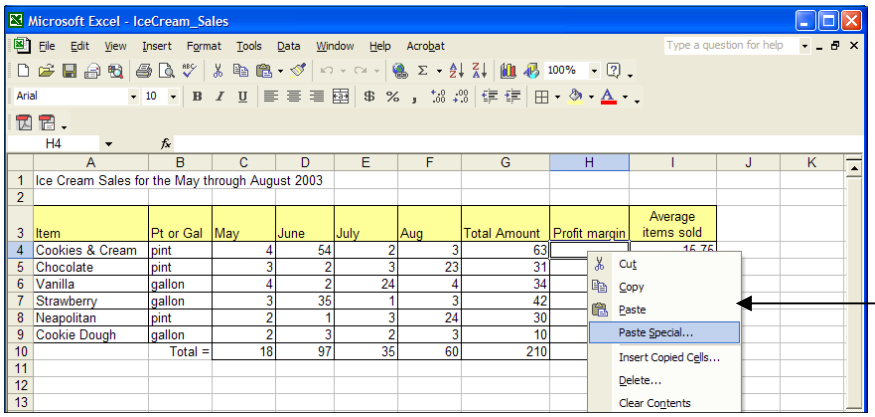
Linking Formulas

- It is possible to use cell references from different worksheets within a workbook.



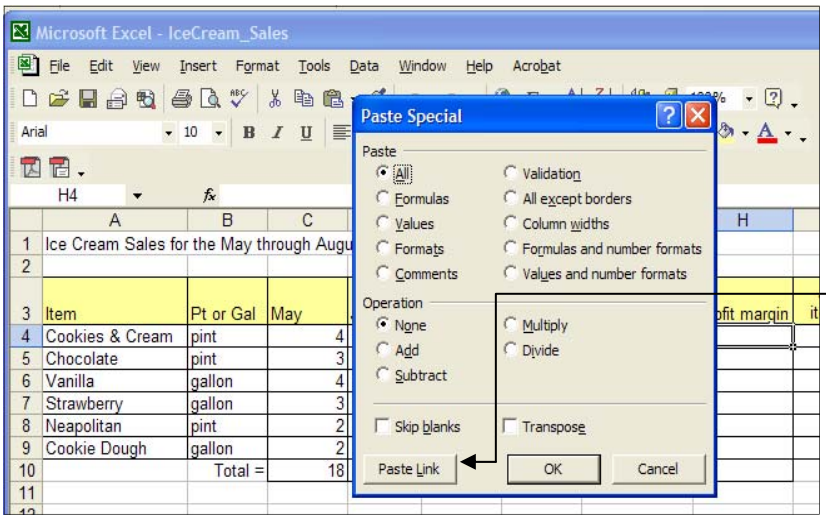
[1] Select the cell reference that contains the formula in the first worksheet

[2] Right click on the cell and choose Copy.



[1] Switch to the second worksheet

[2] Right click on the cell reference that will contain the linked formula and choose Paste Special.



[1] In the Paste Special window, choose Paste Link.

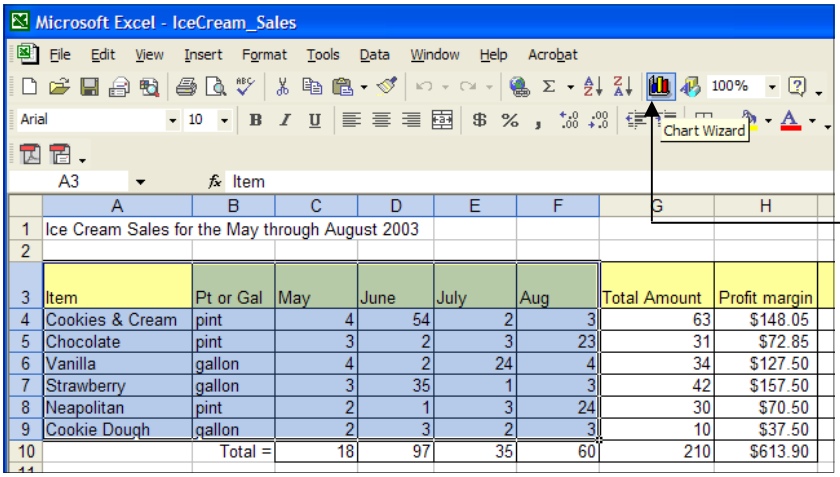
[2] Click OK

[3] The formula will contain the name of the worksheet and its cell reference.

Creating Charts or Graphs

- Charts or graphs will graphically show the data in your worksheet and are available in a variety of different styles (column, pie, bar, area, surface, …).
- If the data is modified in the worksheet, the data displayed in the chart will also be changed.

