

7

Using Audience-Centered Visuals



LEARNING OBJECTIVES FOR THIS CHAPTER

- Appreciate the role of visuals in technical communication
- Decide when to use visuals on their own or with text
- Distinguish between different types of visuals
- Understand how to choose visuals appropriately for your audience and purpose
- Place, cross-reference, and present visuals appropriately for your readers
- Use color in your visuals
- Appreciate the importance of using visuals in an ethical manner

CHAPTER OUTLINE

The Importance of Using Audience-Centered Visuals 112

When to Use Visuals 113

Types of Visuals 115

STRATEGIES for Creating Tables 116

STRATEGIES for Creating Graphs 118

STRATEGIES for Creating Charts 121

STRATEGIES for Illustrations, Diagrams, Photographs, Videos, Icons, and Symbols 125

Special Considerations When Using Visuals 126

CHECKLIST for Using Audience-Centered Visuals 128

Applications 129

In addition to structure and style, the use of audience-centered visuals is one of the four essential elements in technical communication.

THE IMPORTANCE OF USING AUDIENCE-CENTERED VISUALS

Visuals are important in print or digital documents, in oral presentations, and in multimedia programs for several reasons: They help readers interpret and remember complex information; they show how items look or work; and they show how items are organized or actions are performed.

Visuals help readers interpret and remember complex information

Because they focus and organize complex information into more simplified form, visuals make data easier for readers to interpret and remember. Visuals work because readers want more than just raw information; they want the information presented so they can understand it at a glance. Consider, for example, how the following passage might be better presented using a visual:

Technical data in prose form can be hard to interpret

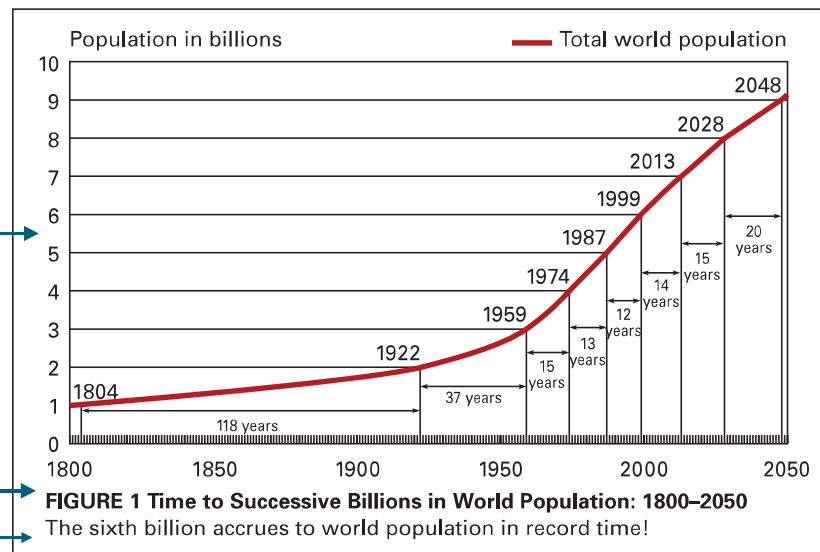
The time required for the global population to grow from 5 to 6 billion was shorter than the interval between any of the previous billions. It took just 12 years for this to occur, just slightly less than the 13 years between the fourth and fifth billion and the 15 years between the third and fourth billion, but much less time than the 118 years between the first and second billion...

Now consider this same information presented as a graph in Figure 7.1.

FIGURE 7.1
A graph that simplifies complex information

Labels identify key elements (in this case, units of measure)

Figure number and informative title
Caption explains the visual's overall meaning



Source: United Nations (1995b); U.S. Census Bureau; International Programs Center, International Database and Unpublished Tables.

Notice how Figure 7.1 makes it easier to understand and remember the upward population trend and the numerous facts and figures described in the paragraph that precedes it.

Not all visuals are designed to convey numeric or other data. A second reason visuals are important is that they can show readers at a glance what something looks like and/or how it works—as opposed to lengthy descriptions in prose form.

Visuals that show how items look include illustrations and photographs, while visuals that show how items work include diagrams. For example, the diagram in Figure 7.10 (page 122) illustrates how a safety belt locking mechanism operates. Notice how this diagram is much easier to understand than if the idea were described using text only.

Finally, visuals are important because they can quickly and efficiently show how items are organized or actions are performed, without resorting to long and difficult-to-follow textual explanations. Such visuals include organizational charts and flowcharts. For example, imagine the dense and wordy paragraphs that would be needed to describe the process for helping an adult choking victim, as shown in the flowchart in Figure 7.6 on page 120.

Visuals show readers how items look or work

Visuals show readers how items are organized or actions are performed

WHEN TO USE VISUALS

Visuals should be used to enhance your document, not just to decorate it. There may also be organizational reasons for using visuals; for example, some companies may always expect photographs, charts, and graphs as part of an annual report. Certain industries, such as the financial sector, routinely use visuals (such as a line graph showing recent fluctuations in the Dow Jones Industrial Average).

Use visuals to enhance, not decorate

As discussed below, you may choose to use visuals to support the text of your document, or you may choose to use visuals on their own.

Using Visuals to Support Text

Visuals are often an excellent way to support, but not replace, essential discussion in the actual text. For example, you may be writing about an important financial trend, describing features about the world economy, and making a case for financial reforms. A series of graphs or charts would augment, not substitute for, the text. In a situation like that, visuals would add to your discussion.

Be sure to refer to each visual by number (“see Figure 1”) in the text. Explain what the visual means; supply a caption for it; and place the visual as close as possible to the text it supports.

For captions, use “Table” for tables; for all other visuals, use “Figure.” See, for example, Tables 7.1 and 7.2 versus Figure 7.2 or any of the other figures in this chapter.

