

CHAPTER 8

Visual Aids in Workplace Communication

► REAL PEOPLE *in the workplace*

As an investment banker at Country Commercial Bank, on developing financial plans as well as implementing them. She earned her MBA from Penn State University and currently has a client list of over 450 people with a combined personal valuation of 290 million dollars. Much of Yolanda's time is devoted to

- Developing strategies to pitch to clients
- Preparing financial analyses and documentation
- Working with the sales force of the bank to sell stocks and bonds
- Making presentations to potential customers
- Preparing quarterly summaries for her clients

Yolanda uses spreadsheets and software packages to analyze her clients' finances and to forecast ways in which they can invest their funds. On the basis of her analyses, Yolanda writes letters to her clients, makes oral presentations, and documents her work with written reports. In addition, her job requires frequent communication with her supervisor and subordinates in the form of e-mail messages, memos, and telephone calls.

To ensure her clients' satisfaction and to protect her bank's assets, Yolanda performs market and credit analyses to determine acceptable levels of risk. Because many of her clients are retired individuals, living on fixed incomes and dependent on supplemental income from investments, Yolanda wants to prevent bad trades. As Yolanda says, "Making money for the bank isn't everything to me. My goal is achieving customer satisfaction. In fact, I treat each of my clients just as I would my parents, both of whom are retired. One testament to my success is that my parents are also my customers." ◀



CHAPTER GOALS

When you complete this chapter, you will be able to do the following:

1. Recognize the benefits of visual aids in your workplace communication.
2. Consider the use of color or three-dimensional graphics to enhance workplace communication.
3. Understand the criteria for creating effective tables and figures.
4. Know how to use a variety of visual aids.
5. Evaluate your visual aids with the checklist.

WWW

To learn more about visual aids in workplace communication, visit our Web Companion at <http://www.prenhall.com/gerson>.

Yolanda's Communication Challenge

Yolanda says, "I have to write a proposal to a potential client, Sylvia Light, a retired public health nurse. Sylvia is 68 years old and worked for the Texas Public Health Department for 36 years. She has earned her State of Texas retirement and Social Security benefits. She also has \$315,500 in savings allocated as follows: \$78,000 in an individual retirement account (IRA), \$234,000 in a low-earning certificate of deposit (CD), and \$3,500 in her checking account.

Sylvia contacted me for help organizing a portfolio for a comfortable retirement. I have studied Sylvia's various accounts and considered lifestyle and expenditures. Now, I am ready to write the proposal. In this proposal, I want to show Sylvia how to reallocate funds. Sylvia should keep some ready money available and invest a portion of capital for long-term returns. Currently, too much of her money is tied up in a CD earning 3.1 percent.

Like most people, Sylvia is unfamiliar with financial planning. Though she was an expert in her health field—tuberculosis and AIDS treatment—money matters confuse her. Numbers alone will not explain my vision for money management. My challenge is to communicate complex financial information to Sylvia, a lay person with no financial expertise."

See pages 231–232 to learn how Yolanda met her communication challenge.

THE BENEFITS OF VISUAL AIDS

Although your writing may have no grammatical or mechanical errors and you may present valuable information, you won't communicate effectively if your information is inaccessible. Consider the following paragraph.

According to an article in *Business Week*, WiFi usage worldwide is growing. For example, in the Asia Pacific Rim region, in 2004, 32,937,000 people were WiFi users. This number grew to 55,341,000 in 2005. In 2006, the article said that the number grew to 81,048,000 and then to 168,193,000 in 2009. In Western Europe, in 2004, WiFi users numbered 16,681,000. By 2005, 24,877,000 people were WiFi users. This number grew to 33,546,000 in 2006 and then to 63,746,000 in 2009. Central and Eastern Europe had fewer WiFi users, numbering 2,109,000 in 2004, 3,172,000 in 2005, 4,383,000 in 2006, and 9,875,000 in 2009. Latin American WiFi users were

(Continued)

example

example

similar to those in Europe, with the following numbers: 2,386,000 in 2004, 3,401,000 in 2005, 4,528,000 in 2006, and 8,331,000 in 2009. The lowest number of WiFi users exist in Africa and the Middle East, with only 287,000 in 2004, 664,000 in 2005, 1,096,000 in 2006, and 2,747,000 in 2009. North American WiFi users are second only to Asia and the Pacific Rim. In North America, WiFi users numbered 20,570,000 in 2004, 30,235,000 in 2005, 40,454,000 in 2006, and 74,174,000 in 2009. The total number of WiFi users worldwide were 74,970,000 in 2004, 117,690,000 in 2005, 165,055,000 in 2006, and 327,066,000 in 2009 (“WiFi Gaining Traction”).

If you read the preceding paragraph in its entirety, you are an unusually dedicated reader. Such wall-to-wall words mixed with statistics do not create easily readable writing. The goal of effective workplace communication is accessible information. The example paragraph fails to meet this goal. Readers cannot digest the data easily or see clearly the comparative changes annually from one region of the world to another.

To present large blocks of data or reveal comparisons, you can supplement, if not replace, your text with graphics. In workplace communication, visual aids accomplish several goals. Graphics (whether hand drawn, photographed, or computer generated) will help you achieve conciseness, clarity, and cosmetic appeal.

Conciseness

Visual aids allow you to provide large amounts of information in a small space. Words used to convey data (such as in the example paragraph above) double, triple, or even quadruple the space needed to report information. By using graphics, you can also delete many unnecessary words and phrases.

Clarity

Visual aids can clarify complex information. Graphics help readers see the following:

- **Trends**—Certain trends, such as increasing or decreasing sales figures, are most evident in line graphs.
- **Comparisons between like components**—Comparisons such as actual monthly versus average WiFi usage can be seen in grouped bar charts.
- **Percentages**—Pie charts help readers discern these.
- **Facts and figures**—A table states statistics/numbers more clearly than a wordy paragraph.

Cosmetic Appeal

Visual aids help you break up the monotony of wall-to-wall words. If you only give unbroken text, your reader will tire, lose interest, and overlook key concerns. Graphics help you sustain your reader's interest. Let's face it; readers like to look at pictures. The two types of graphics important for workplace communication are tables and figures. This chapter helps you correctly use both.

COLOR

All graphics look best in color . . . don't they? Not necessarily. Without a doubt, a graphic depicted in vivid colors will attract your reader's attention. However, the colors might not aid communication. For example, using colored graphics could have these drawbacks (Reynolds and Marchetta 5–7):

1. The colors might be distracting (glaring orange, red, and yellow combinations on a bar chart would do more harm than good).
2. Colors that look good today might go out of style in time.
3. Colored graphics increase production costs.
4. Colored graphics consume more disk space and computer memory than black-and-white graphics.
5. The colors you use might not look the same to all readers.

Additional information:
See Chapter 6, “Perfecting Workplace Communication.”

Let's expand on this last point. Just because you see the colors one way does not mean your readers will see them the same. We are talking about what happens to your color graphics when someone reproduces them as black-and-white copies. We are also talking about computer monitor variations. The color on a computer monitor depends on its resolution (the number of pixels displayed) and the monitor's RGB values (how much red, green, and blue light is displayed). Because all monitors do not display these same values, what you see on your monitor will not necessarily be the same as what your reader sees. To solve this problem, test your graphics on several monitors. Also, limit your choices to primary colors instead of the infinite array of other color possibilities. More important, use patterns to distinguish your information so that the color becomes secondary to the design.

THREE-DIMENSIONAL GRAPHICS

Many people are attracted to three-dimensional (3-D) graphics. After all, they have obvious appeal. Three-dimensional graphics are more interesting and vivid than flat, one-dimensional graphics. However, 3-D graphics have drawbacks. A 3-D graphic is visually appealing, but it does not convey information quantifiably. A word of caution: Use 3-D graphics sparingly. Better yet, use the 3-D graphic to create an impression; then include a table to quantify your data.