Using the Chart Wizard

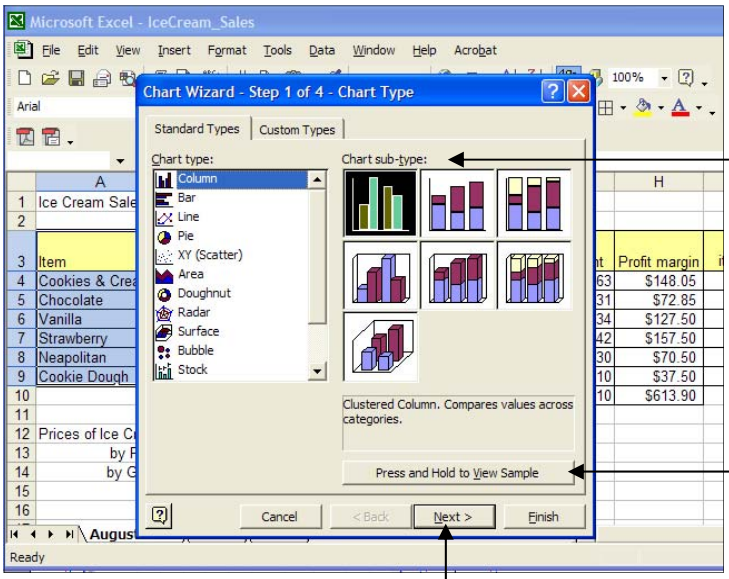


	Item	Pt or Gal	May	June	July	Aug	Total Amount	Profit margin
4	Cookies & Cream	pint	4	54	2	3	63	$148.05
5	Chocolate	pint	3	2	3	23	31	$72.85
6	Vanilla	gallon	4	2	24	4	34	$127.50
7	Strawberry	gallon	3	35	1	3	42	$157.50
8	Neapolitan	pint	2	1	3	24	30	$70.50
9	Cookie Dough	gallon	2	3	2	3	10	$37.50
10		Total =	18	97	35	60	210	$613.90

[1] Click and drag to highlight the data that will be shown in the chart.

[2] On the Standard toolbar, click on the Chart Wizard icon

Step One—Selecting the Chart Type

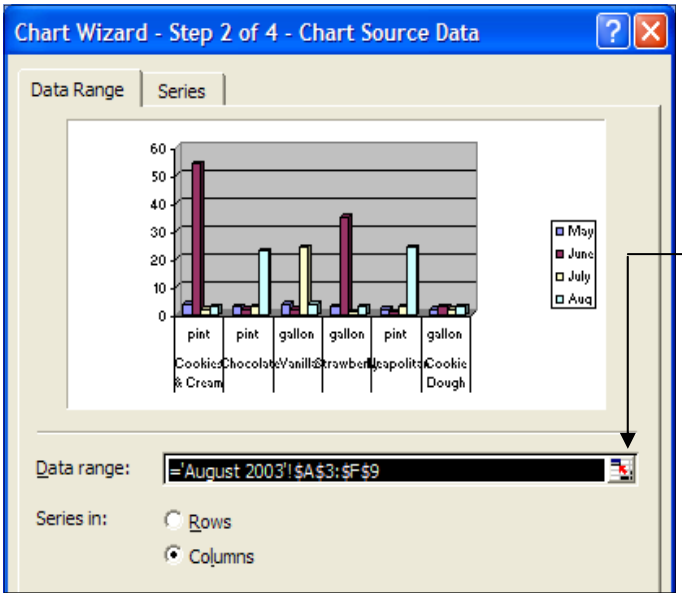


[1] Choose the Chart type and sub-type.

[2] Click on the “Press and Hold to View Sample” button to see your chart.

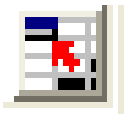
[3] If you are satisfied with its appearance, click Next.

Step Two —Choosing the range of data



[1] Choose the Series (Rows or Columns) for the range of data.

[2] By using the Data Range box, you can change the existing source of the data. Click on the Collapse Dialog button to return to the worksheet and choose another range.



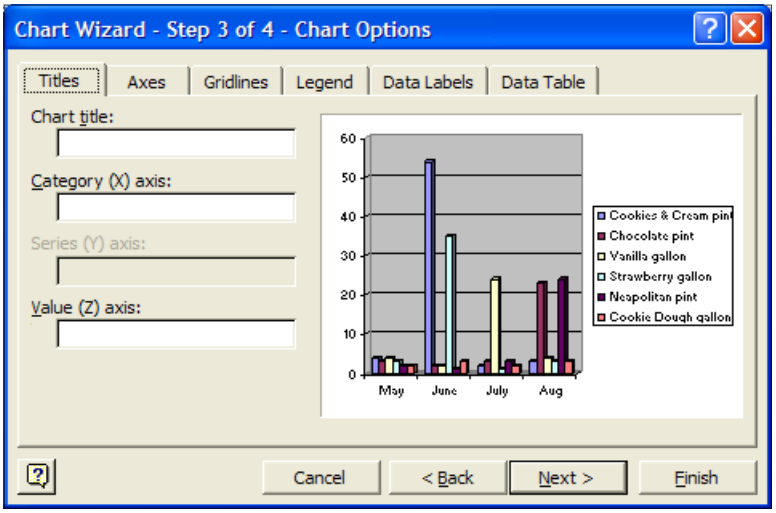
[3] Click Next (not shown)

- What does Series in mean?

  Related data points that are plotted in a chart. Each data series in a chart has a unique color or pattern and is represented in the chart legend. You can plot one or more data series in a chart. Pie charts have only one data series.