Use supporting visuals when you want to add to important textual discussion

TABLE 7.1 A numerical table

Title explains the table's purpose

Each column has a clear heading

Numbers are aligned properly for ease of reading

Where helpful, data are tallied

A caption explains the numerical relationships

Years of Potential Life Lost Before Age 75				
(Per 100,000 population under age 75)				
Year	Heart Disease		Unintentional Injuries	
	Male	Female	Male	Female
1990	2356.0	948.5	1162.1	607.4
2000	1766.0	774.6	1026.5	573.2
2005	1559.0	680.2	1137.2	647.9
2009	1399.2	606.5	1028.2	604.6
2010	1370.8	593.6	1025.2	616.4
% change, 1990–2010	–41.8	–37.4	–11.8	+1.5

This table compares years of potential life lost before age 75 due to heart disease and unintentional injury in males and females. In both males and females, years lost due to heart disease decreased between 1990 and 2010. Years lost due to unintentional injury decreased only slightly in males and increased very slightly in females.

Source: *Health, United States 2012*, from the U.S. National Center on Health Statistics.

TABLE 7.2 A textual table

Title explains the table's purpose

Each column has a clear heading that leads readers into the information

Phrases are brief and aligned for ease of reading

Numbers enhance the verbal information

A footnote provides more detail

Radon Risk if You Smoke			
Radon level	If 1,000 people who smoked were exposed to this level over a lifetime ...	The risk of cancer from radon exposure compares to ...	WHAT TO DO: Stop smoking and ...
20 pCi/L ^a	About 135 people could get lung cancer	←100 times the risk of drowning	Fix your home
10 pCi/L	About 71 people could get lung cancer	←100 times the risk of dying in a home fire	Fix your home
8 pCi/L	About 57 people could get lung cancer		Fix your home
4 pCi/L	About 29 people could get lung cancer	←100 times the risk of dying in an airplane crash	Fix your home
2 pCi/L	About 15 people could get lung cancer	←2 times the risk of dying in a car crash	Consider fixing between 2 and 4 pCi/L
1.3 pCi/L	About 9 people could get lung cancer	(Average indoor radon level)	(Reducing radon levels below 2 pCi/L is difficult)
0.4 pCi/L	About 3 people could get lung cancer	(Average outdoor radon level)	

Note: If you are a former smoker, your risk may be lower.

^apicocuries per liter

Source: *Home Buyer's and Seller's Guide to Radon*, by the U.S. Environmental Protection Agency.

Using Visuals on Their Own

In some cases, visuals may work well on their own, as when they make your point more clearly than text can. In situations like these, merely refer to the visuals that show readers what they need to see. For instance, to show how customers who have purchased your company's new plasma televisions break out by age group, don't list the percentages in a lengthy paragraph. Simply supply a chart or graph that conveys these data visually.

When you use stand-alone visuals, make sure they tell the whole story you want readers to understand and that you introduce them clearly. If you need to explain how the visual should be interpreted, do so briefly in the figure's caption.

Use visuals on their own when textual discussion is not necessary

TYPES OF VISUALS

The most commonly used types of visuals are tables, graphs, charts, illustrations, diagrams, photographs, videos, symbols, and icons. The following sections describe each type.

Tables

Tables display organized data or information across columns and rows for easy comparison. Tables can be used to display quantitative information (*numeric tables*) or qualitative information (*textual tables*) or sometimes both. For specific advice on creating tables, see the annotations to Tables 7.1 and 7.2 (page 114) and the Strategies on page 116.

Numeric Tables. Numeric tables simplify complex quantitative information. Although text may be used in headings to organize the table, the primary purpose of the table is to show numbers and their relationships. Note in Table 7.1 how the data are compared in a variety of ways and how a tally of the numbers and an explanatory caption further help readers understand and interpret the data.

Numeric tables focus on quantitative information

Textual Tables. Textual tables simplify complex qualitative information. Numbers may be used to help organize the textual information, but the primary purpose of the textual table is to show written information and relationships. Note how Table 7.2 simplifies written information that would be difficult to explain in paragraph form and uses a footnote to explain a nuance to the reader.

Textual tables focus on qualitative information



STRATEGIES for Creating Tables

- ▶ **Don't include too much information in a single table.** Overly complex tables are confusing. Limit your table to two or three areas of comparison. Or use multiple tables.
- ▶ **Provide a brief but descriptive title.** Announce exactly what is being compared.
- ▶ **Label the rows and columns.**
- ▶ **Line up data and information clearly.** Use neat columns and rows and plenty of white space between items.
- ▶ **Keep qualitative information and quantitative data brief.** When including high numbers (more than three digits), abbreviate the numbers and indicate “in thousands,” “in millions,” and so on. When using text in a table, limit the number of words.
- ▶ **Provide additional information, if necessary.** Add footnotes or a caption at the bottom of the table to explain anything readers may not understand at first glance.
- ▶ **Credit your sources.** Unless you collected the data or information yourself, always credit the source (see page 407 for advice on avoiding plagiarism).

Graphs

Graphs translate numbers into shapes, shades, and patterns. At a glance, graphs display the approximate values, the point being made about those values, and the relationship being emphasized. Typically, a graph's horizontal axis shows categories to be compared, such as time periods, while the vertical axis shows the range of values, such as numbers. The most common types of graphs are *bar graphs* (simple or multiple) and *line graphs* (simple or multiple). For specific advice on creating graphs, see the annotations to Figures 7.2 through 7.5 and the Strategies on pages 118–119.

Bar graphs depict changes over time, patterns, and trends

Bar Graphs. Bar graphs present data using colored (or shaded) bars, usually lined up along the horizontal axis. Simple bar graphs depict changes over time, patterns, or trends for a single category. For instance, the simple bar graph in Figure 7.2 shows one trend extracted from Table 7.1, male deaths from heart disease between 1970 and 2006.

