

Chapter 6

Formatting a Worksheet

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Chapter overview

In this chapter your students will learn how to format worksheets created with Excel. They will learn how to use borders, background colors, column width, alignment, and other cell formats to make the content of cells more readable. In addition, they will learn how to copy and move cells as well as how to delete and insert rows and columns. They will learn when to use absolute references, as well as avoiding making incorrect modifications to values in a worksheet.

Chapter outline

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Technical notes

Your *Practical Office 2003* book includes an action-lacked **multimedia Book-on-CD**. Each page of the Book-on-CD looks exactly like its corresponding page in the printed book and contains interactive elements such as pop-up definitions, interactive animations, and interactive end-of-chapter material. The Book-on-CD is easy to use at home, at school, or at work. For more information on the Book-on-CD, please reference the preface of this book.

The following Materials Needed section is the same for each chapter of *The Practical Office 2003*. This information is repeated in each chapter for your convenience.

Materials needed

Windows 95, 98, Me, 2000, or XP installed on the lab computers. *The Practical Office 2003* Book-on-CD is optimized for use with Windows 95, Windows 98, Windows Me, Windows 2000, and Windows XP. Note that *The Practical Office 2003* Book-on-CD will *not* work acceptably on computers installed with Windows 3.1.

Tracking Disk. You can have students create a Tracking Disk, which records their scores on the Skill Sets, so that you can monitor their progress. When you start a Skill Set, the program checks drive A: for a Tracking Disk. If you want to create a Tracking Disk, insert a formatted floppy disk, then click **Create Tracking File A:\TRACKING.TRK**. You'll be prompted to enter your name, student ID, and section number, all of which will be stored on the Tracking Disk. If you don't want to save your results, just click **Continue without a Tracking Disk**. This option allows you to try a Skill Set review without saving your results. For more information on the Tracking Disk, please reference the preface of this book.

Project Disk. For many of the projects, your students must create a Project Disk, onto which they copy project files and save their completed work. Students create their own Project Disk by inserting a blank, formatted floppy disk in drive A (or the appropriate drive), clicking Project Disk menu option on the Welcome screen of *The Practical Office 2003* CD-ROM, clicking the menu option for the assigned project, and then following the instructions to copy the project file to the blank floppy disk. A second method is to click the Copy It! button on the first page of the project to copy the file for that project to their floppy disk.

You can specify whether students submit the disk for your review, submit their printed completed project, or send you their completed file as an e-mail attachment. For e-mail submission, students will need your e-mail address.

This chapter assumes your students have access to a lab (or home) computer and have previously used a mouse.

Content and Certification. With the increasing presence and use of computers in both school curriculum and the workplace- there is a growing need to evaluate and measure computer skills through a set of certification standards. *Practical Office 2003* integrates computer concepts, Office applications, and Internet concepts making it the perfect solution for your introductory computer needs.



The content of the text and Book-on-CD maps to the certification standards for IC3 (Internet and Computing Core Certification). This certification is a set of 3 exam modules including: Computing Fundamentals, Key Applications, and Living Online.

Even if you don't use IC3 certification, *Practical Office 2003* is a good fit for many other certification standards developed by industry, your state, or your school. For more information on how *Practical Office 2003* can work with your course or for more information on certifications such as IC3 and ICDL, contact your Course Technology Sales Representative, or go to www.course.com.

Instructional notes

Key terms

absolute reference (71): In a worksheet formula, cell references (usually preceded by a \$ symbol) that cannot change as a result of a move or copy operation.

relative reference (70): In a worksheet, cell references that can change if cells change position as a result of a move or copy operation.

scientific notation (68): A number format that converts an extremely large number into an exponent. For example, 9,150,000,000 is equal to 9.15E+09.

Lecture notes

How do I add borders and background colors?

Borders and background colors are used to enhance readability of worksheet data. Discuss with your students the importance of effective worksheet designs. For example, overuse of colors can make the data overly busy and difficult to read. Colorful worksheets might also be difficult to print legibly on black-and-white printers. Similarly, borders should help the reader determine which values go together as data, which are totals, and so forth. In a large worksheet with many values, for example, column and row borders and alternating row colors (yellow and white like a ledger) visually help the reader follow along and see connections between values.

TIP: As an in-class activity, present various examples of effective and ineffective use of colors and borders on worksheets. Ask students to list reasons why each is effective or ineffective. Then have them analyze one ineffective or unformatted worksheet and suggest ways that borders and background colors could be added to make the worksheet more legible and effective. If possible, have them format the worksheet according to their plan.