Step Three —Dressing up your chart (chart options)

- Customize your chart by adding titles, gridlines, legends, data labels,



Titles ..... Will identify the units of measurement and the data's categories.

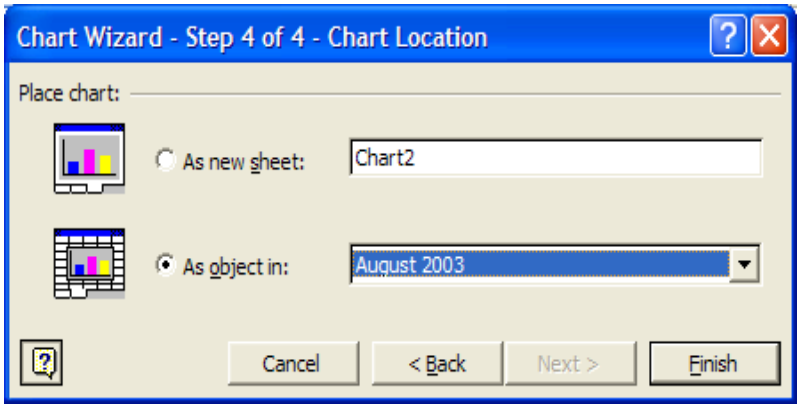
Gridlines ..... Lines that appear behind the graph.

Legend..... A box that contains the colors associated with the data's categories.

Data Labels ..... Series, category names and values that will appear on the data's section of the chart.

Data Table ..... Will show the value for each data series in a grid below the chart. Not available for all chart types.

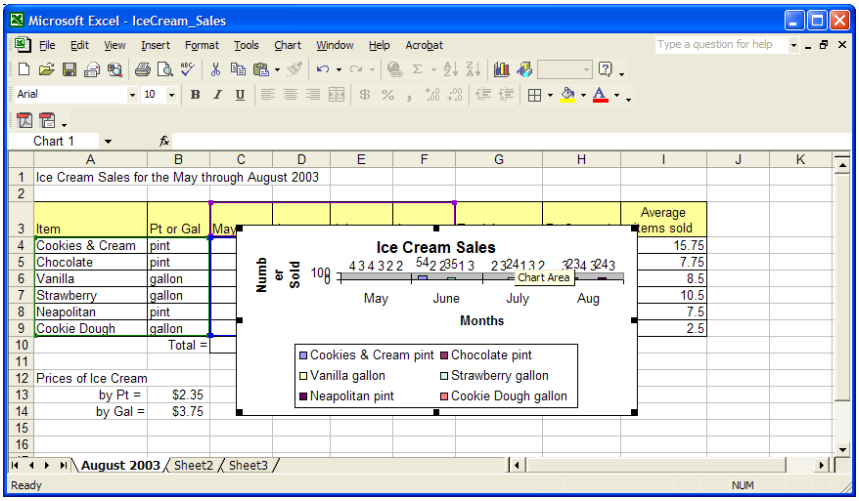
Step Four —Choosing where to put the chart



[1] Choose the where to put the chart.

[2] Click Finish when completed.

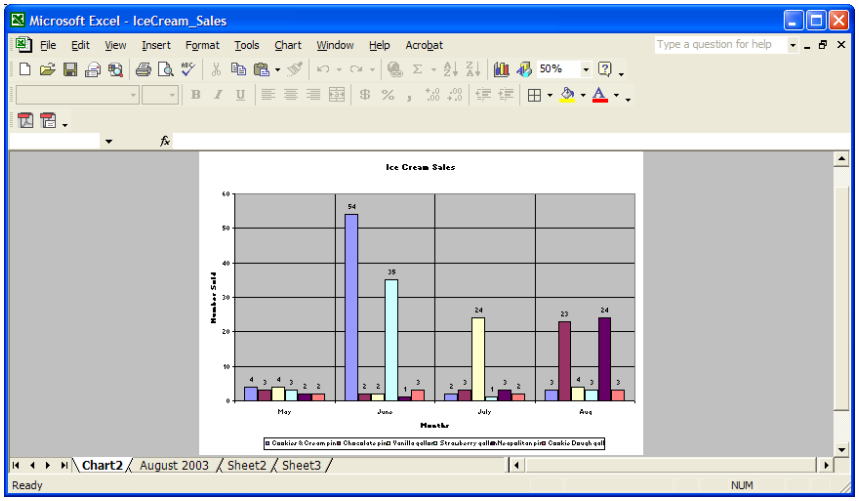
As object in:



[1] The chart will appear on to of the original worksheet.

It will have to be resized and positioned so that it will not cover up the data.