Multiple bar graphs, meanwhile, compare two or more categories. For example, the multiple bar graph in Figure 7.3 (also extracted from Table 7.1) shows not only a trend in male deaths from heart disease between 1990 and 2010 but also from cancer during that same period.

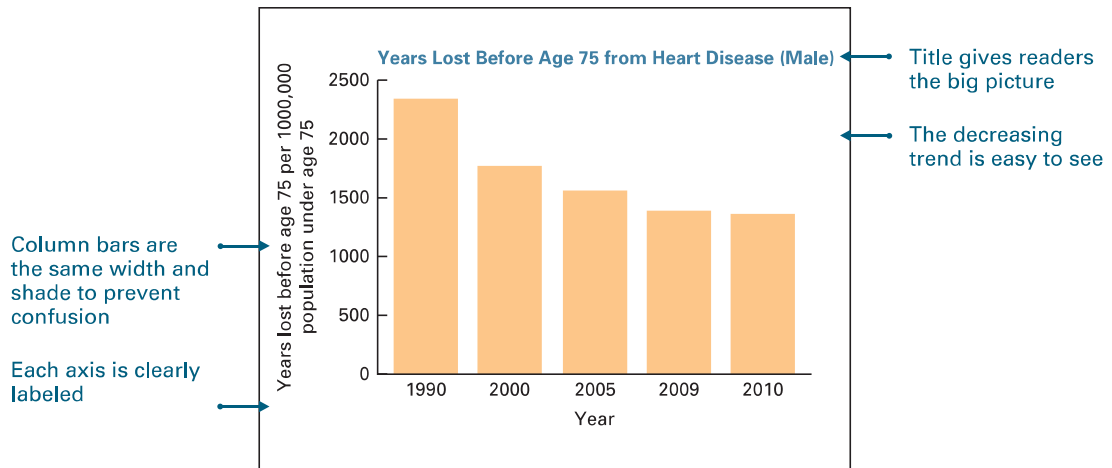


FIGURE 7.2 A simple bar graph

Source: *Health, United States 2012*, from the U.S. National Center on Health Statistics.

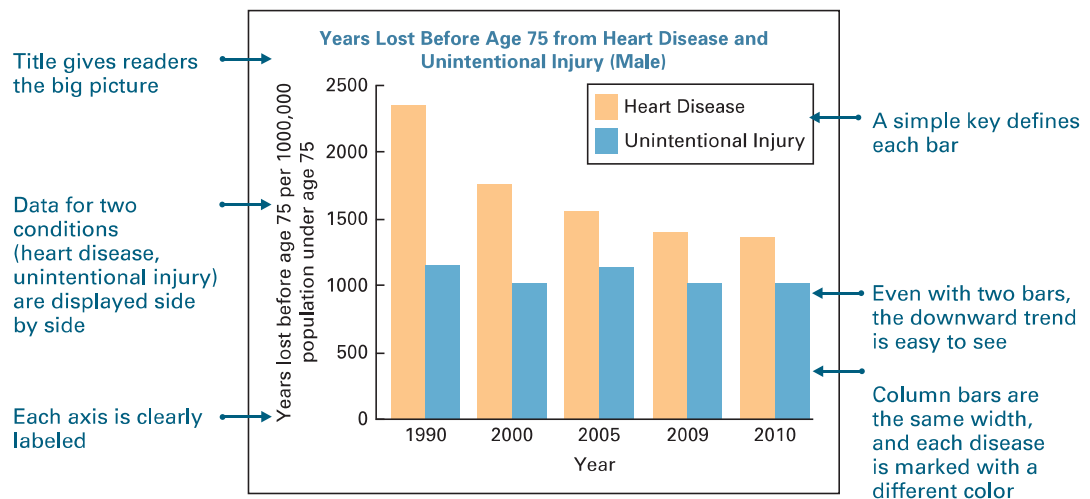


FIGURE 7.3 A multiple bar graph

Source: *Health, United States 2012*, from the U.S. National Center on Health Statistics.

Line Graphs. Line graphs present data using colored (or shaded) lines, marked at regular intervals so that the data points line up with the items on the horizontal axis. A line graph can accommodate and display more data points than a bar graph. Simple line graphs show changes, patterns, or trends for a single category. In Figure 7.4 the single line tracks the number of building permits issued during the year, showing how permit requests are more common between May and October.

Multiple line graphs display several relationships simultaneously, as in Figure 7.5.

