■ ONLINE DISCOVERY

Google Docs is a Web site where you can create and share your work online. Complete the following:

1. In a Web browser, visit the Google home page at *www.google.com*.

2. Click the more link in the bar at the top of the Web page, and then click Documents.

3. Read the description of Google Docs, and then create an account and sign in. If you already have an account, sign in.

4. Create a Google document that explains what you can do with Google Docs. Enter your name in the document, and then save the document.

5. Click the Share button on the Google Docs tool-bar to open the Sharing settings dialog box. Click the Add people text box, and then enter the e-mail address of your instructor.

IC³
3-2.3.2

6. Click the Paste the item itself into the e-mail check box, make sure the Notify people via email box is checked, and then click the Share & save button.

7. Click the Done button, and then close the browser.

■ JOB SKILLS

Many work projects in all fields involve collaborating with others. Even if you work in the same location, this collaboration often uses a form of electronic communication. On your own or working with a partner, brainstorm the types of skills and abilities someone needs to collaborate effectively. Select the top three skills and list them in a word-processing document. Briefly describe each skill.

**Estimated Time:
1 hour**

LESSON 28

Using the Internet and the World Wide Web

■ OBJECTIVES

Upon completion of this lesson, you should be able to:

■ Explore the Internet and the Web.

■ Define Internet terminology.

■ Connect to the Internet.

■ Understand browser basics.

■ Select Web browser settings.

■ Identify browser issues.

■ DATA FILES

You do not need data files to complete this lesson.

■ WORDS TO KNOW

ActiveX

cookie

digital certificate

domain

File Transfer Protocol (FTP)

geographic imaging

home page

Hypertext Markup Language (HTML)

Hypertext Transfer Protocol (HTTP)

Internet Protocol (IP) address

Internet service provider (ISP)

podcast

portal

Secure Sockets Layer (SSL)

social networking site

Uniform Resource Locator (URL)

Web 2.0

Web app

Web cache

wiki

Each day millions of people explore the Internet and its popular service, the World Wide Web, or Web for short. People use the Internet to research information, shop for goods and services, go to school, communicate with family and friends, read the daily newspaper, and make airplane and hotel reservations, for example. They use the Internet at work, at home, and while traveling. Anyone with access to the Internet can connect to and communicate with anyone else in the world who also has Internet access.

Exploring the Internet and the Web

The Internet is made up of many services. Popular services include e-mail, instant messaging, newsgroups and bulletin boards, online conferencing, and Voice over Internet Protocol (VoIP). Its most popular service is the Web.

Many people use the terms Web and Internet interchangeably. In reality, they are two different things. The Web is part of the Internet. The Internet can exist without the Web, but the Web cannot exist without the Internet. The Web actually began in 1990, when Dr. Tim Berners-Lee, currently the director of the World Wide Web Consortium (W3C), wrote a small computer program for his own use. This program, called *Hypertext Transfer Protocol (HTTP)*, became the language computers use to transmit hypertext documents over the Internet. Dr. Berners-Lee next designed a scheme to give documents addresses on the Internet, and then developed a text-based program called *Hypertext Markup Language (HTML)* that creates hyperlinked documents. Clicking linked text or images in a hyperlinked document transfers you from one Web page to another or to another part of the same Web page. Dr. Berners-Lee's contributions laid the foundation, but they were not the catalyst that made the Web what it is today.

In 1993, the number of people using the Web increased significantly. This increase occurred when Marc Andreessen, working for the National Center for Supercomputing Applications at the University of Illinois, released Mosaic, the first graphical browser. See **Figure 28–1**.
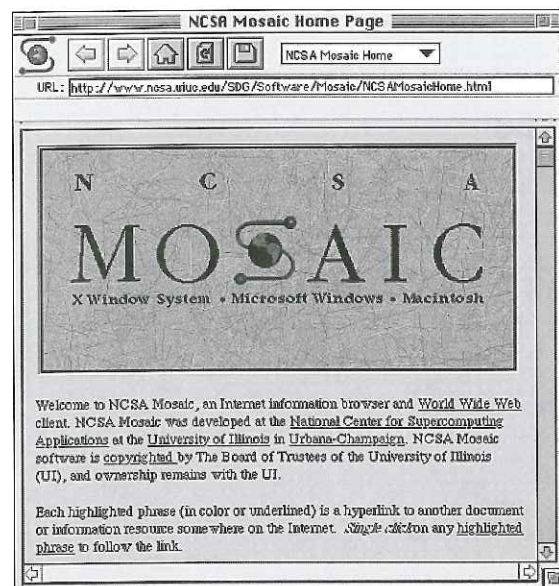
▶ **VOCABULARY**
Hypertext Transfer Protocol (HTTP)

Hypertext Markup Language (HTML)

FIGURE 28–1   Mosaic Web page

In 1994, Marc Andreessen cofounded Netscape Communications. With the introduction of Mosaic and the Web browsers that followed, the Web became a communications tool for a much wider audience.

In 2004, the phrase *Web 2.0* was coined. Also called the participatory Web, this term has several definitions, although the most popular one refers to Web sites where users can modify the content. Web 2.0 includes a new generation of Web-based services such as blogs, social networking sites, wikis, and software built into the site. Because of these enhancements, the Web is one of the most widely used services on the Internet.

Defining Internet Terminology

The Internet and the Web have their own terminology. This section introduces Internet-related vocabulary in alphabetical order and provides definitions.

ActiveX is a programming interface developed by Microsoft for Windows. This set of rules controls Windows programs that are downloaded from the Internet and then run in a browser.

As you become an experienced Internet user, you may find that you want to change how your browser handles cookies. Windows Help defines a *cookie* as "A small text file that Web sites put on your computer to store information about you and your preferences." Web sites store cookies on your computer so that when you return to a site, it displays any preferences or other customized settings you selected, such as sign-in information or items stored in a shopping cart. However, some unscrupulous Web sites use cookies to track your Web habits, which many consider an invasion of privacy. You need to balance the ease of use provided by cookies with security concerns and the amount of storage space available on your computer. For the most part, the default settings for cookies and stored pages are appropriate for most Internet users. In Step-by-Step 28.1, you use the Windows online Help to find out more about cookies.

▶ **VOCABULARY**
Web 2.0
ActiveX
cookie

ABOVE AND BEYOND

Currently, the most popular Web browser is Internet Explorer. Other browsers include Firefox, Chrome, Opera, and Safari.