As new sheet:



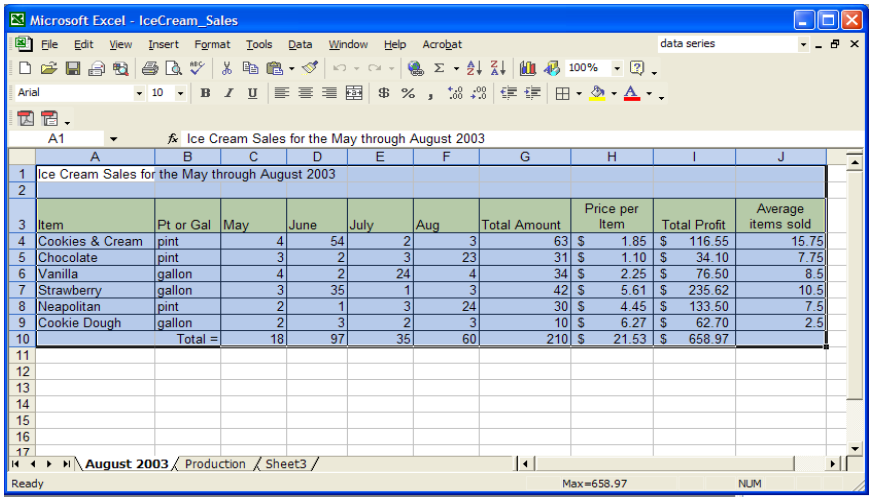
[1] The chart will appear as a new worksheet in the workbook.

It will have to be resized and positioned so that it will not cover up the data.

Copying a worksheet into MS Word

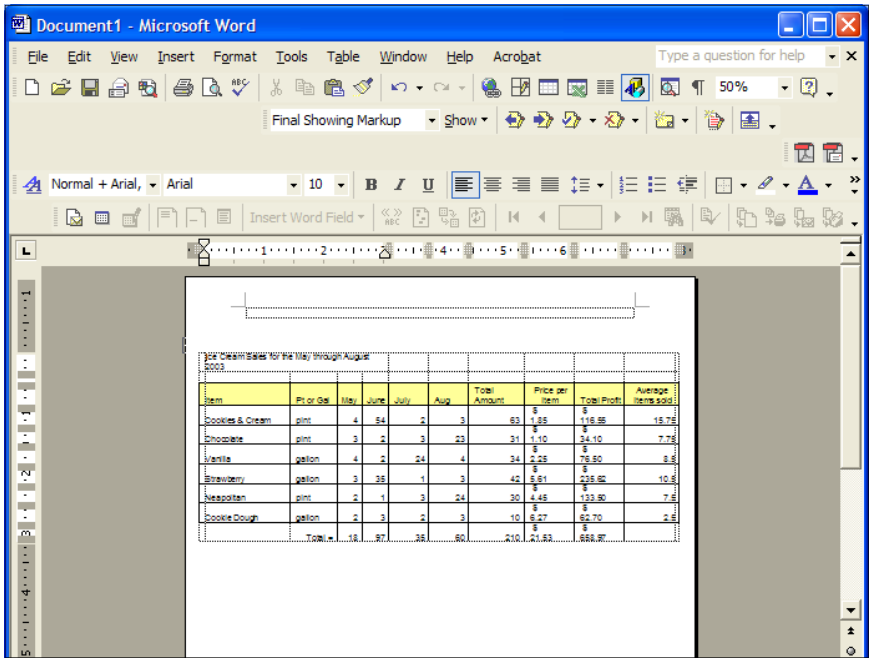
- It is easy to exchange information (images, text, data, charts and graphs, sounds, …) between programs in the MS Office Suite.

A simple copy and paste



[1] Select the area containing your data

[2] Right click on the selection and choose Copy.

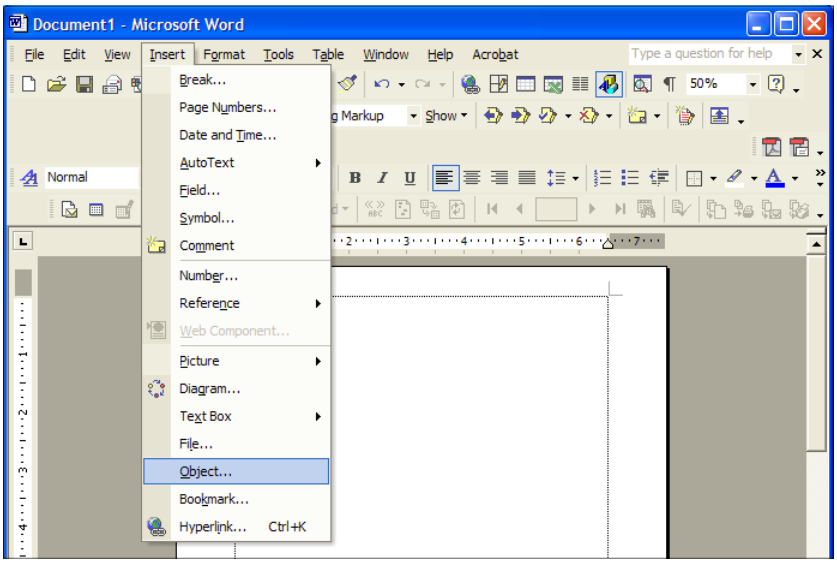


[1] Open MS Word

[2] Right click on the page and choose paste.