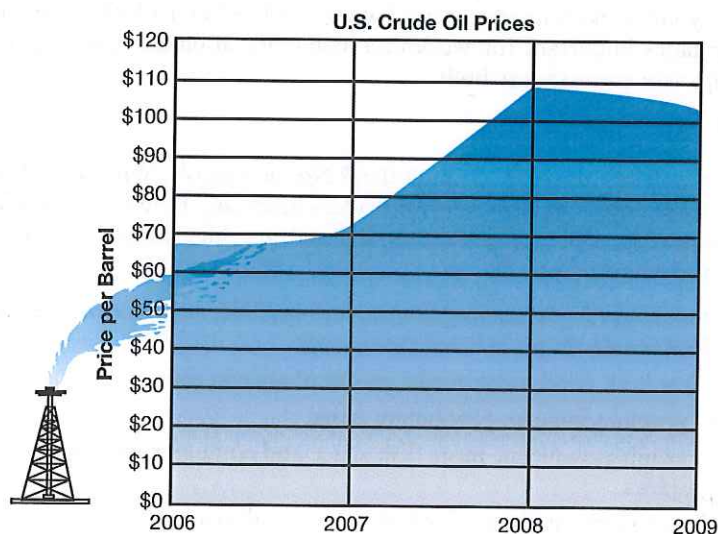
CRITERIA FOR EFFECTIVE GRAPHICS

Figure 8.1 is an example of a cosmetically appealing, clear, and concise graphic. At a glance, the reader can pinpoint the comparative prices per barrel of crude oil between 2005 and 2009. Thus, the line graph is clear and concise. In addition, the writer has included an interesting artistic touch. The oil gushing out of the tower shades parts of the graph to emphasize the dollar amounts. Envision this graph without the shading. Only the lines would exist. The shading provides the right touch of artistry to enhance the information communicated.

The graph shown in Figure 8.1 includes the traits common to effective visual aids. Whether hand drawn or computer generated, successful tables and figures

1. Are integrated with the text (i.e., the graphic complements the text; the text explains the graphic).
2. Are appropriately located (preferably immediately following the text referring to the graphic and not a page or several pages later).
3. Add to the material explained in the text (without being redundant).

FIGURE 8.1 Line Graph with Shading



4. Communicate important information that could not be conveyed easily in a paragraph or longer text.
5. Do not contain details that detract from rather than enhance the information.
6. Are an effective size (not too small or too large).
7. Are neatly printed to be readable.
8. Are correctly labeled (with legends, headings, and titles).
9. Follow the style of other figures or tables in the text.
10. Are well conceived and carefully executed.

TYPES OF GRAPHICS

Graphics can be broken down into two basic types: tables and figures. Tables provide columns and rows of information. You should use a table to make factual information—such as numbers, percentages, and monetary amounts—easily accessible and understandable. Figures, in contrast, are varied and include bar charts, line graphs, photographs, pie charts, schematics, line drawings, and many more.

Tables

Let's tabulate the information about worldwide WiFi usage presented earlier on pages 213–214. Because effective workplace communication integrates text and graphics, you will want to provide an introductory sentence prefacing Table 8.1, as follows: "Table 8.1 shows WiFi usage by regions in the world."

This table has advantages for both the writer and the reader. First, the headings eliminate needless repetition of words, thereby making the text more readable. Second, the audience easily can see the comparison between yearly WiFi usage worldwide. Thus, the table highlights the content's significant differences. Finally, if this information is included in a report, the writer will reference the table in the Table of Contents' List of Illustrations. This creates ease of access for the reader.

Criteria for Effective Tables

To construct tables correctly, do the following:

1. Number tables in order of presentation (i.e., Table 1, Table 2, Table 3, etc.).
2. Title every table. In your writing, refer to the table by its number, not its title. Simply say, "Table 1 shows . . .," "As seen in Table 1," or "The information in Table 1 reveals. . ."
3. Present the table as soon as possible after you have mentioned it in your text. Preferably, place the table on the same page as the appropriate text, not on a subsequent, unrelated page, or in an appendix.
4. Don't present the table until you have mentioned it.
5. Use an introductory sentence or two to lead into the table.

Table 8.1 WiFi Usage by Worldwide Regions
("Wi-Fi Gaining Traction")

	2004	2005	2006	2009
Asia Pacific	32,937,000	55,341,000	81,048,000	168,193,000
Western Europe	16,681,000	24,877,000	33,546,000	63,746,000
Central and Eastern Europe	2,109,000	3,172,000	4,383,000	9,875,000
Latin America	2,386,000	3,401,000	4,528,000	8,331,000
Africa/Middle East	287,000	664,000	1,096,000	2,747,000
North America	20,570,000	30,235,000	40,454,000	74,174,000
Total	74,970,000	117,690,000	165,055,000	327,066,000

6. After you have presented the table, explain its significance. You might write, "Thus, WiFi usage has grown exponentially since 2004. The peak year for WiFi usage by region worldwide is 2009."
7. Write headings for each column. Choose terms that summarize the information in the columns. For example, you could write "Percent (%) of Error," "Length in Ft.," or "Amount in \$."
8. Because the size of columns is determined by the width of the data or headings, you may want to abbreviate terms (as shown in item 7). If you use abbreviations, however, be sure your audience understands your terminology.
9. Center tables between right and left margins. Don't crowd them on the page.
10. Separate columns with ample white space, vertical lines, or dashes.
11. Show that you have omitted information by printing two or three periods or a hyphen or dash in an empty column.
12. Be consistent when using numbers. Use either decimals or numerators and denominators for fractions. You could write $3\frac{1}{4}$ and $3\frac{3}{4}$ or 3.25 and 3.75. If you use decimal points for some numbers but other numbers are whole, include zeroes on the whole numbers. For example, write 9.00 for 9.
13. If you do not conclude a table on one page, write *Continued* in parentheses.

Technology Tips

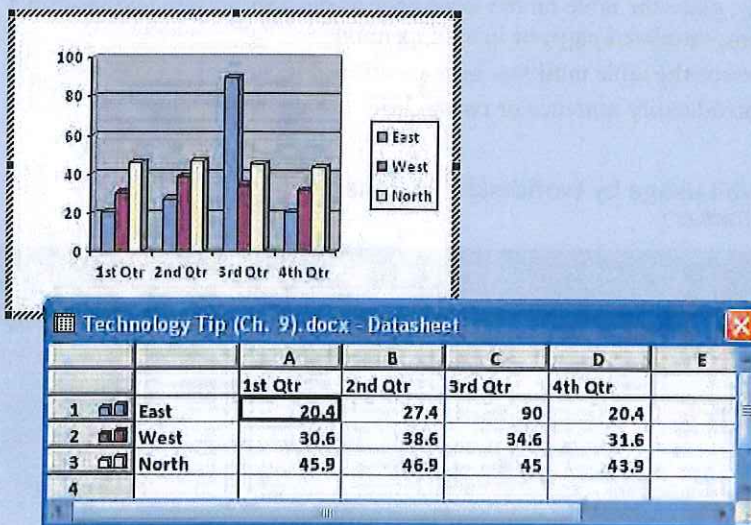
CREATING GRAPHICS IN MICROSOFT WORD 2007 (PIE CHARTS, BAR CHARTS, LINE GRAPHS, ETC.)

You can create customized graphics in Microsoft Word 2007 as follows:

1. Click on "Insert" on the Menu bar.



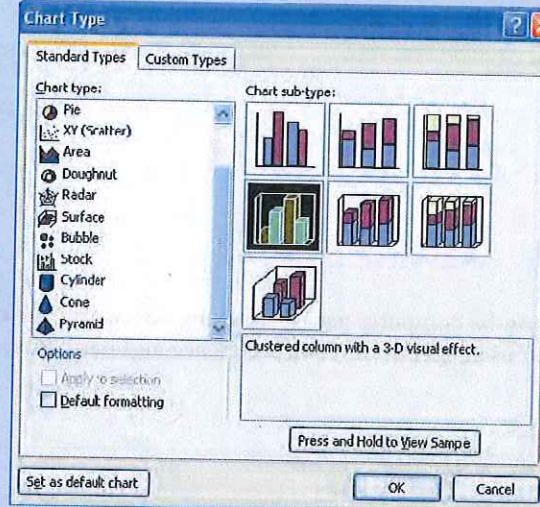
2. Click on "Chart." Word will open a datasheet and bar chart template that you can customize by inserting your own text and numbers.



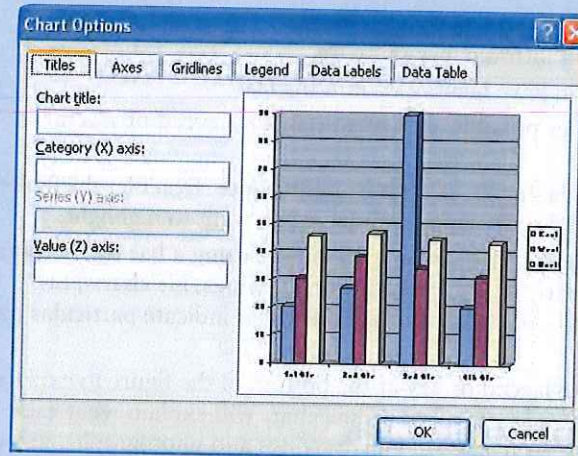
(Continued)

Once you have opened Word's graphic datasheet and template, you can customize the graphic further as follows:

3. Choose the type of graphic you want by clicking on "Chart" on the Menu bar and scrolling to and selecting "Chart Type." The "Chart Type" dialog box displays, allowing you to select a chart type.