Step-by-Step 28.1

1. Click the **Start** button on the taskbar, click **Help and Support**, type **cookies** in the Search text box, and then press the **Enter** button to display a list of Best 30 results for cookies (see **Figure 28–2**).
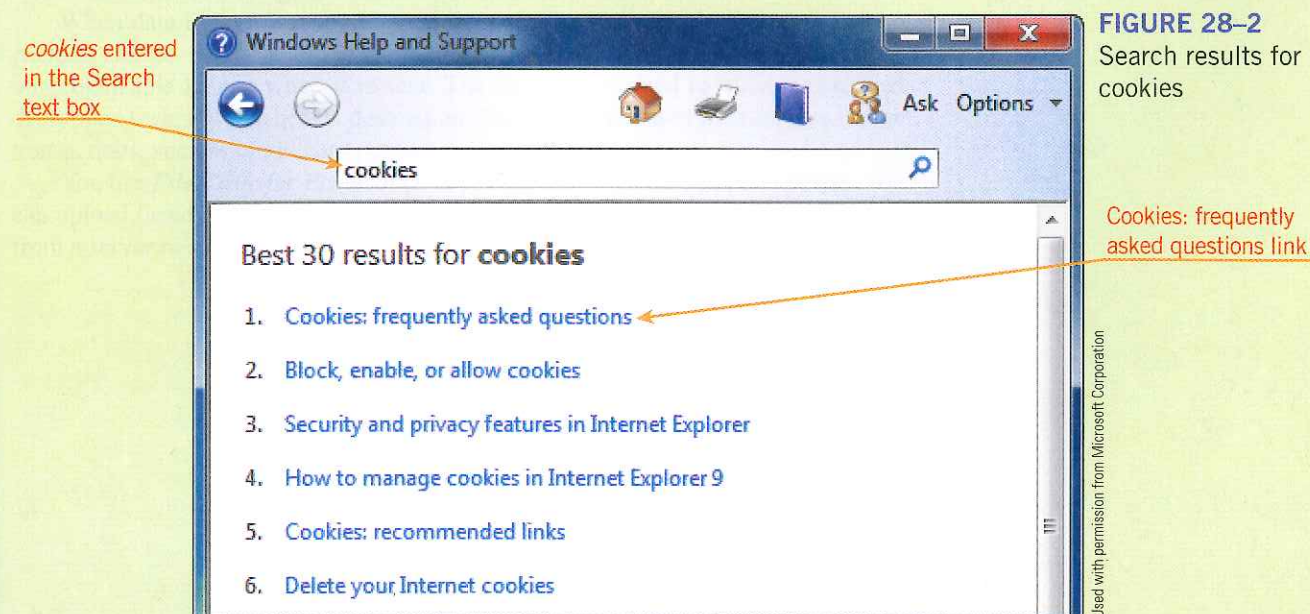

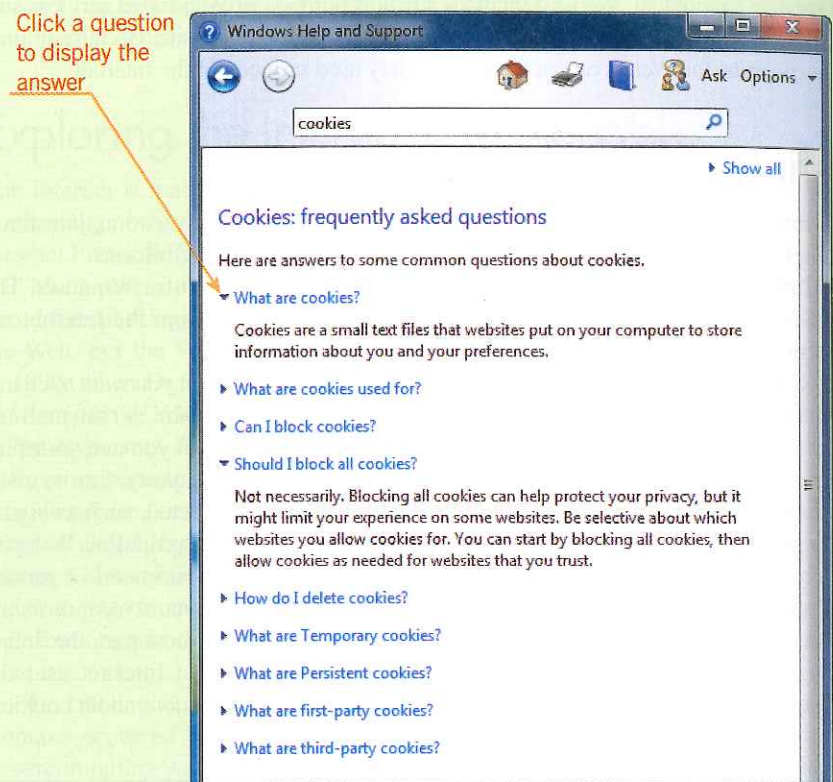**FIGURE 28–2**
Search results for cookies

2. Click the **Cookies: frequently asked questions** link, and then click each question to read the answers (see **Figure 28–3**). Two of the links have been clicked in Figure 28–3.

FIGURE 28–3
Cookies: frequently asked questions Help page

Click a question to display the answer

Used with permission from Microsoft Corporation

3. Use your word-processing program to write a brief explanation of what you learned from each of the answers. Save the document as **ic3-28**. Keep the document open for the next Step-by-Step exercise.
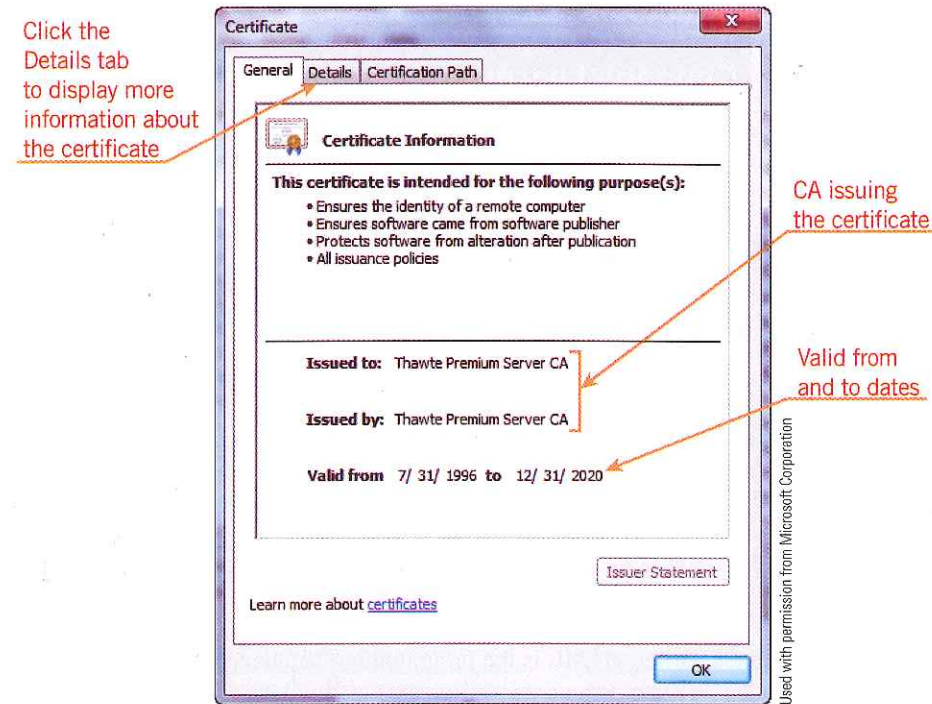
4. Close the Windows Help and Support window.