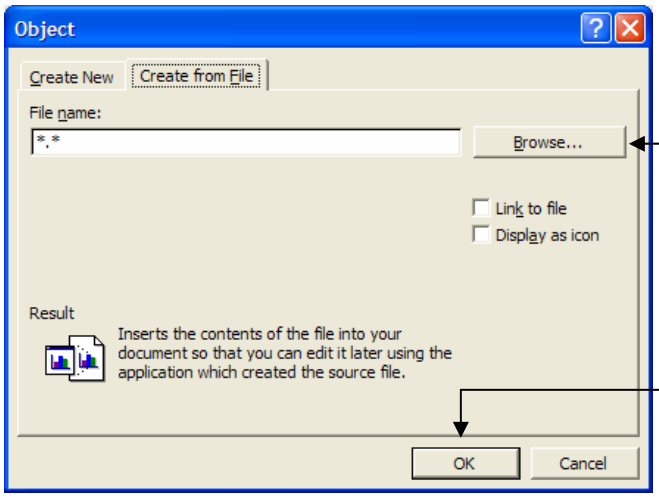
[3] Move and resize the chart, if needed.

Inserting a worksheet



[1] Open MS Word

[2] On the Menu bar, click Insert, Object.



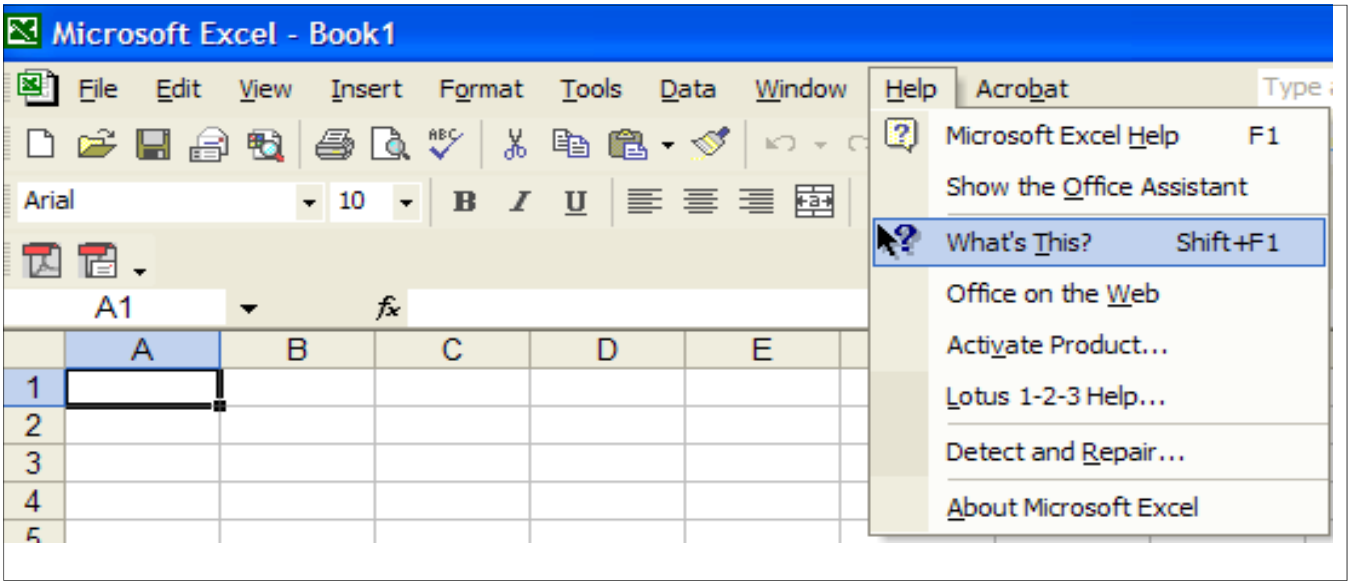
[1] In the Object window, click on the Create from File tab.

[2] Click on the Browse button and find your spreadsheet.

[3] Click OK

- If you choose the Link to File option, the changes made in original worksheet will reflect in the MS Word document.

Use the Help Options to find out more….



Test for Knowledge - MS Excel XP

Create the following in MS Excel XP

Developing Publications	Event Calendars Schedules and Planners
Finance and Accounting	Accounts Receivable Aging Workbook Balance Sheet with Ratios and Working Capital Billing Statement Expense Report Payroll Calculator
Inventory Control	Product Price Lists School Budget according to departments and teachers School Budget listing items purchased and purchase order numbers
Education	Staff paper (music) Multiplication Tables Teacher's Weekly Class Plans Student Attendance Record Hall Pass Log List of Class Period Lengths Weekly Class Schedule Grade book based on averages, percentages, or points.