Line graphs can synthesize large quantities of data

Title gives readers the big picture

The trend (up, then down) is easy to see

Data points are marked with a square shape

Each axis is clearly labeled

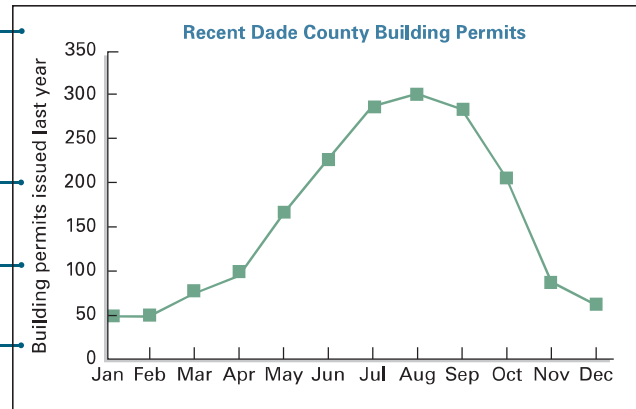


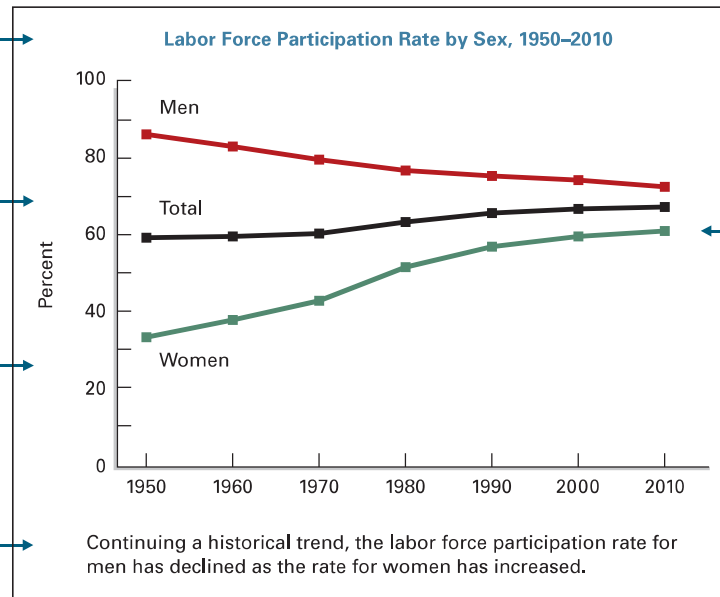
FIGURE 7.4 A simple line graph

Title gives readers the big picture

The overall trend (moving closer together) is easy to see

Each axis is clearly labeled

A short caption helps explain the relationship that the writer wants readers to notice



Data points are marked with a square shape

FIGURE 7.5 A multiple line graph

Source: U.S. Department of Labor.



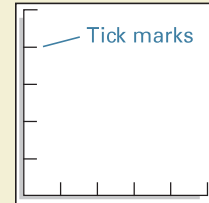
STRATEGIES for Creating Graphs

- **Use a graph only to compare values that are noticeably different.** A bar graph in which all bars are about the same height or a line graph depicting a single straight line (or overlapping multiple lines) serves no purpose.



STRATEGIES *continued*

- ▶ **Provide a clear title.** Announce exactly what is being displayed.
- ▶ **Label both the purpose and divisions of each axis.** Use numbers or gradations that are evenly divided (e.g., multiples of 10, spans of 5 years, months of the year), and add tick marks next to each number/gradation.
- ▶ **Keep the graph simple and easy to read.** Use no more than three bars (bar graph) or three to four lines (line graph) per graph. Avoid needless details; readers should understand the graph at a glance.
- ▶ **Make each bar or line distinct.** In multiple bar or line charts, use different colors or shades for each bar or line. Provide a key or label that indicates what each bar or line represents.
- ▶ **Use consistent format for bars and lines.** In a bar graph, bars should all be of the same width. In a line graph, lines should all be of the same thickness and all data points (those points at which a line intersects with gradations on the horizontal axis) should be marked.
- ▶ **Credit your sources.** As always, avoid plagiarism by citing the sources of your information or data.



Charts

Charts depict relationships via shapes, arrows, lines, and other design elements. The terms “chart” and “graph” are often used interchangeably; technically, however, a chart displays relationships (quantitative or cause-and-effect) that are not plotted on vertical and horizontal axes. Commonly used charts include *flowcharts*, *pie charts*, and *organization charts*. For more specific advice on creating charts, see the annotations to Figures 7.6 through 7.8 and the Strategies on page 121.

Flowcharts. A flowchart traces a process or procedure from beginning to end, moving from top to bottom or from left to right and using connector bars to show relationships, as in Figure 7.6.

Flowcharts show processes and procedures

Pie Charts. Easy for almost anyone to understand, pie charts are circular diagrams that display the status of each “piece” of the “pie”—the percentage of the whole pie (which totals 100%) that each piece represents. Readers can compare the differently colored (or shaded) pieces to each other as well as to the whole. Figure 7.7 shows a basic pie chart comparing major food sources of trans fat for American adults.

Pie charts show proportions among the segments

Organization Charts. An organization chart shows the hierarchy and relationships between different departments and other units in an organization, using a top-down series of boxes connected by arrows, as in Figure 7.8.