A *digital certificate* is an electronic document similar to an ID card. This digitally signed statement verifies the identity of a person or company and confirms that they own a public key. Also referred to as digital IDs, digital certificates are issued by third parties known as certification authorities (CAs). The certificate is designed to prevent fraud or other illegal activities and is validated by the CA. A typical digital certificate includes a serial number, issuer, private key, public key, signature algorithm, subject, thumbprint algorithm, thumbprint, valid from and valid to dates (see **Figure 28–4**).

Click the Details tab to display more information about the certificate

CA issuing the certificate

Valid from and to dates

Used with permission from Microsoft Corporation

FIGURE 28–4   Digital certificate

A *domain* identifies a computer or Web site on the Internet. The domain name system (DNS) converts domain names to IP addresses. Examples of top-level domain names are .com, .edu, .org, .gov, and .net.

When data is sent over the Internet, it is sent in packets. Along the way, these packets can be intercepted. Encryption is the process of converting text into an unrecognizable format when it is sent. The data is converted to plain text (called decryption) when it reaches its destination. This process is used for sensitive online transactions, such as credit card purchases.

You use *File Transfer Protocol (FTP)* to transfer files between computers. You can upload (send) files from one computer to a server and retrieve (download) files from a server to a computer.

▶ **VOCABULARY**

home page

Internet service provider (ISP)

Internet Protocol (IP) address

podcast

Secure Sockets Layer (SSL)

Uniform Resource Locator (URL)

A *home page* is the first page that appears in the browser when you visit a Web site. The Cengage Learning home page is shown in **Figure 28–5**. (The home page also refers to the first page that is displayed when you start your browser.)

FIGURE 28–5   Cengage Learning home page

As mentioned earlier, HTML is the programming language used to create Web pages. The code is written using a text editor such as Windows Notepad or by using a program such as Adobe Dreamweaver. HTTP/HTTPS is the underlying protocol for the Web. This protocol defines how messages are formatted across the Internet. An HTTP client program is required at one end, and an HTTP server program is required on the other end. (Recall that a client is a type of computer program that makes a service request from a server.) For example, when you enter a Web site address in your browser, you send an HTTP command to the Web server to tell it to locate and transmit the requested Web page.

An *Internet service provider (ISP)* is an organization or company that provides connectivity to the Internet through a telecommunications line or wireless system.

An *Internet Protocol (IP) address* is a numerical addressing system that uniquely identifies computers and networks linked to the Internet. IP addresses consist of four sets of numbers separated by periods. Every client and server must have a unique IP address. A DNS server translates the IP address into a domain name such as *networksolutions.com.*

A *podcast* is a method of publishing files (primarily audio) to the Internet that can be streamed or downloaded for playback on a computer or a personal digital audio player. In other words, podcasts are downloadable audio broadcasts.

Recall that Really Simple Syndication (RSS), also known as Rich Site Summary and RDF Summary, is a format originally developed to syndicate news articles online. This communication method now is used widely to share the contents of blogs.

Secure Sockets Layer (SSL) is a protocol for managing the security of message transmissions on the Internet.

A *Uniform Resource Locator (URL)* is the address of a Web page, FTP site, audio stream, or other Internet resource.

A Web browser is a software program you use to view and retrieve documents from the Web and to display the documents in a readable format. The browser is the interface between the user and the Internet. The browser sends a message to a Web server to retrieve a requested Web page. The browser then renders the HTML code to display the page.

A *Web cache* is a temporary storage area on your computer for collecting data. Once the data is stored in the cache, a Web site can quickly access the stored copy rather than downloading the data again.

A Web site is a collection of related HTML-formatted Web pages located on the Web. All pages within the site are accessible from the Web site address. The pages within the Web site can contain text, images, and multimedia elements such as audio, video, and animation files.

A *wiki* is a collaborative Web site that people can use to add, edit, remove, and organize Web page content. **Figure 28–6** shows the *Wikipedia.com* Web site, a popular online wiki.
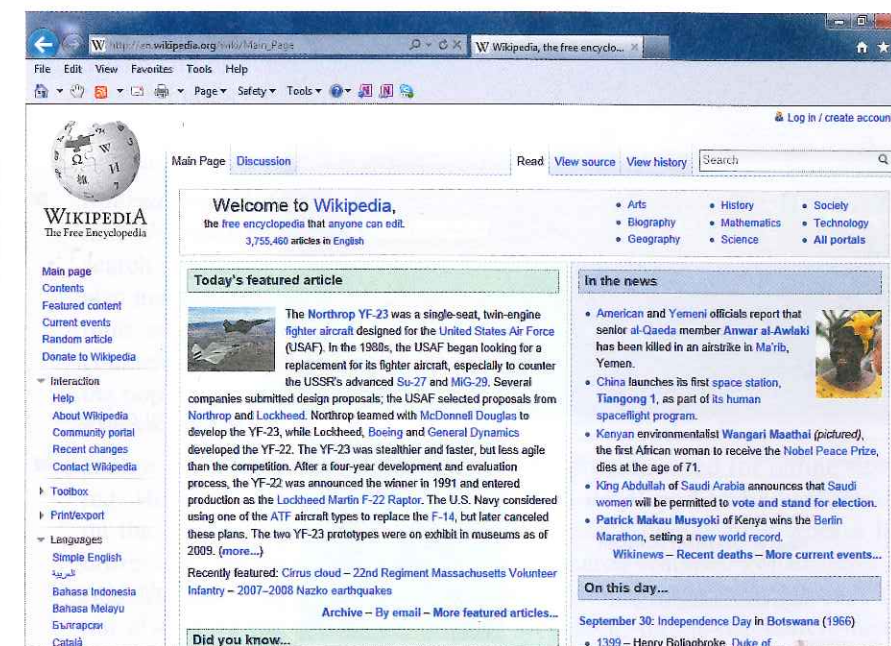
▶ **VOCABULARY**

Web cache

wiki

FIGURE 28–6   Wikipedia Web site

XML is the acronym for Extensible Markup Language, which is a flexible text format for creating structured computer documents. For example, programs, such as Microsoft Office, save files in a particular format. Generally, the file must be opened by the same program. However, leading software makers have introduced a new method of saving files: XML. This method saves the document as a simple text file, along with information on how the program interprets the text. Programs such as Microsoft Office, OpenOffice, and WordPerfect Office create their own versions for different operating systems such as Windows, Apple Macintosh, and Linux/UNIX. Recent versions of these programs provide the option to save in XML format, thus enabling easier file exchange.