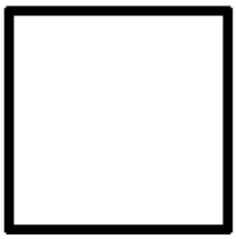
Mini MS Excel XP Quiz

1. Name three ways that you can increase the productivity in your classroom by using MS Excel XP program _____
   _____
   _____

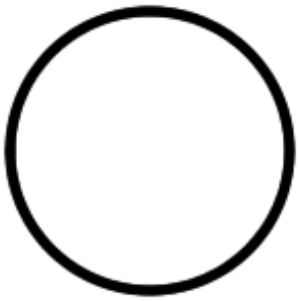
2. Name three ways that you can increase the productivity in your school by using the MS Excel XP program. _____
   _____
   _____
3. What is the difference between bar graphs and column graphs? __
   _____
   _____
   _____
4. What are the steps to inserting a chart into a document? _____
   _____
   _____
5. What are the step to insert a spreadsheet into a document? _____
   _____
   _____
   _____
   _____

Evaluation Form

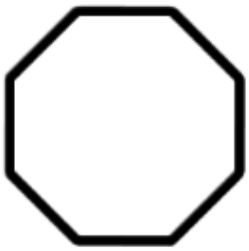
Geometric Reflection and Evaluation



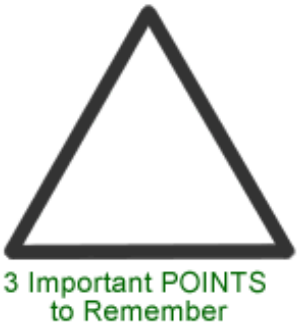
Something I learned that SQUARED with my beliefs.



A question going AROUND in my mind...



STOP!
How do I plan to implement what I have learned?



Please respond to the questions by selecting 1-5, 5 being the highest and 1 being the lowest, below:

The Session Facilitator:

1.Held my interest with relevant examples.	1 2 3 4 5
2.Facilitated activities effectively that reflected a clear grasp of the topic.	1 2 3 4 5
3.Responded effectively to questions.	1 2 3 4 5
4.Delivered content in an appropriate, well-paced manner.	1 2 3 4 5
5.Provided opportunities for active participation.	1 2 3 4 5
6.Provided quality handouts that enhanced my learning experience.	1 2 3 4 5
7.If this activity was TEKS-related, at what LOTI level were most of the activities?	1 2 3 4 5
8.Anything else you would like to share about the workshop today that may not have been addressed previously?	

MS Excel XP Integration

The Microsoft Excel XP program with a myriad of practical purposes for the classroom teacher. The use of word processing in the classroom will give both students and teachers the opportunity to community ideals, validate theories, solve problems, and research people, places, and things. Below are just a few suggestions for content area integration:

Elementary

Language Arts	Learning Strategies; Graphics Tools
Reading	Graphic Tools
Math	Multiplication Tables
Science	Research Papers—Scientific Theories
Social Studies	Research Papers—Timelines

Secondary

Language Arts	Research Papers-Timelines; Historical Trends
Science	Statistical Research; Data Analysis, Probabilities
Social Studies	Research Papers—Historical Trends; Economics
Math	Equations; Probabilities; Patterns, Functions

Technology Application: Texas Essential Knowledge and Skills

§126.11. Technology Applications, Grades 6-8.

TEKS (2) **Foundations.** The student uses data input skills appropriate to the task. The student is expected to:

(A) demonstrate proficiency in the use of a variety of input devices such as mouse/track pad, keyboard, microphone, digital camera, printer, scanner, disk/disc, modem, CD-ROM, or joystick;

(B) demonstrate keyboarding proficiency in technique and posture while building speed;

(C) use digital keyboarding standards for data input such as one space after punctuation, the use of em/en dashes, and smart quotation marks; and

(D) develop strategies for capturing digital files while conserving memory and retaining image quality

TEKS (7) **Solving Problems.** The student uses appropriate computer-based productivity tools to create and modify solutions to problems. The student is expected to:\

(D) demonstrate proficiency in the use of multimedia authoring programs by creating linear or non-linear projects incorporating text, audio, video, and graphics;

(G) integrate two or more productivity tools into a document including, but not limited to, tables, charts and graphs, graphics from paint or draw programs, and mail merge;

TEKS (8) **Solving Problems.** The student uses research skills and electronic communication, with appropriate supervision, to create new knowledge. The student is expected to:

(E) integrate acquired technology applications skills, strategies, and use of the word processor, database, spreadsheet, telecommunications, draw, paint, and utility programs into the foundation and enrichment curricula.

TEKS (10) **Communication.** The student formats digital information for appropriate and effective communication. The student is expected to:

(A) use productivity tools to create effective document files for defined audiences such as slide shows, posters, multimedia presentations, newsletters, brochures, or reports;

(D) demonstrate appropriate use of fonts, styles, and sizes, as well as effective use of graphics and page design to effectively communicate;

TEKS (11) **Communication.** The student delivers the product electronically in a variety of media, with appropriate supervision. The student is expected to:

(A) publish information in a variety of ways including, but not limited to, printed copy, monitor display, Internet documents, and video;

Technology Application: Texas Essential Knowledge and Skills

§126.26. Multimedia (One Credit). High School

(a) General requirements. The prerequisite for this course is proficiency in the knowledge and skills described in §126.12(c) of this title (relating to Technology Applications (Computer Literacy), Grades 6-8). This course is recommended for students in Grades 9-12.

(b) Introduction.

(1) The technology applications curriculum has four strands: foundations, information acquisition, work in solving problems, and communication.