Organization charts show relationships between departments or units

Connecting lines show relationships between actions in the process

Individual boxes are of same or similar size and shape

Wording within each cell is simple and clear

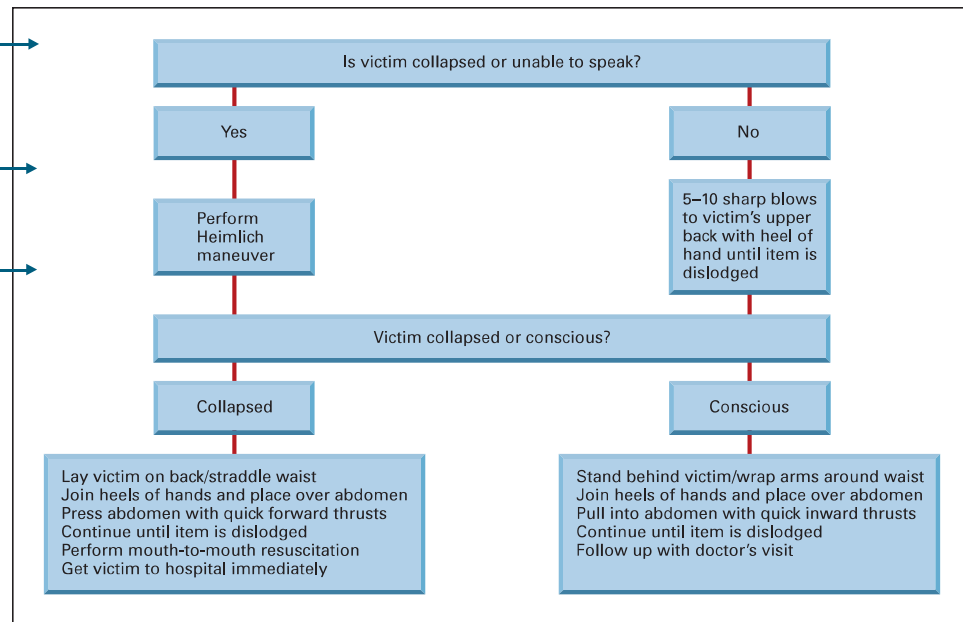


FIGURE 7.6 A flowchart

Title explains the big picture

Labels and numeric percentages are provided for each slice

Percentages add up to 100%

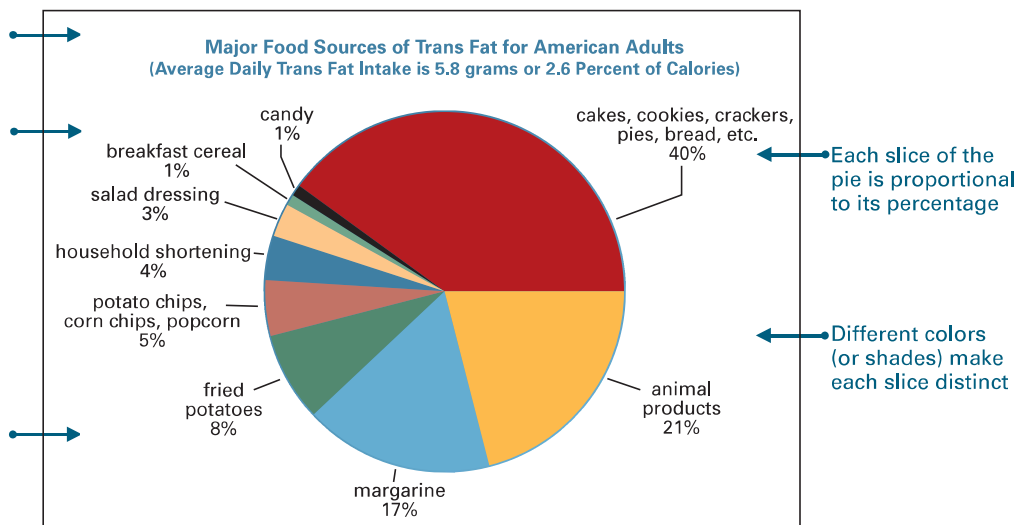


FIGURE 7.7 A pie chart

Source: U.S. Food and Drug Administration.

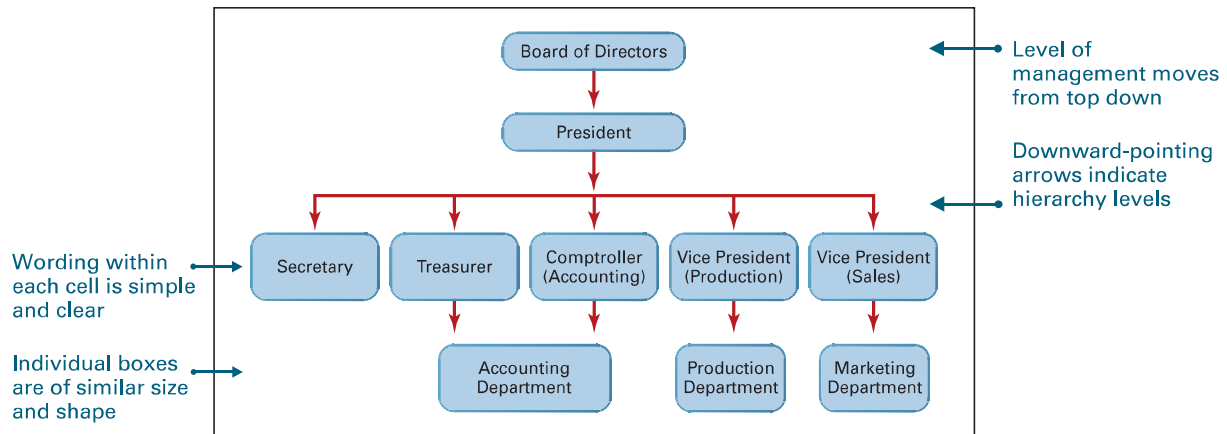


FIGURE 7.8 An organization chart



STRATEGIES for Creating Charts

For all types of charts, provide a clear title and credit your sources.

► Flowcharts

- **Move from top to bottom or left to right.** The process must start at the top (top-to-bottom chart) or left (left-to-right chart).
- **Use connector lines.** Show relationships between parts of the process.
- **Keep boxes uniform and text brief.** See the tips for organization charts below.

► Pie charts

- **Make sure the parts of the pie add up to 100%.**
- **Differentiate and label each slice clearly.** Use different colors or shades for each slice, and label the category and percentage of each slice.
- **Keep all labels horizontal.** Make the chart easy to read.
- **Combine very small pie slices.** Group categories with very small percentages under “other.”

► Organization charts

- **Move from top to bottom or left to right.** Place the highest level of hierarchy at the top (top-to-bottom chart) or at the left (left-to-right chart).
- **Use downward- or rightward-pointing arrows.** Arrows show the flow of hierarchy from highest to lowest.
- **Keep boxes uniform and text brief.** Shape may vary slightly according to how much text is in each box. Maintain a uniform look. Avoid too much text in any box.

Illustrations and Diagrams

Illustrations and diagrams rely on drawings and sketches rather than data or words, though some words may be needed to point out names, parts, or purposes. In some cases, even if you attempt the most accurate prose description, only an illustration or diagram can show what it is you are trying to explain. Technical illustrations accomplish what text alone cannot.