▶ **ABOVE AND BEYOND**

Besides being a popular wiki, Wikipedia is one of the most visited sites on the Web. Wikipedia is managed by the Wikimedia Foundation, a nonprofit organization that sponsors other wikis, including Wiktionary (an online dictionary), Wikiquote (a free collection of quotations), and Wikibooks (a collection of open-content educational textbooks).

Understanding Web Page Elements

3-3.1.3

A Web page can be a simple text document or it can contain a variety of the following elements:

- Web site addresses that link to other Web sites
- Text, video, or other media
- Hyperlinked text and graphics
- Interactive objects such as buttons, text boxes, option buttons, check boxes, menus, and lists
- Images such as photos, pictures, maps, and drawings

Figure 28–7 shows a Web page that contains most of these items.

Interactive text links
Links to URLs
Video
Graphical object
Hyperlinked text
Hyperlinked graphic

Courtesy National Park Service

FIGURE 28–7   *nps.gov* Web page

Web sites can be organized into categories, each with a different purpose. The following list provides an overview of the types of Web sites available:

- *Commercial*: Also known as an e-commerce site, a commercial site sells or promotes products or services. Almost every business today has a commercial Web site. Many of these Web sites also provide options to purchase products or services online (see **Figure 28–8a**).
- *Academic*: Most educational facilities, elementary to university and public to private, have a Web site. Most higher education Web sites provide online registration, online courses, and other options. Many research facilities and both private and public companies also provide online training for their employees (see **Figure 28–8b**).
- *Organizational*: Examples include Web sites of nonprofit organizations such zoos and advocacy groups such as wildlife and clean air supporters (see **Figure 28–8c**).
- *Governmental*: Most local, state, regional, and national governments have a Web site or numerous Web sites. For instance, a medium-sized city could have a number of Web sites for employment, news of the day, parks and recreation, local services, utilities, visitors guide, citizens guide, customer service, and other public announcement sites (see **Figure 28–8d**).
- *International*: Internet marketing of a product or service sometimes requires that Web sites be hosted in other countries because each country has unique search engines, which use different mathematical algorithms. Web page text also needs to be translated into the language of the country. Values and customs vary, so an effective Web site in one country may not work in other countries. Finally, local agencies most likely have a better understanding of the population and search engine optimization related to that population (see **Figure 28–8e**).
- *Search sites*: A search engine is a software program used for online searching. Hundreds of search engines have been developed to find information on the Internet (see **Figure 28–8f**). Each search engine may work a little differently, but most share some common search features. For example, all search engines support keyword searches. Although keyword searches may not always be the most effective way to search, this is the search method most people use. Some search engines support an additional enhancement called concept-based searching. The search engine tries to determine what you mean and returns hits that relate to the keywords. Hits are the Web sites that contain text matching on your keywords. For example, if you search for "video games," the search engine might also return hits on sites that contain Nintendo and PlayStation. One of the best-known search engines using concept-based searching is Excite. Its search engine uses intelligent concept extraction (ICE) to learn about word relationships.

  Another feature supported by some search engines is stemming. When you search for a word, the search engine also includes other "stems" of the word. For example, when you enter the search word *play*, you may also get back results for plays, playing, and player. The dogpile Web site, displayed in Figure 28-8f, is a metasearch engine that returns results from other search engines such as Google, Bing, Ask, Yahoo, About, and several others.

- *Secure sites*: Some Web sites, such as those used for financial transactions or e-commerce, are more secure than sites that simply provide information. Most secure Web sites require you to log on using an account or user name and a password. You might see a message indicating that you are now entering (or leaving) a secure Web site, and you often see a padlock icon or another indicator in the status bar of a Web page to indicate that the information is secure. In Internet Explorer 7 and later, the Address bar turns green

when you display secure Web sites. Occasionally, messages appear questioning the security of a site you are entering. Read the information in the message carefully before deciding whether to provide sensitive or private information on such a site. The secure Web site for a federal credit union is featured in **Figure 28-8g**.

You might also be required to provide a password for a Web site that limits access to members or subscribers. For example, if you access a university's Web site, you can browse and link to many parts of the site, but you might need a password to access a professor's class-specific Web site or your student account. Or, you might be able to read the current online edition of a newspaper, but if you want to search the paper's archives, you need to provide a password to show that you are a subscriber.

Recall that HTTP is a protocol for sending data back and forth between Web servers and clients. You often see this abbreviated in the browser window as http:// and https://. The letter s in this case stands for secure. You should never enter personal information, such as your credit card number, in an http:// Web site. You should always verify that the Web address begins with https://.

- *Online applications*: Also known as *Web apps*, these sites host programs you can access with your Web browser. When using a Web app, the browser functions as a client. You interact with the software through your browser. Some programs allow you to store data on your local computer while others store your data and information on their servers. Some Web sites provide the service free of charge, and others charge a fee. For instance, TurboTax Online is a free service. However, if you choose to file online or to print a copy of your tax return, a minimum fee is charged. Google Docs and Microsoft Office Web Apps are other examples of this type of software. Both let you create documents online, edit from anywhere, and share your documents in real time for no charge (see **Figure 28–8h**).

- *Portal*: A *portal* is a Web site that features useful content but also contains links to other sites. You can use a portal as your home page. For example, *besthistorysites.net*, shown in **Figure 28–8i**, is a portal that includes links to Web sites about history and research, for example.

- *Weblog*: A Weblog, or blog, is a Web site designed as an online journal. These sites generally are maintained by one person or a small group and are similar to a diary. Postings generally are about personal experiences, hobbies, school, work, and opinion. Some companies also sponsor blogs. The blog in **Figure 28–8j** provides advice about saving and investing your money.

- *Social networking*: A *social networking site* is an online community that provides interaction for groups of people who share a similar interest or activity. Users can post online profiles, pictures, video, music, and other information. There are dozens of social networking sites, but some of the more popular include Facebook, LinkedIn, Twitter, and Digg (see **Figure 28–8k**).

- *Geographic imaging*: Mapping and *geographic imaging* Web sites use technology to change imagery of the Earth's surface into valuable information. This information is used by geographical information systems (GIS) to capture, store, analyze, and manage images. Google Earth is one example of this type of site. **Figure 28–8l** shows earthquake imaging data from the U.S. Geological Survey.

(a) Commercial　© 1996-2011, Amazon.com, Inc.　(b) Academic　© 2011 University of South Florida　(c) Organizational　© 2011 Tampa's Lowry Park Zoo.

(d) Governmental　Courtesy of USA.gov　(e) International　© Iberia　(f) Search site　© 2011 InfoSpace, Inc.

(g) Secure site　© 2011 Andera　(h) Online application　© 2011 Microsoft　(i) Portal　© 2008 EdTechTeacher Inc

(j) Weblog　© 1999-2011 by GetRichSlowly.org　(k) Social networking　© 2011 foursquare.com　(l) Geographic imaging　© 1995-2011 Esri.