(2) Through the study of technology applications foundations, including technology-related terms, concepts, and data input strategies, students learn to make informed decisions about technologies and their applications. The efficient acquisition of information includes the identification of task requirements; the plan for using search strategies; and the use of technology to access, analyze, and evaluate the acquired information. By using technology as a tool that supports the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create a solution, and evaluate the results. Students communicate information in different formats and to diverse audiences. A variety of technologies will be used. Students will analyze and evaluate the results.

(c) Knowledge and skills.

TEKS (1) **Foundations.** The student demonstrates knowledge and appropriate use of hardware components, software programs, and their connections. The student is expected to:

(A) demonstrate knowledge and appropriate use of operating systems, software applications, and communication and networking components;

(B) analyze demands for accomplishing multimedia tasks to appropriately use input, processing, output, and primary/secondary storage devices;

(C) make decisions regarding the selection, acquisition, and use of software in a multimedia classroom/lab taking under consideration its quality, appropriateness, effectiveness, and efficiency;

(D) delineate and make necessary adjustments regarding compatibility issues including, but not limited to, digital file formats and cross platform connectivity;

(E) use necessary vocabulary related to multimedia;

(F) install and configure appropriate software;

(G) distinguish between and correctly use process color (RGB and CYMK), spot color, and black/ white;

(H) identify color mixing theories and apply these theories to the creation of new colors in the digital format;

(I) identify and distinguish among the basic sound editing principles including the addition of effects and manipulation of the wave form;

(J) identify and use compression schemes for photo, animation, video, and graphics; and

(K) distinguish between and determine the appropriate application of bitmapped and vector graphics into a multimedia project.

TEKS (2) **Foundations.** The student uses data input skills appropriate to the task. The student is expected to:

(A) demonstrate proficiency in the use of a variety of electronic input devices including the mouse, keyboard, scanner, voice/ sound recorder, disk/disc, video, and digital camera by creating files to be used in multimedia products;

(B) use digital keyboarding standards for data input such as one space after punctuation, the use of em/en dashes, and smart quotation marks;

(C) use strategies when digitally capturing files that conserve memory and retain the image integrity; and

(D) differentiate among audio input.

TEKS (3) **Foundations.** The student complies with the laws and examines the issues regarding the use of technology in society. The student is expected to:

(A) discuss copyright laws/issues and model ethical acquisition and use of digital information, citing sources using established methods;

(B) demonstrate proper etiquette and knowledge of acceptable use policies when using networks, especially resources on the Internet and intranet;

(C) model respect of intellectual property when manipulating, morphing, or editing graphics, video, text, and sound; and

(D) provide examples of the role of multimedia in society.

TEKS (4) **Information acquisition.** The student uses a variety of strategies to acquire information from electronic resources, with appropriate supervision. The student is expected to:

(A) use strategies to access research information from different resources, including local area networks (LANs), wide area networks (WANs), the Internet, and intranet; and

(B) apply appropriate electronic search strategies in the acquisition of information including keyword and Boolean search strategies.

TEKS (5) **Information acquisition.** The student acquires electronic information in a variety of formats, with appropriate supervision. The student is expected to:

(A) acquire information in electronic formats including text, audio, video, and graphics, citing the source; and

(B) identify, create, and use available file formats including text, image, video (analog and digital), and audio files.

TEKS (6) **Information acquisition.** The student evaluates the acquired electronic information. The student is expected to:

(A) identify and employ a method to evaluate the design, functionality, and accuracy of the accessed information; and

(B) use fundamental concepts of graphic design including visual composition and lighting when analyzing multimedia.

TEKS (7) **Solving problems.** The student uses appropriate computer-based productivity tools to create and modify solutions to problems. The student is expected to:

(A) use foundation and enrichment curricula in the creation of multimedia products;

(B) elect and integrate computer-based productivity tools, including, but not limited to, word processor, database, spreadsheet, telecommunications, draw, paint, and utility programs to develop and modify solutions to problems and to create new knowledge for multimedia products;

(C) use technology tools to create a knowledge base with a broad perspective;

(D) apply color principles to communicate the mood of the product for the specific audience;

(E) integrate path and cell animation modules appropriately into multimedia products;

(F) use the appropriate scripting language to create a multimedia sequence;

(G) edit files using established design principles including consistency, repetition, alignment, proximity, ratio of text to white space, image file size, color use, font size, type, and style; and

(H) read and use technical documentation.

TEKS (8) **Solving problems.** The student uses research skills and electronic communication, with appropriate supervision, to create new knowledge. The student is expected to:

(A) participate with electronic communities as a learner, initiator, contributor, and teacher/ mentor and use technology to participate in self-directed and practical activities in the larger community and society;

(B) demonstrate proficiency in, appropriate use of, and navigation of LANs, WANs, the Internet, and intranet for research and for sharing of resources;

(C) integrate and use efficiently and effectively a variety of multimedia programs and tools including linear/non-linear authoring tools, image/video editing tools, compression programs, draw/paint/text creation tools;

(D) extend the learning environment beyond the school walls through the creation and linking of multimedia products via electronic networks;

(E) develop technical documentation related to multimedia;

(F) participate in different roles and jobs of a multimedia production crew including project manager, lead programmer, writer, art director, sound engineer, researcher, animator, and presenter;

(G) distinguish among and appropriately integrate 3-D modeling, animation, and rendering software into multimedia products;

(H) import video into the digital format for integration into multimedia products; and

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TEKS (8) **Solving problems**, continued

(I) capture, record, and integrate sampled and Musical Instrument Digital Interface (MIDI) sound in different sound rates, resolutions, and channels.