4. To add figure numbers, figure titles, legends, gridlines, data labels, and data tables, click on "Chart" and scroll to and select "Chart Options."



Figures

Another way to enhance your workplace communication is to use figures. Whereas tables eliminate needless repetition of words, figures highlight and supplement important points in your writing. Like tables, figures help you communicate with your reader.

Types of figures include the following:

- Bar charts
 - Grouped bar charts
 - 3-D (tower) bar charts
 - Pictographs
 - Gantt charts
 - Pie charts

- Line charts
 - Broken line charts
 - Curved line charts
- Combination charts
- Flowcharts
- Organizational charts
- Line drawings
 - Exploded views
 - Cutaway views
 - Renderings
 - Virtual reality drawings
- Photographs
- Icons
- Internet graphics

All of these types of figures can be computer generated using an assortment of computer programs. The program you use depends on your preference and hardware.

Criteria for Effective Figures

To construct figures correctly, do the following:

1. Number figures in order of presentation (i.e., Figure 1, Figure 2, Figure 3, etc.).
2. Title each figure. When you refer to the figure, use its number rather than its title: for example, "Figure 1 shows the relation between the average price for houses and the actual sales prices."
3. Preface each figure with an introductory sentence.
4. Don't use a figure until you have mentioned it in the text.
5. Present the figure as soon as possible after mentioning it instead of several paragraphs or pages later.
6. After you have presented the figure, explain its significance. Don't let the figure speak for itself. Remind the reader of the important facts you want to highlight.
7. Label the figure's components. For example, if you are using a bar or line chart, label the *x*- and *y*-axes clearly. If you're using line drawings, pie charts, or photographs, use clear *call-outs* (names or numbers that indicate particular parts) to label each component.
8. When necessary, provide a legend or key at the bottom of the figure to explain information. For example, a key in a bar or line chart will explain what each differently colored line or bar means. In line drawings and photographs, you can use numbered call-outs in place of names. If you do so, you will need a legend at the bottom of the figure explaining what each number means.
9. If you abbreviate any labels, define these in a footnote. Place an asterisk (*) or a superscript number (¹, ², ³) after the term and then at the bottom of the figure where you explain your terminology.
10. If you have drawn information from another source, note this at the bottom of the figure.
11. Frame the figure. Center it between the left and right margins or place it in a text box.
12. Size figures appropriately. Don't make them too small or too large.

Bar Charts

Bar charts show either vertical bars (as in Figure 8.2) or horizontal bars (as in Figure 8.3). These bars are scaled to reveal quantities and comparative values. You can shade, color, or crosshatch the bars to emphasize the contrasts. If you do so, include a key explaining what each bar represents, as in Figure 8.3. *Pictographs* (as in Figure 8.4) use picture

FIGURE 8.2 Vertical Bar Chart
WiFi Usage by Worldwide Regions

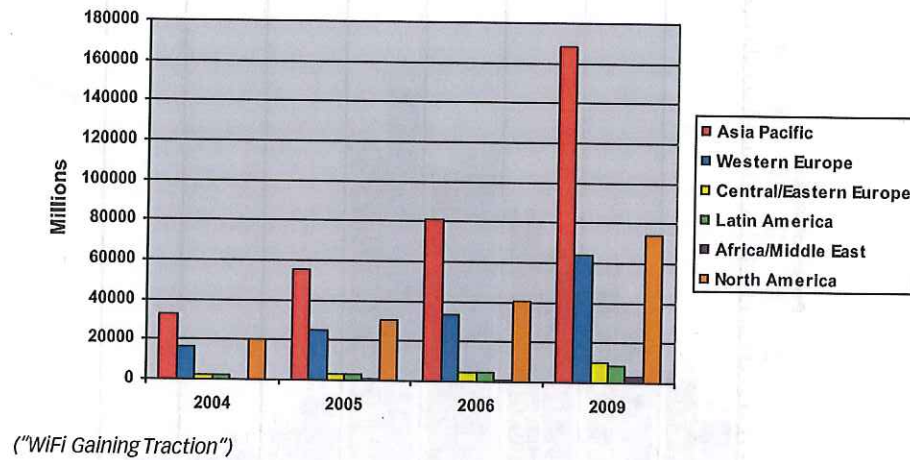
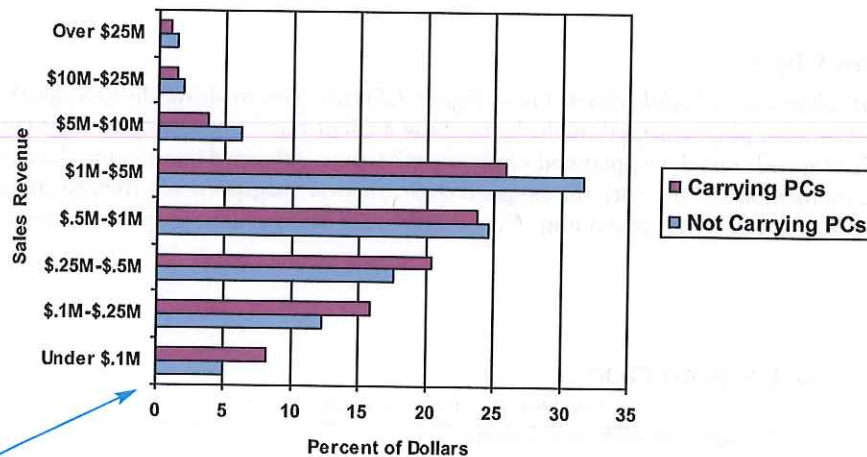


FIGURE 8.3 Horizontal Bar Chart for High-Tech Readers
Comparative Sales Revenue of Office Products Dealers

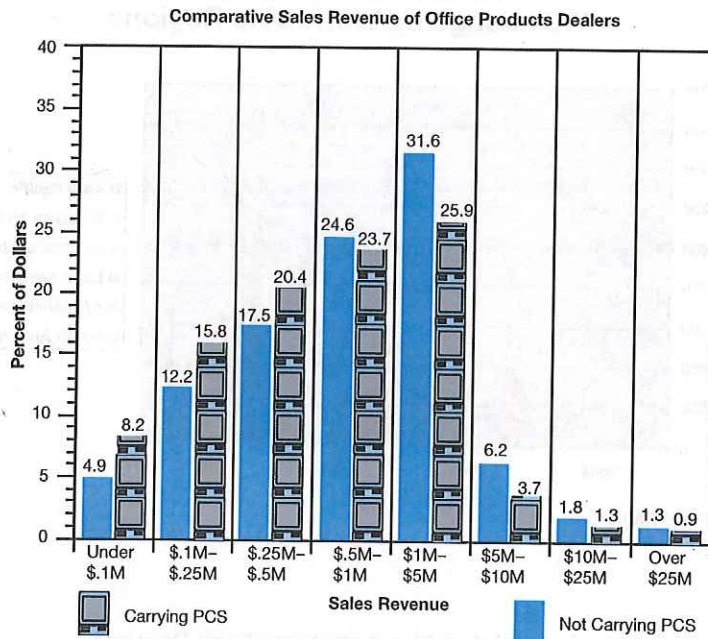


This bar chart, geared toward office supply sales managers, is as factual as the pictograph in Figure 8.4. However, Figure 8.3, which omits the drawings of the PCs, keeps the graphic more businesslike for the intended audience of specialists.

symbols instead of bars to show quantities. To create effective pictographs, keep the following in mind:

1. The picture should be representative of the topic discussed.
2. Each symbol equals a unit of measurement. The size of the units depends on your value selection as noted in the key or on the x- and y-axes.
3. Use more symbols of the same size to indicate a higher quantity; do not use larger symbols.