FIGURE 28–8　Types of Web sites

Connecting to the Internet

3-3.1.5

Before you can access the Internet, you must connect to it. If you connect to the Internet from an office or academic setting, you probably are connecting through a local area network (LAN). You connect to the Internet using a network interface card (NIC), which is a special card inside your computer that allows the computer to be networked. A direct connection is made from the LAN to a high-speed connection line leased from the local telephone company.

Home users connect to the Internet using a dedicated high-speed digital telephone line ("dedicated" means it is always available for Internet access), a cable modem, or a wireless connection. Dial-up modems linked to telephone lines are becoming less common.

Connecting to the Internet is fairly simple and typically involves the following steps:

1. Locate an ISP or an online service. Of the thousands of ISPs, many are small local companies. Their service is primarily to provide a connection to the Internet. Other providers are large national and international companies, such as Verizon, AT&T, Comcast, and MSN. Generally, a local ISP is less expensive, but many people use the more expensive national services if they offer additional speed.

2. After you find an ISP, you must install some type of telecommunications software. This software enables your computer to connect to another computer. Your ISP or online service company provides this software, or you might be able to use software already installed on your computer. Most new computers are set up for a wireless connection.

3. You need a Web browser to visit Web sites. Most computers purchased today come with a browser already installed.

After you contract with an ISP and install telecommunications software and a browser, you are ready to connect to the Internet. This is the easy part. You may have to give instructions to your computer to dial a local telephone number if you are using a dial-up modem, but if you have a high-speed dedicated phone line, a cable connection, or a wireless service, you just start your browser. This connects you to your ISP's computer, which in turn connects you to the Internet. You are then online with the world. **Figure 28–9** shows a program that searches for available public wireless hookups, called hotspots. You can use hotspots to connect to the Internet when you cannot use your ISP, such as when you are traveling.
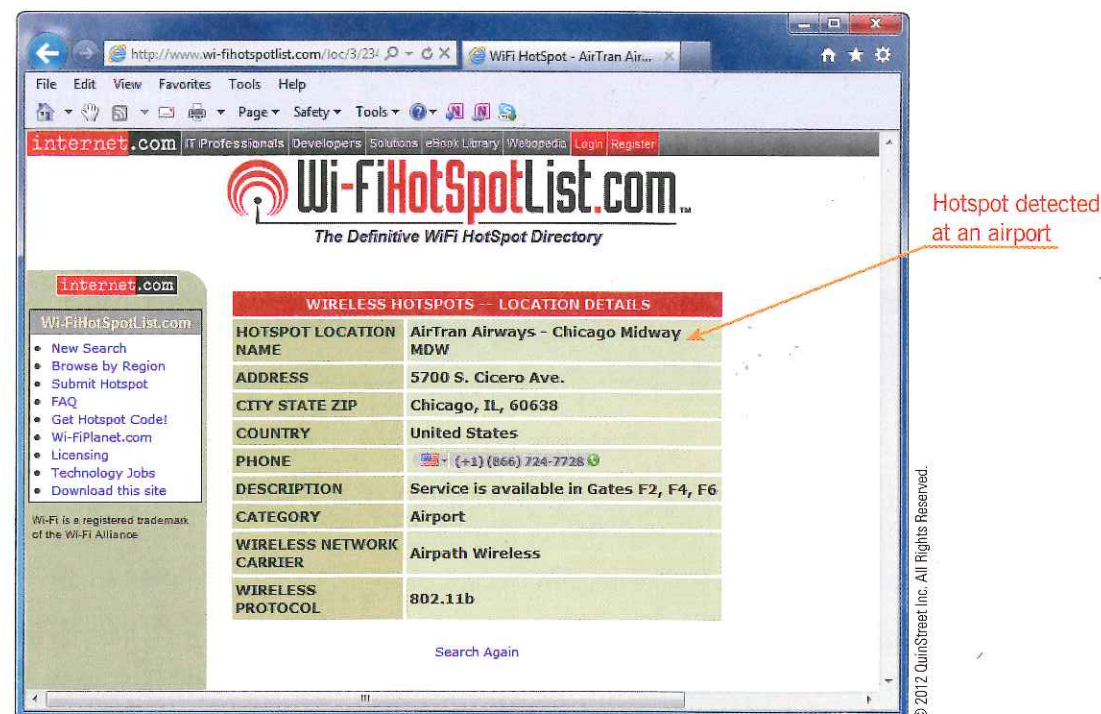
FIGURE 28–9   Searching for a hotspot

Different types of Internet connections provide a range of options. Be prepared to balance the features you want, such as connection speed and reliability, with the cost and availability of the options. For example, broadband connections can transmit multiple channels of information over a single link, so they can carry video, voice, and computer data simultaneously. Cable modems, digital subscriber lines (DSL), and T-1 lines offer high bandwidth, as opposed to a dial-up telephone modem, which has only a single bandwidth that can transmit voice or data, but not at the same time. Broadband cable connections allow home computer users to enjoy the benefits of faster connection speed and multiple channels to transmit data.

Understanding Browser Basics

Recall that a browser is a software program you use to retrieve documents from the Web and to display them in a readable format. The Web is the graphical portion of the Internet. The browser functions as an interface between you and the Internet. Using a browser, you can display both text and images. Browsers also support multimedia information, including sound and video.

To connect to the Internet, the browser sends a message to the Web server to retrieve your requested Web page. The browser then renders the HTML code to display the page. (Recall that HTML is the language used to create documents for the Web.) You navigate through the Web by clicking hyperlinked words and images.