How do I format worksheet data?

Formatting worksheet data, just like formatting Word documents, is done to increase readability. Remind your students to keep it simple. Overuse of font attributes can be distracting rather than helpful to readers. Discuss with your students when it might be appropriate to apply formats to labels and values. Some reasons include: to distinguish labels for a group of data (such as Income and Expenses), to highlight subtotals and totals (both labels and values), to distinguish negative values from positive ones (red for negative, green for positive), and so forth.

TIP: Remind students that with Excel, they have the flexibility to try different formats and then remove them if the formatting doesn't look like they expected. Demonstrate to students how to apply and then remove an exceptionally difficult-to-read format (for example, yellow, italic, underlined text on a white background).

How do I use the Format Cells dialog box?

Values can be used for many different types of numbers, including currency, dates, and percentages. In addition, within each type of number category, there are different formats, such as commas for a number that has four or more digits, parentheses around negative numbers, number of decimal places displayed, and dates as numbers separated by slashes or spelled out. All these changes can be made using either the number format buttons on the Formatting toolbar or in the Format Cells dialog box. The buttons provide a one-click method for applying the most common formats, whereas the dialog box provides more options.

TIP: As an in-class demonstration, show students how to apply number formatting options in the Format Cells dialog box. Select a cell in a worksheet, click the Format menu, click Cells, click the Number tab in the Format Cells dialog box, select various options, and then click the OK button.

Students may sometimes want to use a number or date format that isn't in the categories list. Point out that they can create the exact number format they want in Excel, using a number format code. For example, they might want to use a special date format. Show them how the number format code is made up of a series of letters and punctuation—for example, mm/d/yyyy—as described in the following table:

Code	Description	Example
m	month as number	1, 10
mm	month as two-digit number	01, 10
mmm	month abbreviated	Jan, Nov
mmmm	month spelled out	January, November
d	day as number	2, 27
dd	day as two-digit number	02, 27
ddd	day of week abbreviated	Sun, Mon
dddd	day of week spelled out	Sunday, Monday
yy	year as two-digit number	02
yyyy	year as four-digit number	2002

TIP: Have students experiment with creating different date formats. Then ask them to see if they can figure out the codes for other numbers, such as #, 0, h, m, s, and so forth.

How do I adjust column and row size?

One thing that makes worksheets look clean and efficient is using an appropriate-sized column. Having a lot of extra space in a column can make the data difficult to read and take up too much space on a printed page. Having too little space can truncate (or cut off) a label or display values as #####. The answer to these problems? Adjust column widths.

TIP: Suggest to your students that they adjust the widths of columns in their worksheets after they have finished entering data and applying formats. This way, they will know exactly how much space they need for each column and won't have to keep readjusting widths.

A quick way to adjust column width is to double-click the vertical line between the column headers. Click to the right of the column you want to adjust. Excel expands or narrows the column to fit the longest entry.

TIP: Point out to your students that row heights can also be adjusted. To change the row height, place the pointer on the horizontal line below the row whose height they want to change, when the pointer changes shape, press and hold the left mouse button while dragging the line up or down.

Show your students an example of how Excel will display the results in **scientific notation** if the result of the formula is too long to fit into a cell. This can be easily fixed by making the column wider.

How do I center and align cell contents?

Because Excel aligns labels and values in cells differently, students can realign data to give their worksheets a more polished look. Adjusting alignments can also make a worksheet easier to read and understand. For example, students are used to values being right-aligned (the Excel default for values and formulas) so they can be added or subtracted easily. Although it makes the most sense for the corresponding labels to also be right-aligned or centered, these are left-aligned by default. The alignment options provide your students the flexibility to select the best placement.

TIP: Point out to your students that the Merge and Center button combines two actions—changing the number of columns included in a cell and changing the alignment. This is very useful for headings and labels that span multiple columns.

What happens when I copy and move cells?

The process for copying and moving the content of cells is virtually the same as copying and moving text in a Word document. Point out to students that this is one of the advantages of learning an Office suite—once they learn how to do a common task in one program, they know how to do it in all programs.

TIP: Remind students to select the upper-left cell in the range where they want to paste. If they try to select the range of cells where they want to paste, and that range is a different composition of cells (four down and three across, rather than three down and four across) Excel will give them an error message. It's much simpler and faster to select only the upper-left cell in the paste range.