Illustrations and diagrams are especially valuable when you need to convey spatial relationships or help readers visualize what an item or process actually looks like. For specific advice on creating illustrations and diagrams, see the annotations to Figures 7.9 and 7.10 and the Strategies on page 125.

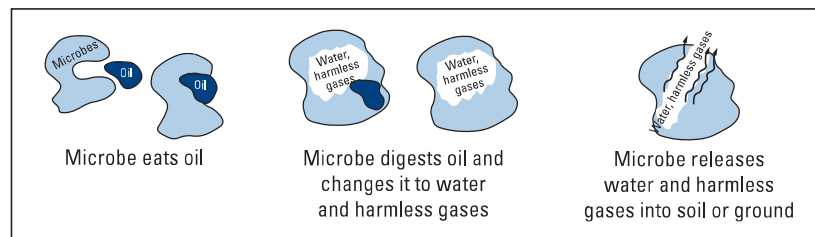


FIGURE 7.9 An illustration

Source: Environmental Protection Agency. Information available at <www.epa.gov/superfund/sites> or <www.cluin.org>.

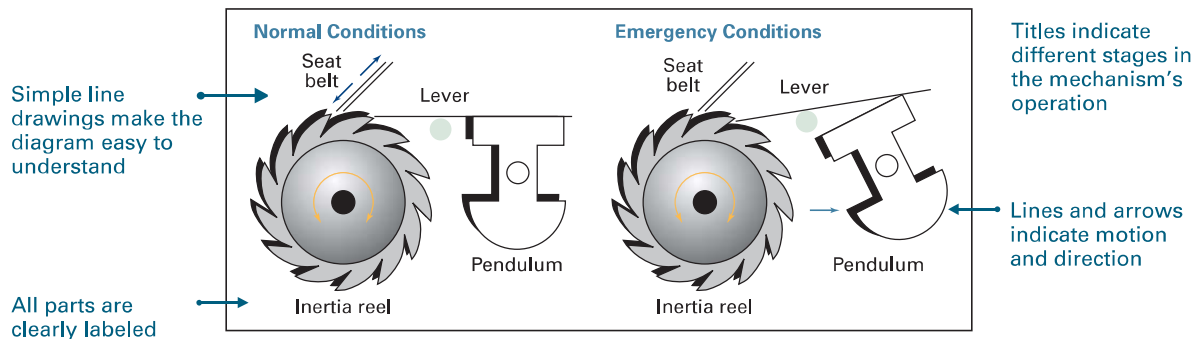


FIGURE 7.10 A diagram

Source: Department of Transportation.

Illustrations show what something looks like

Illustrations. An illustration shows with accuracy what something looks like. Impressive-looking visuals are easy to create by using electronic drawing programs or by locating clip art and other images online. However, more complex illustrations or those suited to your exact needs generally require the services of graphic artists or technical illustrators. See, for example, how the illustration in Figure 7.9 (taken from the document in Figure 1.3) provides a clear visual picture of the bioremediation process.

If you are unable to locate an illustration that points out just the parts of a product, process, or other item you want to display, you may need a professional illustrator. However, the variety of illustrations available online grows every day.

Diagrams. Unlike illustrations, which simply show what something looks like, diagrams show how parts of an object fit together or how mechanisms operate. For example, the diagram of a safety belt locking mechanism in Figure 7.10 portrays the mechanism in operation by juxtaposing “normal conditions” and “emergency conditions.”

Diagrams show how parts fit or operate

Among the many types of diagrams, three of the most common are *exploded diagrams* (which separate parts of an object while showing how the parts fit together), *cutaway diagrams* (which show the interior of an object by “cutting away” the shell), and *maps*.

Photographs

Although photographs are obviously more realistic than illustrations and diagrams (which often highlight certain parts of an object), photographs can provide *too much* detail or fail to emphasize the parts you want viewers to focus on.

Photographs show an ultra-realistic view

Many people take their own digital photographs and then use software to crop the image for proper emphasis. For basic documents circulated to a small group inside a department or organization, this can be fine. But for important documents circulated to high-level audiences inside or outside an organization, use professionally taken photographs.

If you locate photographs online, be sure to credit your sources. You also need to request permission if your document will be printed and circulated. For more advice on taking and altering photographs, see the annotations to Figure 7.11 and the Strategies on page 125.



FIGURE 7.11
A photograph

- ← Photograph shows both the object and the person using it, for a sense of scale
- ← Photo is taken from an angle that simulates the operator's angle of vision
- ← Photo has likely been cropped to remove needless detail

Source: Charles Orrico/SuperStock.

Videos

Videos show a full-motion view

Until recently, workplace videos were typically used for training and safety purposes only and were filmed by outside professionals. Today, with the advent of YouTube and similar sites, as well as the ease of filming by using a small video camera or even a cell phone, organizations are using videos to supplement traditional documents such as user manuals. For instance, the video frame captured in Figure 7.12 is from a set of video instructions for a product called Dust-Aid (used to clean dust from the camera sensor of a digital SLR camera). The principles for using videos are similar to those for photographs, except that videos are altered via editing rather than cropping. For more advice, see the annotations to Figure 7.12, the Strategies on page 125, and Chapter 20.



FIGURE 7.12 A video frame

Source: From “Dust-Aid: DSLR Camera Sensor Cleaning Video” by Ross Wordhouse from www.youtube.com. Reproduced by permission.