Parts of the Browser Window

This lesson uses Microsoft Internet Explorer 9.0 as the browser. You should understand the parts of the browser window to use a browser effectively. **Figure 28–10** displays parts of the browser window. **Table 28–1** defines each part.
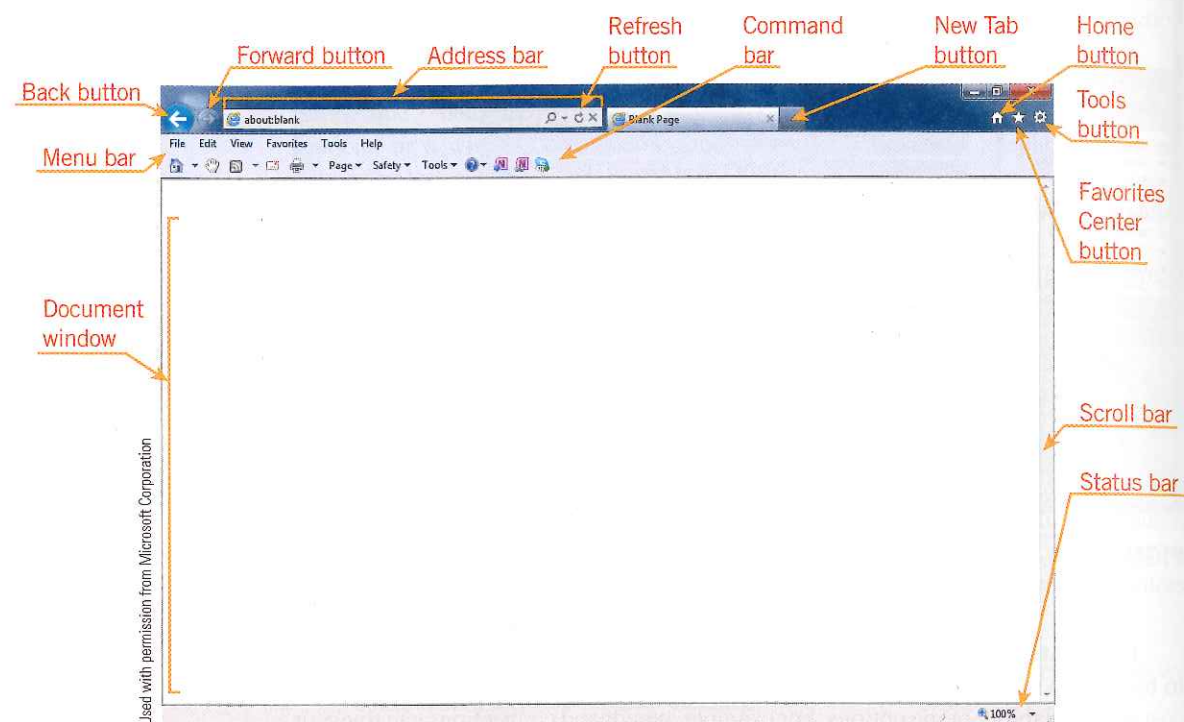

FIGURE 28–10   Parts of the browser window

TABLE 28–1   Parts of the Internet Explorer window

COMPONENT	DEFINITION
Address bar	Displays the URL or address of the active Web page; also is where you type the location for the Web page you want to visit
Back button	Displays the page you viewed before navigating to the Web page currently displayed in the browser window
Command bar	Provides a collection of buttons for selecting common commands
Document window	Displays the active Web page
Favorites Center button	Opens the Favorites Center, which lists Web pages designated as your favorites
Forward button	Displays the next page in a series of pages you previously viewed; this button is not active until the Back button has been clicked at least once
Home button	Displays the Web page designated as your home page
Menu bar	Lists menu names if you select the option to display the menu bar
New Tab button	Lets you open an additional Web page in the same browser window without closing the active page
Refresh button	Refreshes or reloads the active Web page
Scroll bar	Lets you scroll the Web page vertically, if necessary; if displayed, the horizontal scroll bar lets you scroll the Web page horizontally
Status bar	Shows status information, such as the current zoom level and the progress of Web page transactions
Tools button	Displays a menu of often-used commands

Navigating the Web

This lesson assumes that you have an Internet connection, such as a direct connection through school or a broadband connection at home. If you have a direct high-speed connection or a wireless connection, you start your Web browser to display your home page. In Windows 7, you can click the Internet Explorer icon on the task bar. If you are using a different browser, you might be able to double-click the browser icon located on your computer's desktop. If the icon is not available, open the browser from the Start menu. If you have a dial-up modem, first start your browser and then dial the Internet connection.

Your browser was installed with a default home page. The Address bar located near the top of the browser window contains the URL of the current page. The URL tells the browser where to locate the page on the Internet. If you want to visit a specific Web site, you need to know the address, which you enter in the Address bar. After you type the URL, press Enter to go to the Web site. In Step-by-Step 28.2, you visit the National Parks Service Web site and navigate through various options. Then you click the New Tab button to open another site.
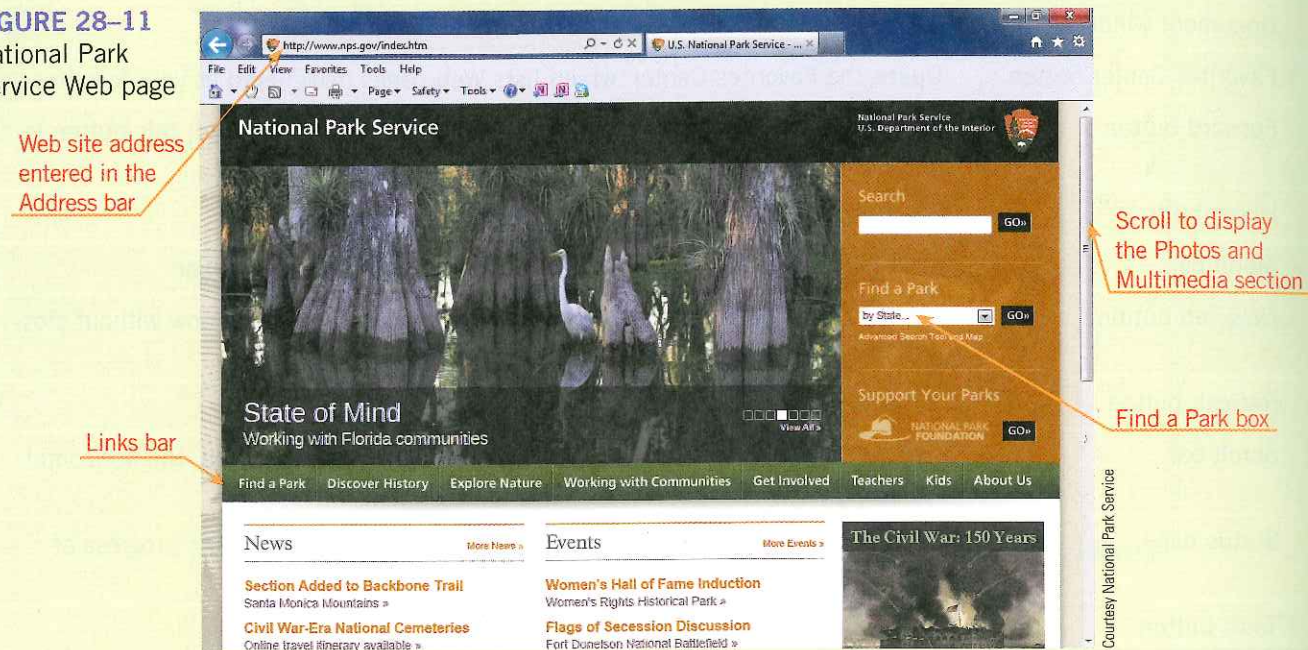
QUICK TIP

To change the default home page, visit the Web page you want to use as your home page. Click Tools on the Internet Explorer menu bar and then click Options. On the General tab of the Internet Options dialog box, click the Use default button.

Step-by-Step 28.2

1. Start your Web browser the way you usually do. The first page you see is your home page.

2. In the Address bar, type **www.nps.gov** and then press **Enter** to access the National Park Service Web page (see **Figure 28–11**). The page that appears in your browser might be different from the one shown in Figure 28–11.