FIGURE 8.4 Pictograph for Lay Audience

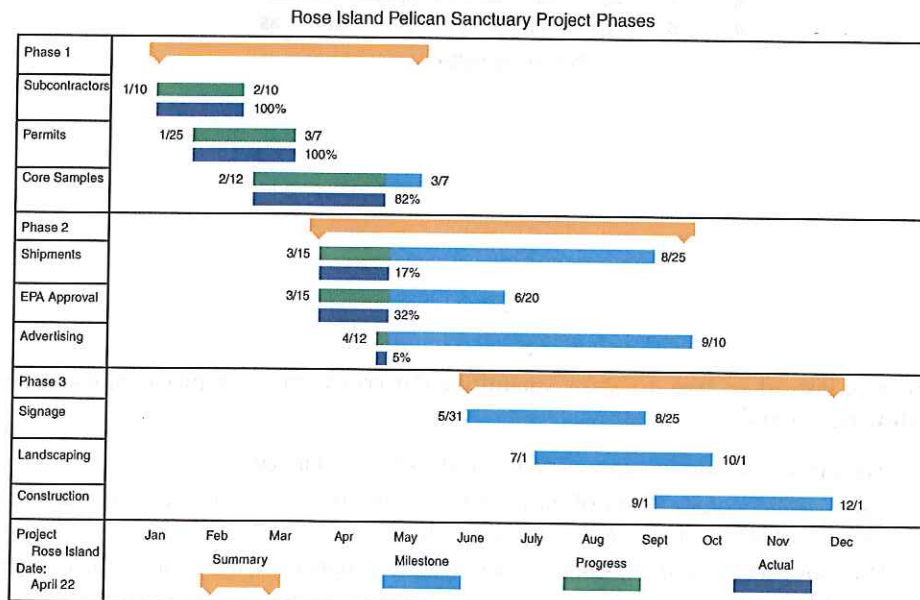


The pictograph is as factual as the bar chart in Figure 8.3. However, since the pictograph is designed for lay readers, it uses symbols of PCs to enhance the visual appeal of this topic. In addition, the PCs make the subject matter more interesting for the audience.

Gantt Charts

Gantt charts, or *schedule charts* (as in Figure 8.5), use bars to show chronological activities. For example, your goal might be to show a client phases of a project. This could include planned start dates, planned reporting milestones, planned completion dates, names of team members along with the assigned duties, actual progress made toward completing the project, and work remaining. Gantt charts are an excellent way to represent these

FIGURE 8.5 Gantt Chart



activities visually. They are often included in proposals to project schedules or in reports to show work completed. To create successful Gantt charts, do the following:

1. Label your x - and y -axes. For example, if the y -axis represents the various activities scheduled, then the x -axis represents time (either days, weeks, months, or years).
2. Provide gridlines (either horizontal or vertical) to help your readers pinpoint the time accurately.
3. Label your bars with exact dates for start or completion.
4. Quantify the percentages of work accomplished and work remaining.
5. Provide a legend or key to differentiate between planned activities and actual progress.

Pie Charts

Use pie charts (as in Figure 8.6) to illustrate portions of a whole. The pie chart represents information as pie-shaped parts of a circle. The entire circle equals 100 percent or 360 degrees. The pie pieces (the wedges) show the various divisions of the whole.

To create effective pie charts, do the following:

1. Be sure that the complete circle equals 100 percent or 360 degrees.
2. Begin spacing wedges at the 12 o'clock position.
3. Use shading, color, or crosshatching to emphasize wedge distributions.
4. Use horizontal writing to label wedges.
5. If you don't have enough room for a label within each wedge, provide a key defining what each shade, color, or crosshatching symbolizes.
6. Provide percentages for wedges when possible.
7. Do not use too many wedges—this would crowd the chart and confuse readers.
8. Make sure that different sizes of wedges are fairly large and dramatic.

Line Charts

Line charts reveal relationships between sets of numbers. To make a line chart, plot sets of numbers and connect the sets with lines. These lines create a picture showing the upward and downward movement of quantities. Line charts of more than one line (see Figure 8.7) are useful in showing comparisons between two sets of values. However, avoid creating line charts with too many lines, as these will confuse your readers.

FIGURE 8.6 Pie Chart

WiFi Usage in North America (in Millions)

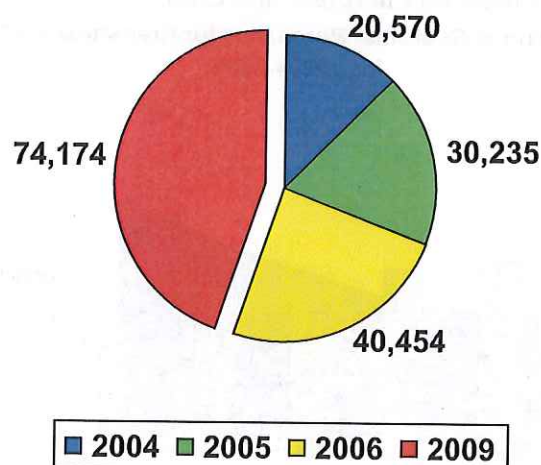
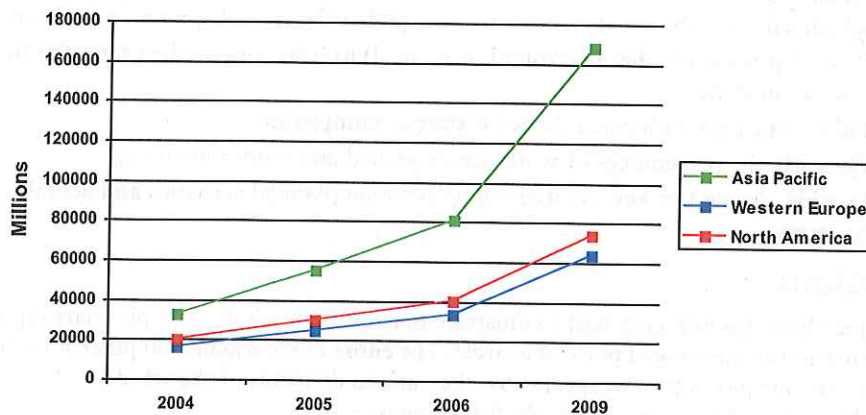


FIGURE 8.7 Line Chart

WiFi Usage by Worldwide Regions



Combination Charts

A combination chart reveals relationships between two sets of figures. To do so, it uses a combination of figure styles, such as a bar chart and a line chart (as shown in Figure 8.8). The value of a combination chart is that it adds interest and distinguishes the two sets of figures by depicting them differently.

Flowcharts

You can show the chronological sequence of activities using a flowchart. Flowcharts are especially useful for writing technical instructions. When using a flowchart, remember that ovals represent starts and stops, rectangles represent steps, and diamonds equal decisions (see Figure 8.9).

Organizational Charts

Organizational charts (as in Figure 8.10) show the chain of command in an organization. You can use boxes around the information or use white space to distinguish among levels

FIGURE 8.8 Combination Chart (Bar and Line)

Comparison of Customer Purchases for Krenshaw & Bailey, Inc., 2004-2009

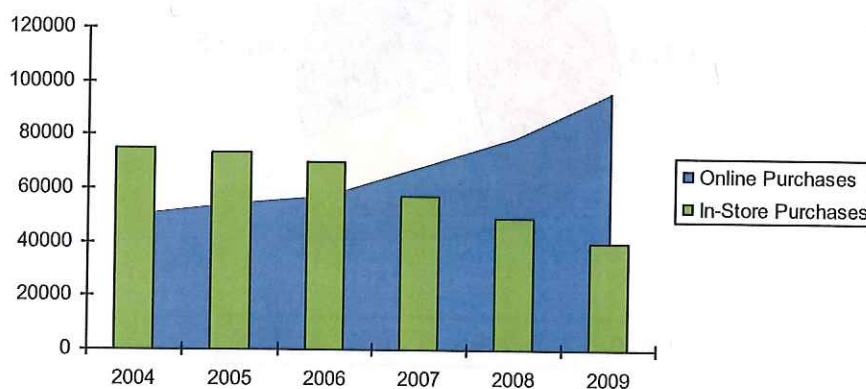
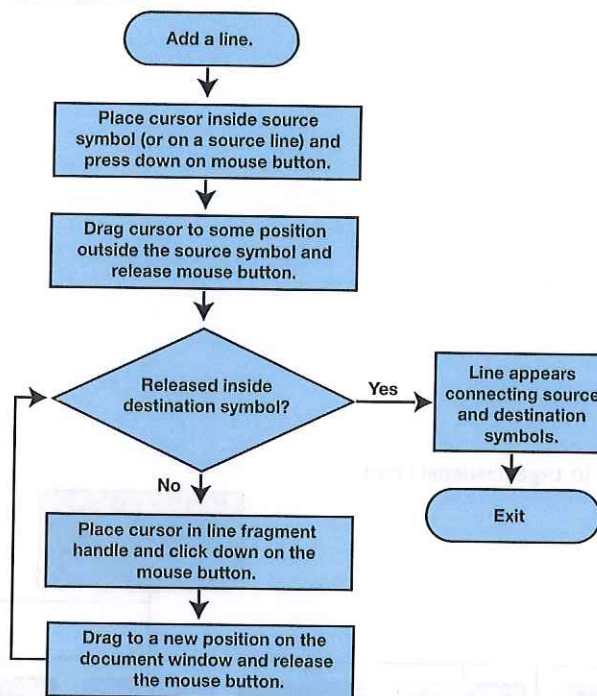


FIGURE 8.9 Flowchart



in the chart. An organizational chart helps your readers see where individuals work within a business and their relation to other workers.