TEKS (9) **Solving problems.** The student uses technology applications to facilitate evaluation of work, both process and product. The student is expected to:

(A) design and implement procedures to track trends, set timelines, and review/evaluate progress for continual improvement in process and product;

(B) seek and respond to advice from peers and professionals in delineating technological tasks;

(C) create technology specifications for tasks and rubrics to evaluate products and product quality against established criteria; and

(D) resolve information conflicts and validate information by accessing, researching, and comparing data and demonstrate that products and product quality can be evaluated against established criteria.

TEKS (10) **Communication.** The student formats digital information for appropriate and effective communication. The student is expected to:

(A) identify quality in multimedia design such as consistency, alignment, repetition, and proximity;

(B) use content selection and presentation for the defined audience and communication purpose; and

TEKS (10) **Communication**, continued

(C) format the multimedia project according to defined output specifications including target audience and viewing environment

TEKS (11) **Communication.** The student delivers the product electronically in a variety of media, with appropriate supervision. The student is expected to:

(A) publish information in a variety of ways including, but not limited to, printed copy or monitor display; and

(B) publish information in saved files, Internet documents, CD-ROM discs, or video.

TEKS (12) **Communication.** The student uses technology applications to facilitate evaluation of communication, both process and product. The student is expected to:

(A) determine and employ technology specifications to evaluate projects for design, content delivery, purpose, and audience; and

(B) seek and respond to input from peers and professionals in evaluating the product.

Levels of Technology Integration (LOTI)

Level	Category	Description
0	Nonuse	A perceived lack of access to technology-based tools or a lack of time to pursue electronic technology implementation. Existing technology is predominately text-based (e.g., ditto sheets, chalkboard, overhead projector).
1	Awareness	The use of computers is generally one step removed from the classroom teacher (e.g., it occurs in integrated learning system labs (i.e. Jostens, CCC, IDEAL, Plato), special computer-based pull-out programs, computer literacy classes, and central word processing labs). Computer based applications have little or no relevance to the individual teacher's instructional program.
2	Exploration	Technology-based tools serve as a supplement (e.g., tutorials, educational games, simulations) to the existing instructional program. The electronic technology is employed either for extension activities or for enrichment exercises to the instructional program.
3	Infusion	Technology-based tools including databases, spreadsheets, graphing packages, probes, calculators, multimedia applications, desktop publishing, and telecommunications augment selected instructional events (e.g., science kit experiments using spreadsheets or graphs to analyze results, telecommunications activities involving data sharing among schools).
4a	Integration (mechanical)	Technology-based tools are mechanically integrated, providing a rich context for students' understanding of the pertinent concepts, themes, and processes. Heavy reliance is placed on prepackaged materials and sequential charts that aid the teacher in the daily operation of the instructional curriculum. Technology (e.g., multimedia, telecommunications, databases, spreadsheets, word processing) is perceived as a tool to identify and solve authentic problems relating to an overall theme or concept.
4b	Integration (routine)	Teachers can readily create integrated units with little intervention from outside resources. Technology-based tools are easily and routinely integrated, providing a rich context for students' understanding of the pertinent concepts, themes, and processes. Technology (e.g., multimedia, telecommunications, databases, spreadsheets, word processing) is perceived as a tool to identify and solve authentic problems relating to an overall theme/concept.
5	Expansion	Technology access is extended beyond the classroom. Classroom teachers actively elicit technology applications and networking from business enterprises, governmental agencies (e.g., contacting NASA to establish a link to an orbiting space shuttle through the Internet), research institutions, and universities to expand student experiences directed at problem solving, issues resolution, and student activism surrounding a major theme or concept.
6	Refinement	Technology is perceived as a process, product (e.g. invention, patent, new software designed), and tool for students to use in solving authentic problems related to an identified real-world problem or issue. In this context, technology provides a seamless medium for information queries, problem-solving, and product development. Students have read access to and a complete understanding of a vast array of technology-based tools to accomplish any particular task.

MS Excel XP Resources on the Web

http://www.microsoft.com/

http://www.msdn.microsoft.com/office/understanding/excel/

http://office.microsoft.com/home/office.aspx?assetid=FX01085800&CTT=6&Origin=ES790020011033

http://www.microsoft.com/mac/products/excelx/excelx.aspx?pid=excelx

Print Resources

There are a number of valuable books written on the topic of MS Excel XP spreadsheets. Check out new and used bookstores. The print resources for MS Excel XP are vast, skim through the books and find the one that is right for you.

Listservs and Newsgroups

If you have access to Usenet Newsgroups, you might try:

- Microsoft Excel XP Newsgroups
- Yahoo Excel XP Newsgroups

LOTI Resources

http://www.learning-quest.com/LoTI , presented by the National Business Alliance