FIGURE 28–11
National Park Service Web page

Web site address entered in the Address bar

Links bar

Scroll to display the Photos and Multimedia section

Find a Park box

Courtesy National Park Service

3. You can navigate through the pages of the site using a number of navigation tools:

    a. In the Links bar below the main picture, click a link of your choice and review the information on the page. Then use your word-processing program to list the main points described on that page in your ic3-28 document.

    b. Click the browser's **Back** button ← to return to the *nps.gov* home page.

    c. Scroll down to the Photos and Multimedia section. Click each item and then review the content.

    d. In your word-processing document, write a short overview of the content that you reviewed.

    e. Click the **Find a Park** box in the upper-right part of the page, and then click the name of your state. Select a link on the page, and then read the information. Click the **Back** button ← as many times as necessary to return to the *nps.gov* home page.

    f. Below the Links bar are lists of news and events links. Click one of the links (your choice) and then scroll to view the entire page.

4. Press the **Print Screen** key to copy an image of the Web page to the Windows Clipboard. Paste the image into your ic3-28 document.

5. Click below the image, press **Enter**, and then add your name and the current date to the document. Create a list describing the article and features on the page you selected.

6. Save the document. Keep the document and the Web browser open for the next Step-by-Step exercise.
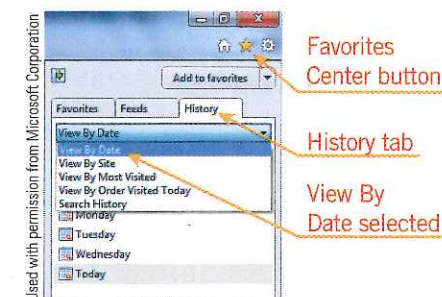
Refreshing or Reloading a Web Page

Cache memory is high-speed RAM that serves as a temporary storage area for data you access frequently. When you visit a Web page, a copy of the contents of the Web page is stored in your cache. If you access a Web page that contains updated information, such as a daily newspaper, most likely you will need to refresh or reload the information. Internet Explorer provides the following three options for reloading your browser:

- Click the Refresh button on the Address bar.
- Select View on the menu bar and then click Refresh.
- Press the F5 key.

Recent History

Your browser tracks the sites you have visited for a specified period of time. The default setting in Internet Explorer, for example, is to keep track of sites visited for approximately three weeks. You can view a list of recently visited Web sites by clicking the Favorites button and then clicking the History tab. You can display the list of visited Web sites using the following View options: By Date, By Site, By Most Visited, and By Order Visited Today. A Search History option is also available. In **Figure 28–12**, View by Date is selected.

IC3
3-3.1.6

QUICK TIP

Clear the cache regularly so you do not slow down the loading, displaying, and exiting of Web pages. To do so, click Safety on the Command bar and then click Delete Browsing History. This deletes temporary files, browsing history, cookies, saved form information, and saved passwords but not your list of Favorites or subscribed feeds.
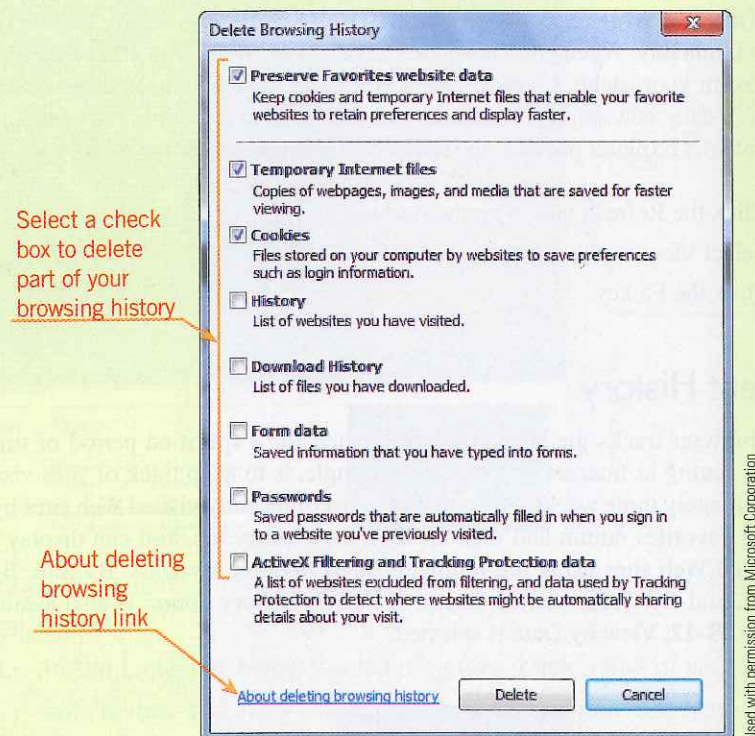
IC3
3-3.1.7

Used with permission from Microsoft Corporation

Favorites Center button

History tab

View By Date selected

FIGURE 28–12   Displaying a recent history of visited Web sites

In Step-by-Step 28.3, you learn how to clear the History list, reload a Web page, and then display the history of recently visited Web sites.

Step-by-Step 28.3

1. In your browser, click the **Home** button 🏠 to return to your home page.

2. Click the **Refresh** button 🔄 to make sure the most recent version of the page is loaded. Do you notice any changes to the page after it has reloaded?

3. Click **Safety** on the Command bar, and then click **Delete browsing history** to display the Delete Browsing History dialog box (see **Figure 28–13**).

FIGURE 28–13
Delete Browsing History dialog box

Select a check box to delete part of your browsing history

About deleting browsing history link

Used with permission from Microsoft Corporation

4. The Delete Browsing History dialog box provides check boxes you select to delete temporary Internet files, cookies, history, form data, and passwords. Click the **About deleting browsing history** link, and then read the Help topic to learn about deleting browsing history.

5. Close the Windows Help and Support window and the Delete Browsing History dialog box.

6. If necessary, open your **ic3-28** document. Write a paragraph explaining what you learned about deleting browsing history. Save your document. Keep the document and your Web browser open for the next exercise.


Finding Text on a Web Page

When searching for information on the Internet, the most widely used tool is a search engine. Because large Web sites contain many pages and links, they often provide a search tool specific to the site. You can also use the Find bar to find text on a Web page. Complete Step-by-Step 28.4 to use the Find bar.