Line Drawings

Use line drawings to show the important parts of a mechanism or to enhance your text cosmetically. To create line drawings, do the following:

1. Maintain correct proportions in relation to each part of the object drawn.
2. If a sequence of drawings illustrates steps in a process, place the drawings in left-to-right or top-to-bottom order.
3. Using call-outs to name parts, label the components of the object drawn (see Figure 8.11).
4. If there are numerous components, use a letter or number to refer to each part. Then reference this letter or number in a key (see Figure 8.12).
5. Use exploded views (Figure 8.12) or cutaways (Figures 8.13) to highlight a particular part of the drawing.

Renderings and Virtual Reality Drawings

Two different types of line drawings are renderings and virtual reality views. Both offer 3-D representations of buildings, sites, or things. Often used in the architectural/engineering industry, these 3-D drawings (as shown in Figures 8.14 and 8.15) help clients get a visual idea of what services your company can provide. Renderings and virtual reality drawings add lighting, materials, and shadow and reflection mapping to mimic the real world and allow customers to see what a building or site will look like in a photorealistic setting.

Photographs

A photograph can illustrate your text effectively. Like a line drawing, a photograph can show the components of a mechanism. If you use a photo for this purpose, you will need to label (name), number, or letter parts and provide a key. Photographs are excellent visual

FIGURE 8.10 Organizational Chart

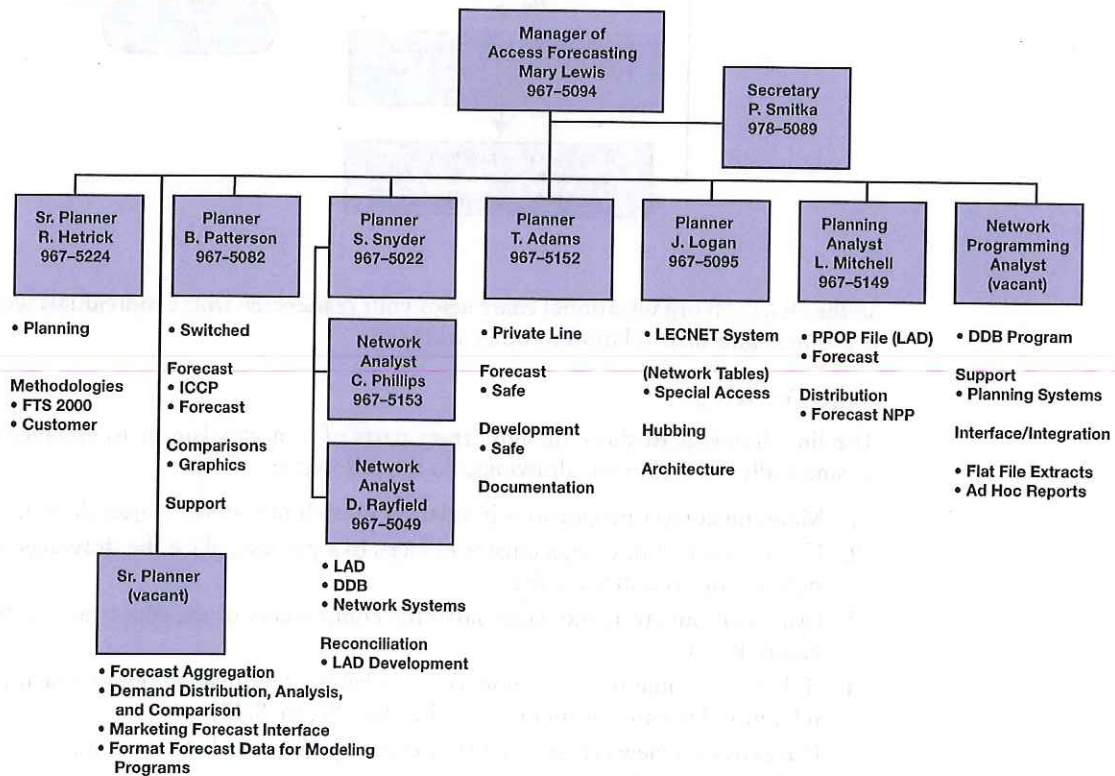
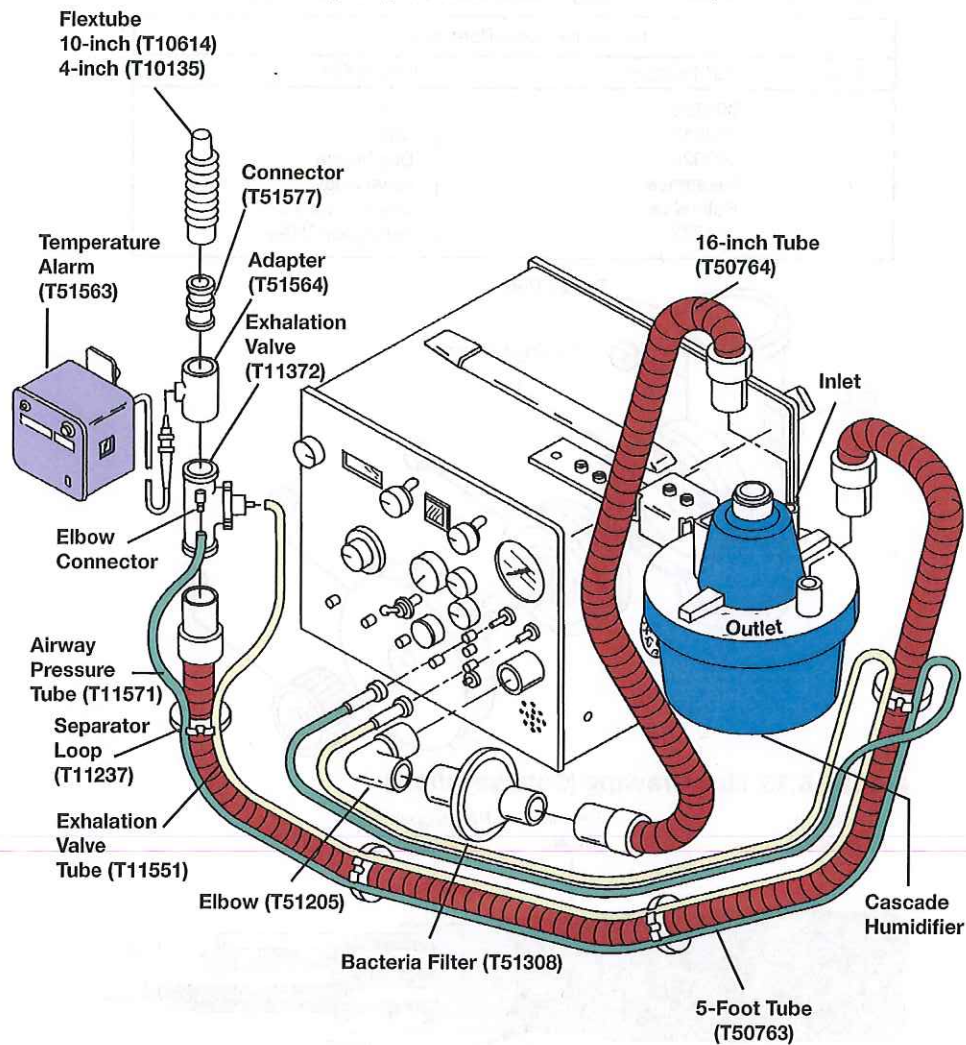


FIGURE 8.11 Line Drawing (Exploded View with Callouts)



aids because they emphasize all parts equally. Their primary advantage is that they show something as it truly is.

Photographs have one disadvantage, however. They are difficult to reproduce. Whereas line drawings photocopy well, photographs do not. See Figure 8.16.

Icons

Approximately 23 percent of America's population is functionally illiterate. In today's global economy, consumers speak diverse languages. Given these two facts, how can workplace writers communicate to people who cannot read and to people who speak different languages? Icons offer one solution. Icons (as in Figures 8.17 to 8.20) are visual representations of a capability, a danger, a direction, an acceptable behavior, or an unacceptable behavior.