One of the most confusing aspects of worksheet operations is the use of **relative references**. Explain that relative references refer to the relative, or comparative, positions of other cells. For example if a relative reference in cell C3 refers to the contents in cell D2, the worksheet understands that the referenced cell is located one column to the right and one row up:

	A	B	C	D
1				
2				500
3			=D2	
4				

If cell C3 is copied to cell C4 the copied formula will be revised so that it still references a cell one row up and one column to the right:

	A	B	C	D
1				
2				500
3			=D2	
4			=D3	

TIP: The DoIt! on page 70 demonstrates how the relative reference in cells change when students copy formulas. The concept of relative references is a bit tricky for some students; therefore, you might want to provide some additional examples.

When should I use absolute references?

Once students have grasped the concept of relative reference, the idea of **absolute references** should be easier for them to understand. Explain that an absolute, or unchanging, reference is used when they do not want formulas automatically adjusted when a cell is copied to a new location. For example, the absolute cell reference =\$D\$2 will reference cell D2, regardless of whether the cell has been moved (if, for example, a row has been inserted before it).

	A	B	C	D
1				
2				500
3			=\$D\$2	
4				

If cell C3 is copied to cell C4, the copied formula will not change and will still contain the reference to cell D2:

	A	B	C	D
1				
2				500
3			=D\$2	
4			=D\$2	

TIP: Students might like some additional examples that require absolute references. Construct a worksheet that calculates discounts based on a value entered in a cell at the top of the sheet. Another easy-to-understand example estimates the future cost of goods (such as bread, milk, and chocolate bars) based on current costs and an inflation rate that is entered in a single cell at the top of the worksheet.

How do I delete and insert rows and columns?

The ability to add and remove rows and columns is necessary as students create and revise worksheets. For example, your students might find that they need to add a new column of data or delete a row of data to an existing worksheet. Unlike a paper grid, in Excel they do this without affecting their existing worksheet. Formulas automatically adjust to accommodate the insertion or deletion. Relative cell references adjust and absolute cell references remain unchanged to keep all calculations accurate.

TIP: Deleted columns are added to the end of the columns without any data. Deleted rows are added to the bottom of the rows without any data.

You might also want to point out the various ways to clear contents of a cell:

1. Click the cell to make it active, and then press the Delete key or the Backspace key.
2. Click a cell to make it active, and then delete its contents in the Formula bar.
3. Right-click the cell, and then click Clear Contents.

TIP: Point out to students that they can also insert or delete a single cell or range of cells. Demonstrate the process for them. Select the range to delete, click Edit, click Delete, specify whether the remaining cells should be shifted to the left or up, and then click the OK button. Select the range where you want to insert cells, click Insert, click Cells, specify whether the existing cells should be shifted to the right or up, and then click the OK button.

Can I use styles and AutoFormats?

Show students the options available in predefined styles. Some styles that have been built into the software include formats for displaying currency, percentages, and general numbers.

TIP: As an in-class demonstration, show students how to easily create their own styles and then modify them if need be.

Discuss the AutoFormat feature, which provides a variety of pre-designed worksheet formats. The main advantage of this feature is that students can quickly format their data with a pleasant design. To use the AutoFormat feature, select the cells you want to format (if you don't want to format the entire worksheet), click Format, click AutoFormat, select the format you want to use, and click the OK button. The Option button enables students to select which elements are included in the format. Mention to students that they can modify the format after they apply it to customize the font, colors, alignment, etc. used in their worksheet.

TIP: As an in-class demonstration, show students how to apply the additional formatting options available in the Format Cells dialog box. Select a cell in a worksheet, click the Format menu, click Cells, click the Font tab in the Format Cells dialog box, select various options, and then click the OK button.

How do I manage multiple worksheets?

A workbook is a collection of worksheets that are grouped together in one file and allows you to navigate from one to the other. A default workbook contains three worksheets. Entering related data into one workbook rather than several different Excel files will help to keep a project organized and will allow for easy referencing.

TIP: As an in-class demonstration, show students how they can add new worksheets by right clicking the tab for the worksheet that should immediately follow the new worksheet. Brainstorm with students to come up with examples of the types of worksheets that you want together to create one complete workbook.

Other options available to the student include renaming the worksheet, changing the tab color, changing the worksheet order, and deleting a worksheet. All of these changes can be easily accomplished by right clicking on the worksheet tab.

Discuss with students the different ways they can reference data from other worksheets. One way is to include the tab name before the row letter and column number or by navigating to the worksheet and clicking on the desired cell while entering a formula or function.

Solutions to QuickChecks

Solutions to QuickCheck **A**

1. T (True)
2. Merge
3. relative
4. absolute
5. =B2*\$D\$6

Solutions to QuickCheck **B**

1. B
2. E
3. H
4. J
5. G