Icons and Symbols

Icons are simple concrete illustrations; symbols are simple abstract illustrations

Icons and symbols use simple illustrations that reduce a concept or item to its most basic, understandable level. The words *icon* and *symbol* are often used interchangeably. But icons resemble the items they represent (for instance, an icon of a file folder on your computer that looks like a real file folder), whereas symbols get the meaning across without resembling the items they represent (for example, a skull-and-crossbones warning symbol that looks like “death” but gets the “do not

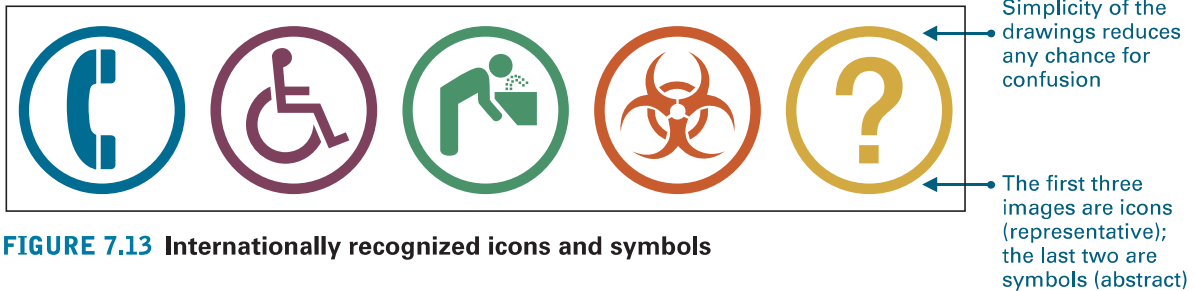


FIGURE 7.13 Internationally recognized icons and symbols

ingest/poison” message across or a cross that symbolizes not “cross” but “medical help”). Because these types of illustrations generally do not rely on text, they are more easily understood by international audiences, children, and people who have difficulty reading. For specific advice on using icons and symbols, see the annotations to Figure 7.13 and the Strategies below.



STRATEGIES for Illustrations, Diagrams, Photographs, Videos, Icons, and Symbols

For all such visuals, always credit the source if not self-created, and seek permission if reproduced and circulated.

► Illustrations

- **Use illustrations that are easy to interpret.** Avoid illustrations that distort an object’s actual appearances.
- **Show only those parts that your viewers need to see.**
- **Label each important part.**

► Diagrams

- **Provide clear explanations.** Explain how diagram parts fit together or operate.
- **Use lines and arrows to indicate direction and motion.** For diagrams that show action, directional markers help viewers understand the action.
- **Keep diagram illustrations simple.** Merely show viewers what they need to see.
- **Label each important part.**

► Photographs

- **Provide a sense of scale.** Try to show the object and a person using it, a ruler, or a hand.
- **Simulate the viewer’s angle of vision.** Consider how your readers would need to view the item.



STRATEGIES *continued*

- **Crop out needless details.**
- **Label key parts.** A simple photograph may not need labels, but a more complicated photograph should have essential parts labeled.
- ▶ **Videos**
 - **Provide a sense of scale.** Try to show the object and a person using it (or a ruler or a hand).
 - **Show only what the viewer needs to see.** For example, in a video of a long procedure, focus on just the part of the procedure that's most relevant.
 - **Edit out needless detail.** If you have editing software, shorten the video to include only the essentials.
 - **Avoid excess outside or office noise when recording sound.**
- ▶ **Icons and Symbols**
 - **Use icons and symbols sparingly.** Use them only when directly appropriate, say, to supplement textual warnings or instructions.
 - **Use internationally recognized icons and symbols.** Some icons and symbols may not convey your intended meaning in other cultures.

SPECIAL CONSIDERATIONS WHEN USING VISUALS

Once you are aware of the variety of visuals at your disposal, select those most appropriate for your audience and purpose, and consider how to integrate them within your document.

Selecting Appropriate Visuals

When selecting visuals for any document, first ask yourself this question: Who is my audience, and what do audience members need to know?

Special audience considerations

Generally speaking, expert audiences tend to prefer numerical tables, complex graphs and charts, and diagrams that they can interpret for themselves. Nonexpert audiences tend to prefer basic tables, graphs, and charts, uncomplicated illustrations and diagrams, and other visuals that direct their focus and interpret key points for them. If your audience is a combination of experts and nonexperts, you should err on the side of the nonexperts.

Also be aware that your audience may include international readers or North American readers from different cultural backgrounds. When choosing icons or symbols, use those that are internationally recognized (when in doubt, check the

International Organization for Standardization's Web site). Also keep your visuals (including text within visuals) simple and basic and avoid images and colors that might unintentionally offend people from other cultures. If you are knowingly writing to members of a particular culture or nationality, search online for more background on that audience.

Consider how each visual advances your purpose. For example, don't decide to use a bar chart just because you like its professional appearance; make sure the information or data you want to present are best served via a bar chart. Following are additional suggestions for fitting a visual to its purpose:

- To simplify complex numerical data or textual information, use a table.
- To get your audience to draw conclusions from facts and figures, use a graph or a chart that shows comparisons.
- To show how parts make up the whole, use a pie chart.
- To show hierarchy and relationships in an organization, use an organization chart.
- To show steps in a process from beginning to end, use a flowchart.
- To show what something looks like, use an illustration or photograph.
- To show how parts fit together or operate, use a diagram or a photograph depicting a process.

Consider
the purpose
of each visual

Placing, Cross-Referencing, and Presenting Visuals

Place your visuals where they best serve the needs of your readers: as close as possible to the related discussion if they are central to that discussion or in an appendix if they are peripheral to your discussion. Introduce your visuals within the text by referring to them by number (Figure 1, Table 4, etc.) and explaining what they mean (e.g., "As Figure 3.4 shows..."), making sure that the figure and table numbers match the cross-references in the text. See the sample formal report on page 320 for an example of a table used as part of a larger document. Make your visuals user-friendly in their presentation by framing them with plenty of white space, eliminating visual "noise" (excessive lines, bars, numbers, and inessential information), and sizing each visual for the right proportion and emphasis on the page.