For example, the computer industry uses icons—open manila folders—to represent computer files. In manuals, a jagged lightning stroke iconically represents the danger of electrocution. On streets, an arrow represents the direction we should travel; on computers, the arrow shows us which direction to scroll. Universally depicted stick figures of men and women greet us on restroom doors to show us which rooms we can enter and which rooms we must avoid.

FIGURE 8.12 Line Drawing (Exploded View with Key)

Exhalation Valve Parts List		
Item	Part Number	Description
1	000723	Nut
2	003248	Cap
3	T50924	Diaphragm
4	Reference	Valve Body
5	Reference	Elbow Connector
—	T11372	Exhalation Valve

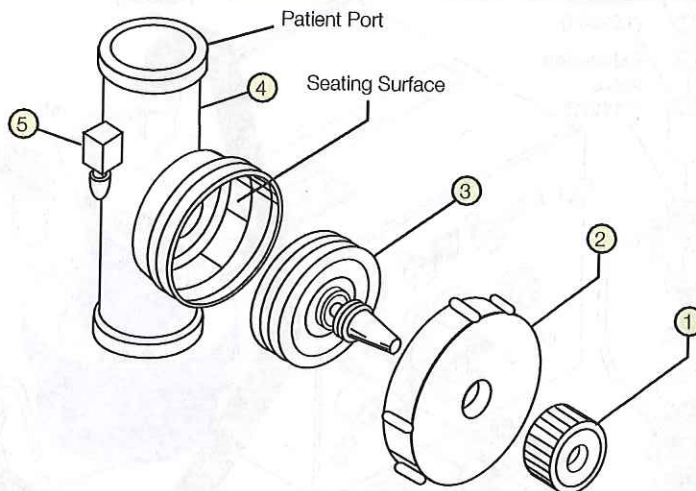


FIGURE 8.13 Line Drawing (Cutaway View)

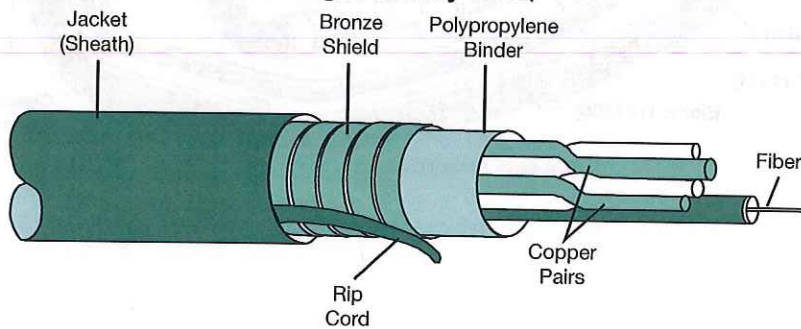
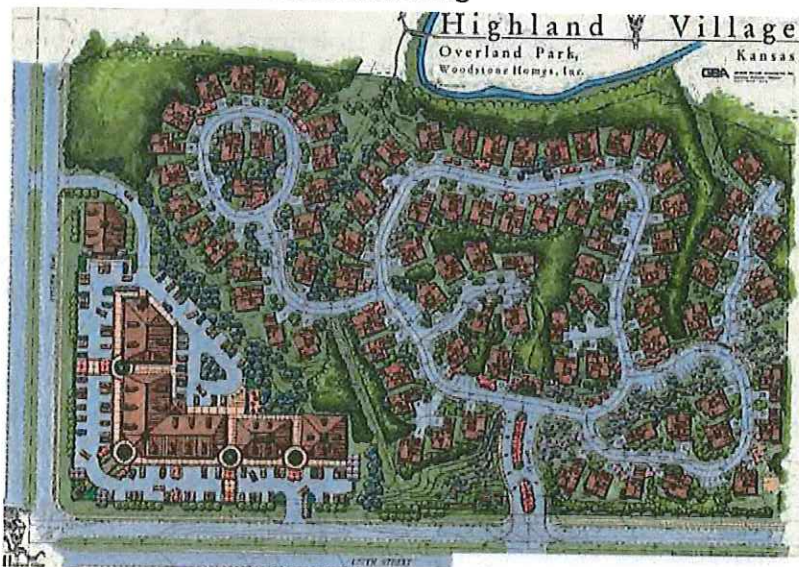


FIGURE 8.14 Architectural Rendering



(Courtesy of George Butler Associates)

FIGURE 8.15 3-D Drawing (Virtual Reality)



(Courtesy of Johnson County Community College)

When used correctly, icons can save space, communicate rapidly, and help readers with language problems understand the writer's intent.

To create effective icons, follow these suggestions:

1. **Keep it simple**—You should try to communicate a single idea. Icons are not appropriate for long discourse.
2. **Create a realistic image**—This could be accomplished by representing the idea as a photograph, drawing, caricature, outline, or silhouette.
3. **Make the image recognizable**—A top view of a cell phone or computer terminal is confusing. A side view of a playing card is completely unrecognizable. Select the view of the object that best communicates your intent.
4. **Avoid cultural and gender stereotyping**—For example, if you are drawing a hand, you should avoid showing any skin color, and you should stylize the hand so it is neither clearly male nor female.
5. **Strive for universality**—Stick figures of men and women are recognizable worldwide. In contrast, letters—such as *P* for *parking*—will mean very little in China, Africa, or Europe. Even colors can cause trouble. In North America, red represents danger, but red is a joyous color in China. Yellow calls for caution in North America, but this color equals happiness and prosperity in the Arab culture (Horton 682–93).

Download Existing Online Graphics

The Internet contains thousands of Web sites that contain graphics, including photographs, line drawings, cartoons, icons, animated images, arrows, buttons, horizontal lines, balls, letters, bullets, hazard signs, and more. You can download images from any Web site.

To download graphics, place the cursor on the graphic and right-click on the mouse. A pop-up menu will appear. Either click on “Copy” or click on “Save Picture.” You can save your image in the file of your choice. The images from the Internet will already be GIF (graphics interchange format) or JPEG (joint photographic experts group) files.

However, when downloading images, you must abide by copyright laws and ethical considerations. “Every element of a Web page—text, graphics, and HTML code—is protected by U.S. and International copyright laws, whether or not a formal copyright application has been submitted” (LeVie 20–21). If you and your company “borrow” from an

FIGURE 8.16 Photograph of Mechanical Piping



(Courtesy of George Butler Associates)

FIGURE 8.17 An Icon of Explosives

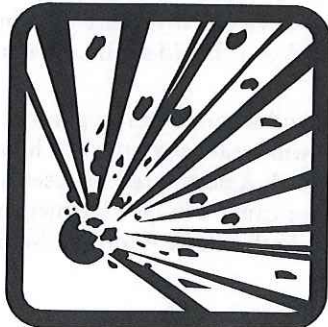


FIGURE 8.18 An Icon of Dangerous Machinery

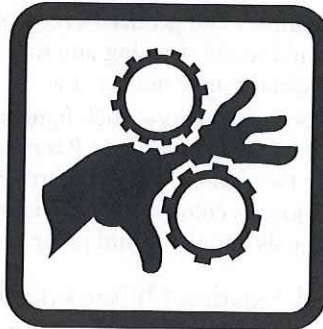


FIGURE 8.19 An Icon of Electric Shock



FIGURE 8.20 An Icon of Corrosive Material



existing Internet site, thus infringing upon that site's copyright, you can be assessed actual or statutory damages. To meet ethical considerations,

- assume that any information on the Internet is covered under copyright protection laws unless proven otherwise.
- obtain permission for use from the original creator of graphics or text.
- copyright any information you create.
- include a copyright notice
- modify existing images.
- create your own graphics and text (Johnson 17).

Can you ethically make changes to a graphic taken from your own company's archives or from boilerplate documents? Do these graphics need a source citation? If your company owns these images, you can modify them and use the changed graphics without citing the source. See figures 8.21 and 8.22 for examples of original and modified photographs taken from a company's archives.

Modifying or Creating New Graphics

To modify graphics, you can download them in two ways. First, you can print the screen by pressing the Print Screen key (usually found on the upper right of your keyboard). This captures the entire screen image in a clipboard. Then you can open a graphics program and paste the captured image.

FIGURE 8.21 Original Photograph with Two Men and Pipe



This photograph includes two men working on a pipe. Note the writing on the pipe.

FIGURE 8.22 Modified Photograph (with the two men and PLO5 removed)



In this computer-altered photograph, the two men and the writing have been digitally erased.