Place visuals close to
their related topic in
the text

Using Color in Visuals

Color focuses reader attention and helps readers identify various elements of a visual. Most of the software you will use to create visuals (e.g., Excel, PowerPoint) automatically adds color to charts and graphs. In an illustration or diagram you can highlight particular areas by using color against a more subdued background.

Color helps focus
your reader's
attention

When color is not available, try using grayscale shades. In some visuals, however, grayscale may not be effective; for example, in a pie chart with numerous “slices” (see Figure 7.7), using slight gradations of gray may cause the slices to blend too closely. Likewise, in a multiple bar chart or multiple line chart (see Figures 7.3 and 7.4) you will want to sharply differentiate bars and lines. For more information on using color, see Chapter 8.

Using Visuals Ethically

Always present the real and complete picture

Some ways in which visuals can be distorted

Although you are perfectly justified in presenting data in its best light, you are responsible for avoiding misrepresentation. The golden rule of using visuals ethically is to always present the real and complete picture.

Following are some of the ways in which visuals can be distorted: using inaccurately sized slices in a pie chart misrepresents the true percentages; leaving out essential information from a table, chart, or graph doesn’t give readers the true picture of what’s happening; inflating or reducing the size of illustrations or photographs can make items appear more or less important than they actually are. When creating visuals, take care to convey and explain information accurately.



CHECKLIST for Using Audience-Centered Visuals

MyWritingLab™

- ☐ Have I looked for parts of the document that contain numeric or other data that would be best conveyed as a visual?
- ☐ Is the visual located near the text and have I referenced the visual within the text (for example, “See Figure 1 on page 9”)?
- ☐ Are my visuals easy to understand at a glance?
- ☐ Are my visuals accurate and not distorted in any way?
- ☐ Have I considered each type of visual and determined the most appropriate?

TABLES

- ☐ Am I using a table to compare data or other information?
- ☐ Is the table clear and uncluttered?
- ☐ Can readers make easy comparisons of the data in the table?
- ☐ Are rows and columns clearly labeled?



CHECKLIST *continued***GRAPHS**

- ☐ Am I using a graph to depict patterns, trends, or changes over time?
- ☐ Will a bar graph or a line graph be more effective for these data?
- ☐ Am I using color effectively but not overwhelmingly?
- ☐ Is each bar or line distinct and easy to distinguish?

CHARTS

- ☐ Am I using a chart to illustrate relationships of parts to a larger whole?
- ☐ In a flowchart is the flow easy to follow and are all boxes connected?
- ☐ In an organization chart are the titles/names clear and easy to read?
- ☐ In a pie chart do the slices of the pie add up to 100%?

ILLUSTRATIONS, DIAGRAMS, AND PHOTOGRAPHS

- ☐ Are the illustrations sufficiently clear without being too detailed?
- ☐ Do all illustrations and diagrams have a title or explanation?
- ☐ Is the quality of my photographs sufficient for viewers to see what I am trying to illustrate?
- ☐ Am I using any symbols or icons sparingly?

**APPLICATIONS****GENERAL APPLICATIONS**

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1. Display the following information in the visual format most appropriate for a particular audience. Describe that audience and explain why you selected the type of visual as most effective for that audience. Include with the visual a caption that interprets and explains the data.

Data: Assume that the Department of Energy breaks down energy consumption in the United States (by source) into these percentages: In 1970, coal, 18.5; natural gas, 32.8; hydro and geothermal, 3.1; nuclear, 1.2; oil, 44.4. In 1980, coal, 20.3; natural gas, 26.9; hydro and geothermal, 3.8; nuclear, 4.0; oil, 45.0. In 1990, coal, 23.5; natural gas, 23.8; hydro and geothermal, 7.3; nuclear, 4.1; oil, 41.3. In 2000, coal, 20.3; natural gas, 25.2; hydro and geothermal, 9.6; nuclear, 6.3; oil, 38.6.

2. Find an article in a newspaper, in a journal, or on the Web that lacks the visuals necessary to support the purpose of the article or the needs of its readers. Analyze the article and identify where visuals would be helpful. Make a list of the visuals you would recommend. Pick one visual from your list and create it. Does the article contain all the data or information you need to create the visual?
3. Devise a pie chart to depict your yearly expenses. Title the chart and be prepared to discuss it in class.

TEAM APPLICATIONS

1. As a team, obtain enrollment figures at your college for the past five years by gender, age, race, or any other pertinent category. Construct a bar graph to illustrate one of these relationships over the five years.
2. As a team, decide what would be the most appropriate visual for illustrating this relationship: a comparison of three top brands of skis, according to cost, weight, durability, and edge control. In groups of two, create this visual, then compare approaches. Why did one group choose one type of visual over another?

GLOBAL APPLICATION

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The International Organization for Standardization (ISO) is a group devoted to standardizing a range of material, including technical specifications and visual information. If you've ever been in an airport and seen the many international signs directing travelers to the restroom or informing them not to smoke, you have seen ISO signs. Go to the ISO Web site to learn about ISO icons and symbols. Show some of the icons and symbols, and explain why these work for international audiences.

DIGITAL AND SOCIAL MEDIA APPLICATION

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Digital communication relies heavily on the use of images. Find the Facebook page for a government agency (such as NASA) or for an organization at your college or university (such as a student club or department). Using the Checklist on pages 128–129 in this chapter, analyze the page's use of visuals. Write a short memo to your instructor presenting your findings.

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Visit Chapter 7, *Using Audience-Centered Visuals*, in MyWritingLab to complete this chapter's applications, to explore this chapter's overview, checklist, and flashcards, and to test your understanding of the chapter objectives.