(Courtesy of George Butler Associates)

Second, you can save the image in a file and then open the graphic in a graphics package. Most graphics programs will allow you to customize a graphic. Popular programs include Paint, Paint Shop Pro, PhotoShop, Corel Draw, and Adobe Illustrator. In these graphics programs, you can manipulate the images by changing colors, adding text, reversing the images, cropping, resizing, redimensioning, rotating, retouching, deleting or erasing parts of the images, overlaying multiple images, joining multiple images, and so forth.

Another option is to create your own graphic. If you are artistic, draw your graphic in a graphics program. This option might be more challenging and time consuming. However, creating your own graphic gives you more control over the finished product, provides a graphic precisely suited to your company's needs, and helps avoid infringement of copyright laws.

VISUAL AID CHECKLIST

- | | |
|---|--|
| <p>_____ 1. Will a visual aid add to your workplace communication and make the document concise, make it clear, and add cosmetic appeal?</p> <p>_____ 2. Should you use color or three-dimensional graphics in your visual aids?</p> <p>_____ 3. Have you considered the following criteria when you created your tables or figures:</p> <p style="margin-left: 20px;">a. Are visuals integrated with the text?</p> <p style="margin-left: 20px;">b. Do the visuals add to the text and enhance it without being redundant?</p> | <p style="margin-left: 40px;">c. Do they communicate information visually that could not easily be conveyed in text?</p> <p style="margin-left: 40px;">d. Are the visuals the correct size, labeled, readable, and similar in style?</p> <p>_____ 4. Did you use a table when you presented factual information, such as numbers, percentages, or monetary amounts?</p> <p>_____ 5. Have you used a figure to highlight and supplement important points in your writing?</p> |
|---|--|

Yolanda Met Her Challenge

To meet her communication challenge, Yolanda used the *P³* process.

Planning

To plan her proposal, Yolanda first considered the following:

- Goal—document financial information and recommend actions to be taken by clients
- Audience—specialists (bank employees) and lay reader (client, Sylvia Light)
- Channels—financial proposal to be reviewed by both the client and the bank
- Data—specific client financial information, including assets



"To help plan my client's investments, I asked Sylvia to fill in a questionnaire about needs and assets. Then, I met with Sylvia at her home to review the questionnaire and answer Sylvia's concerns. I made a list of how best to allocate her assets," says Yolanda. Figure 8.23 shows Yolanda's list for planning Sylvia's asset allocations.

Packaging

Next, Yolanda had to decide how to present her information to Sylvia. Yolanda wrote the following rough draft of the asset allocation in paragraph form (Figure 8.24):

Perfecting

Yolanda met her communication challenge by revising her rough draft. Yolanda says, "I knew that raw numbers and lots of words would not communicate clearly to my customer. When I propose investment plans, it's just too hard for most people to visualize where their money will be located. To solve this problem, I created a pie chart for Sylvia. I also emphasized where I planned to invest the largest percentage of her money (annuity allocations) by pulling a wedge apart from the pie. Finally, I made sure that I quantified the allocations by providing the percentages and using a legend to identify each wedge. A picture really is worth a thousand words!" Figure 8.25 shows Yolanda's perfected pie chart of asset allocation.

FIGURE 8.23 Planning List of Asset Allocations

Sylvia could reallocate funds as follows:

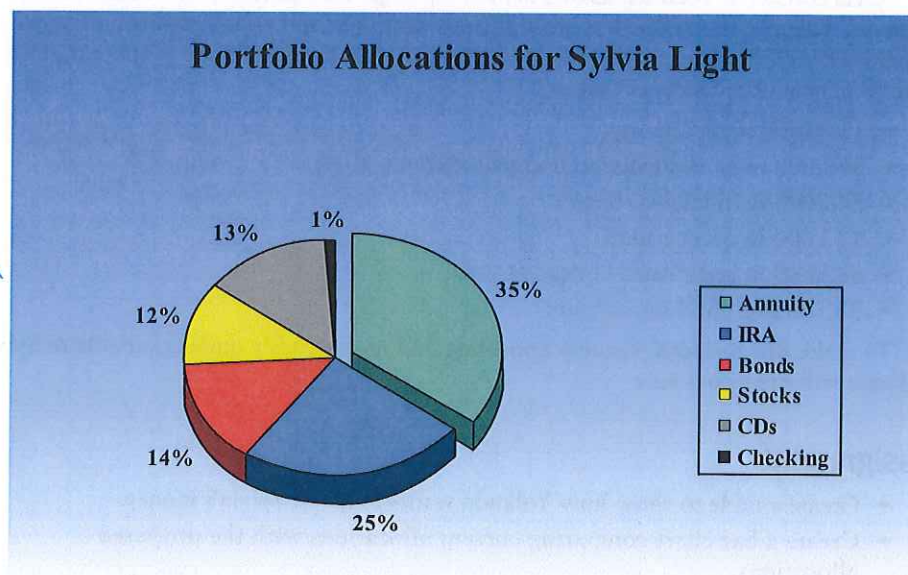
- \$110,000 in an annuity
- \$78,000 in an individual retirement account (IRA)
- \$45,000 in municipal bonds
- \$37,000 in a stock fund
- \$42,000 in certificates of deposit (CD)
- \$3,500 in a checking account

FIGURE 8.24 Rough Draft of Asset Allocation

"Sylvia, after reviewing your financial situation and considering your lifestyle, you should consider reallocating your assets in the following way. Put \$110,000 in an annuity, \$78,000 in an individual retirement account (IRA), \$45,000 in municipal bonds, \$37,000 in a stock fund, \$42,000 in certificates of deposit (CD), and \$3,500 in a checking account. This will allow you to have a higher overall rate of return, yet remain almost risk free in regards to your capital. I know that preservation of capital is of paramount importance at this time in your life."

FIGURE 8.25 Perfected Pie Chart of Asset Allocation

Albert says, "I approached my potential client the way I discuss money with my parents. Like Sylvia, they, too, are very successful in their fields. However, money confuses them. This confusion makes it difficult for them to understand how to make their money both safe and wisely invested. Using a visual aid in my presentation to Sylvia allowed her to 'see' how I could manage her money and keep her capital safe but growing. We are now moving forward with reallocation of all her funds, and she told me that she is comfortable with my plans. I am thrilled to be working with her. Planning, packaging, and perfecting allowed me to choose the most successful method of communication—a visual aid."



CHAPTER HIGHLIGHTS

1. Using graphics can allow you to create a more concise document.
2. Graphics add variety to your text, breaking up wall-to-wall words.
3. Color and 3-D graphics can be effective. However, these two design elements can also cause problems. Your color choices might not be reproduced exactly as you planned, and a 3-D graphic could be misleading rather than informative.
4. Tables are effective for presenting numbers, dates, and columns of figures.
5. You can often communicate more easily with your audience when you use figures, such as bar charts, pie charts, line charts, flowcharts, and organizational charts, to highlight and supplement important parts of your text.

WWW Find additional visual aid exercises, samples, and interactive activities at <http://www.prenhall.com/gerson>.

MEETING WORKPLACE COMMUNICATION CHALLENGES

CASE STUDIES

1. Yolanda Ruiz is an investment banker at Country Commercial Bank, as noted in this chapter's beginning scenario. She is writing a proposal to a potential client, Sylvia Light, a retired public health nurse. She now has \$315,500 in savings, allocated as follows: \$78,000 in an individual retirement account (IRA), \$234,000 in a low-earning certificate of deposit (CD), and \$3,500 in her checking account.

Sylvia contacted Yolanda, asking her to help organize a portfolio for a comfortable retirement. Yolanda has studied Sylvia's various accounts and considered her lifestyle and expenditures. Now, she is ready to write the proposal. Yolanda plans to propose that Sylvia could reallocate her funds as follows:

- \$110,000 in an annuity
- \$78,000 in an individual retirement account (IRA)
- \$45,000 in municipal bonds
- \$37,000 in a stock fund
- \$42,000 in certificates of deposit (CD)
- \$3,500 in a checking account

To make this proposal visually appealing and more readily understandable to Sylvia, Yolanda will use visual aids.

Assignment

- Create a table to show how Yolanda wants to invest Sylvia's money.
 - Create a bar chart comparing current allocations with the proposed allocations.
2. Jim Goodwin owns an insurance agency, Goodwin and Associates Insurance. Letters are a major part of his workplace communication with vendors, clients, and his insurance company's home office. However, many of Jim's employees fail to recognize the importance of business communication. To prove how important their communication is to the company, Jim plans to summarize the amount

of writing they do on the job. He has determined that they write the following each week:

- 57 inquiry letters. Insurance coverage changes constantly. To clarify these changes for customers, employees write inquiries, asking the home office questions about new insurance laws, levels of coverage, coverage options, and rate changes.
- 253 response letters. A key to GAI's success is acquiring new customers. When potential customers call, e-mail, or write letters asking for insurance quotes, Jim and his employees write response letters.
- 43 cover (transmittal) letters. Once customers purchase insurance policies, Jim and his coworkers mail these policies, prefaced by cover letters. The transmittal letters clarify key points within the documents.
- 12 good news letters. Jim's clients receive discounts when they add new cars to an existing policy or include both car and home coverage. GAI writes good news letters to convey this information.
- 25 adjustment letters. When accidents occur or when losses take place, GAI writes adjustment letters stating that the claim is covered.
- 2 bad news letters. Like any business, GAI needs to communicate bad news to clients or vendors.
- 7,000 e-mail messages. Jim and his 20 employees send and receive a minimum of 50 e-mail messages each day.

Assignment

To show his employees the importance of workplace communication, Jim wants to create a visual aid depicting this data. Create the appropriate graphic for GAI's employees.

ETHICS IN THE WORKPLACE CASE STUDY

Flow Inc., a water purification company that has been in business for over 40 years, is known throughout the Midwest for their logo and slogan, "Go with the Flow."



Nurani Rama grew up in the Midwest and is familiar with Flow Inc. She now works for a software development company named GO—Gaming Online. Nurani is in charge of marketing and public relations and was asked to create a logo and slogan for her company. She fondly remembers Flow Inc.'s slogan and logo and used it as her inspiration. At a board meeting, Nurani promoted the phrase "Flow with the GO" and showed her creation.

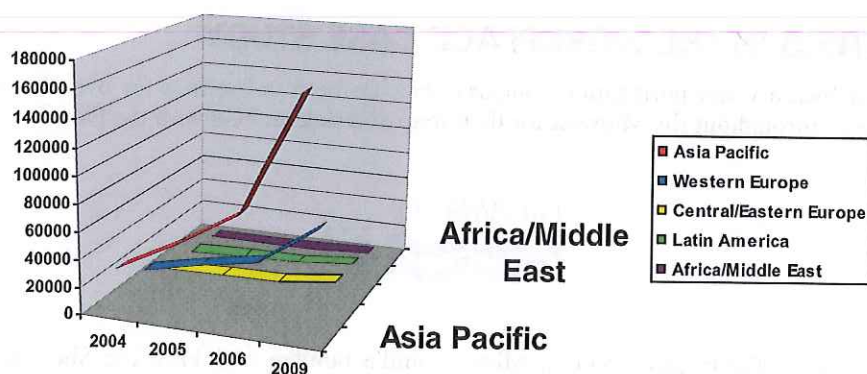


Question: Though Nurani's company is in a different city and industry than Flow Inc., is it ethical for Nurani to pattern her slogan and logo after Flow Inc.'s? Justify your answer based on information provided in Chapter 1.

INDIVIDUAL AND TEAM PROJECTS

1. Present the following information in a pie chart, a bar chart, and a table.
In 2009, the Interstate Telephone Company bought and installed 100,000 relays. It used these for long-range testing programs that assessed failure rates. It purchased 40,000 Nestor 221s; 20,000 VanCourt 1200s; 20,000 Macro R40s; 10,000 Camrose Series 8s; and 10,000 Hardy SP6s.
2. Using the information presented in activity 1 and the following revised data, show the comparison between 2009 and 2010 purchases through two pie charts, a grouped bar chart, and a table.
In 2010, after assessing the success and failure of the relays, the Interstate Telephone Company made new purchases of 200,000 relays. It bought 90,000 VanCourt 1200s; 50,000 Macro R40s; 30,000 Camrose Series 8s; and 30,000 Hardy SP6s. No Nestors were purchased.
3. Create a line chart. To do so, select any topic you like. The subject matter, however, must include varying values. For example, present a line chart of your grades in one class, your salary increases (or decreases) at work, the week's temperature ranges, your weight gain or loss throughout the year, the miles you've run during the week or month, amounts of money you've spent on junk food during the week, and so forth.
4. Analyze the following graphic and explain why it succeeds or fails. How could you improve it?

WiFi Usage



DEGREE-SPECIFIC ASSIGNMENTS

1. In your workplace communication classroom, what are the students' majors? Tabulate your findings, and create a pie chart or bar chart to show these figures.
2. In teams, research average salaries for the following career fields: management, business information systems, accounting, marketing, and finance. Using any of the visual aids discussed in the chapter, depict the information you have found.
3. Go to Homefair's "Salary Calculator" at www.homefair.com/real-estate/salary-calculator.asp. This site will allow you to enter a job field, city, and state to show you what you might earn in this locale. Pick five cities you might want to work and live in, research the medium earnings, and tabulate your results. Create a bar chart, line graph, or pie chart to illustrate these earning figures.

PROBLEM-SOLVING THINK PIECES

1. Angel Guerrero, computer information systems technologist at HeartHome Insurance, was responsible for making an inventory of his company's hardware. He learned the following: The company had 75 laptops, 159 PCs, 27 printers, 10 scanners, 59 handheld computers (PDAs), 238 cell phones with e-mail capabilities, and 46 digital cameras.

To write his inventory report, Angel needs to chart the previous data. Which type of visual aid should Angel use? Explain your answer, based on the information provided in this chapter. Create the appropriate visual aid.

2. Minh Tran works in the marketing department at Thrill-a-Minute Entertainment Theme Park (TET). Minh and her project team need to study entry prices, ride prices, food and beverage prices, and attendance of their park versus their primary competitor, Carnival Towne (CT).

Minh and her team have found that TET charges \$16.50 admission, while CT charges \$24.95. Most of TET's rides are included in the entry price, but special rides (the Horror, the Bomber, the Avenger, and Peter Pan's Train) cost \$2.50. At CT, the entry fee covers many rides, excluding Alice's Teacup, Top-of-the-World Ferris Wheel, and the Zinger, which cost \$2.00 each. Food and beverages at TET cost \$1.95 for a hot dog, \$2.50 for a burger, \$3.95 for nachos, and \$1.50–2.50 for drinks. At CT, food and beverages cost \$1.75 for hot dogs, \$2.75 for burgers, \$2.50 for nachos, and \$1.50–2.50 for drinks. Attendance at TET last year was 250,000, while attendance at CT was 272,000.

What type of visual aid should Minh and her team use to convey this information? Explain your decision, based on the criteria for graphics provided in this chapter. Create the appropriate visual aid.

3. Toby Hebert is human resource manager at Crab Bayou Industries (Crab Bayou, LA), the world's largest wholesaler of frozen Cajun food. Toby and her management are concerned about the company's hiring trends, as prospective employees complained about discriminatory hiring practices at Crab Bayou.

To prove that the company has not practiced discriminatory hiring practices, Toby has studied the last ten years' hires by age. She found that in 1999, the average age per employee was 48; in 2000, the average age was 51; in 2001, the average age was 47; in 2002, the average age was 52; in 2003, the average age was 45; in 2004, the average age was 47; in 2005, the average age was 42; in 2006, the average age was 39; in 2007, the average age rose to 42; in 2008 and 2009, the average age fell to 29 and 30, respectively (due to a large number of early retirements).

What type of visual aid should Toby use to convey this information? Explain your decision, based on the criteria for graphics provided in this chapter. Create the appropriate visual aid.

4. Yasser El-Akiba is a member of his college's International Students' Club. Yasser is a native of Israel. Other members of the club are from other countries: 3 from Australia, 2 from Ecuador, 8 from Mexico, 5 from Africa, 2 from England, 3 from Canada, 4 from the Dominican Republic, and 9 from China.

What kind of visual aid could Yasser create to show his club members' homelands? Defend your decision based on criteria for graphics in this chapter. Create the appropriate visual aid.

WEB WORKSHOP

Using an Internet search engine, type in phrases such as "automobile sales+line graph," "population distribution by age+pie chart," or "California+organizational chart." Create similar phrases for bar charts, pictographs, flowcharts, tables, and so forth. Open several links from your Web search and study the examples you have found. Which examples of graphics are successful and why? Which examples of graphics are unsuccessful and why? Explain your reasoning, based on this chapter's criteria.

QUIZ QUESTIONS

1. How can you effectively present large blocks of data or reveal comparisons?
2. What are four things graphics help readers to see?
3. What can happen when you use only unbroken text in a document?
4. When should you avoid using color in a graphic?
5. What are drawbacks to 3-D graphics?
6. When you use graphics, what are five criteria to follow to achieve successful graphics?
7. What are five types of figures?
8. What are two types of bar charts?
9. What is a pictograph?
10. When would you use a Gantt chart?