IC3
3-3.1.8

Step-by-Step 28.4

1. Return to the home page of the National Park Service Web site using any technique you learned in this lesson. For example, click the **Back** ⬅ button or use the History list. Scroll down, if necessary, to display the nps.gov section.
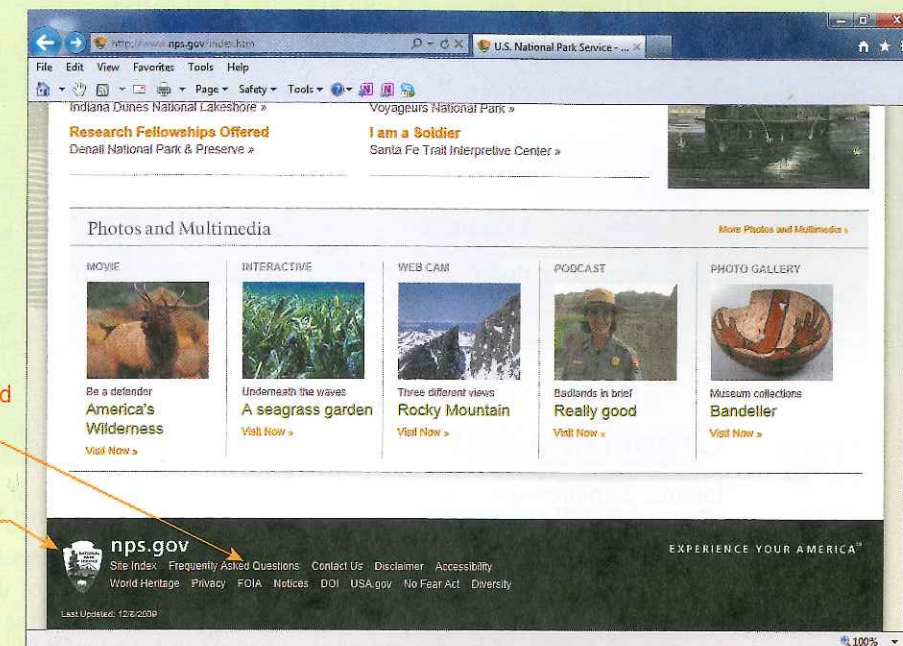
FIGURE 28–14
Home page of the National Park Service Web site

Frequently Asked Questions link

nps.gov section

Courtesy National Park Service

2. Press and hold the **Ctrl** key, and then click the **Frequently Asked Questions** link to open the Frequently Asked Questions page on a new tab (see **Figure 28–15**).
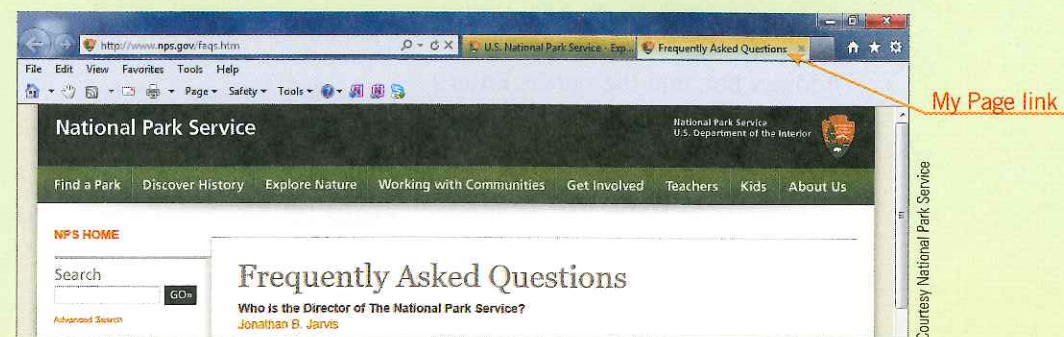
FIGURE 28–15
Frequently Asked Questions page

My Page link

Courtesy National Park Service

3. Scroll the page and view its contents. Press **Ctrl+F** to display the Find bar below the Command bar (see **Figure 28–16**).

FIGURE 28–16
Displaying the Find bar

Find box

Close the Find bar button

Find bar

Courtesy National Park Service
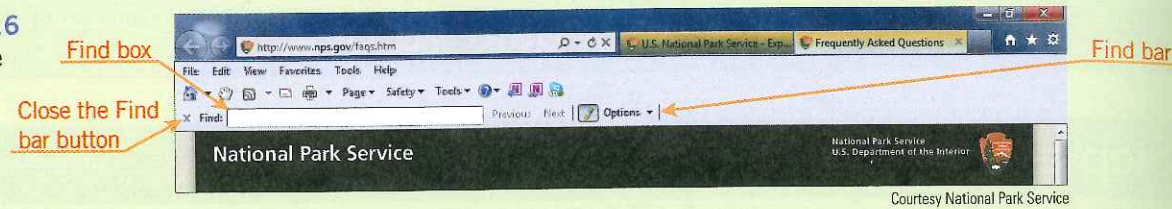
4. In the Find box, type **recreation**, and then press **Enter** to find the first instance of *recreation*. Click the **Next** button repeatedly to find all instances of *recreation* on the page.

5. Click the **Close the Find bar** button ☒ to close the Find bar, and then return to the home page of the National Park Service Web site (see **Figure 28–14**).

6. Scroll to the top of the page. In the Search box, type **recreation** and then press **Enter**. Review the first page of search results.

7. If necessary, open your **ic3-28** document. Write a paragraph describing the difference between using the Find box and using the Search box. Save your document.

8. Keep your document and Web browser open for the next Step-by-Step exercise.

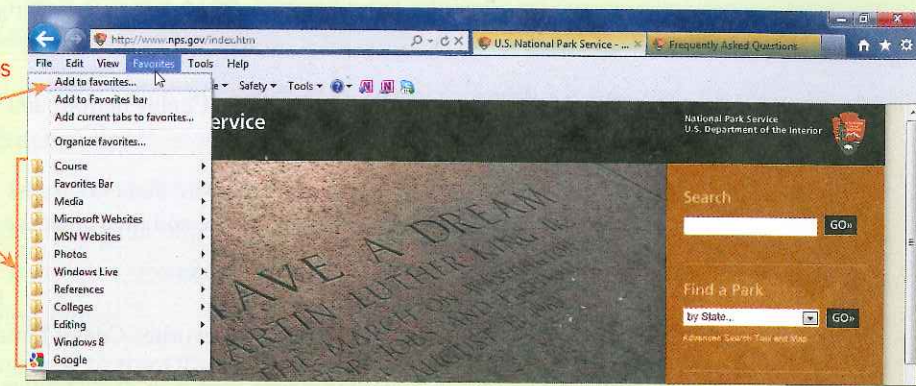### Organizing and Managing Favorites

3-3.1.9

Internet Explorer and other browsers provide a tool that makes it easy for you to return to a particular Web site or to easily access a Web site that you visit frequently. Internet Explorer refers to these links as favorites. Other browsers refer to these as bookmarks. The Favorites list contains the addresses (URLs) of designated sites. When you add a Web site to your Favorites list, you can access the site by clicking the site name. In Step-by-Step 28.5, you add a Web page to your Favorites list.

Step-by-Step 28.5

1. Return to the *nps.gov* Web page. (If necessary, type **www.nps.gov** in the Address bar, and then press **Enter**.)

2. If the menu bar is not displayed, click **Tools** on the Command bar, point to *Toolbars*, and then click **Menu bar**. Click **Favorites** on the menu bar to display the Favorites list, as shown in **Figure 28–17**. Your Favorites list is most likely different from the one shown in Figure 28–17.
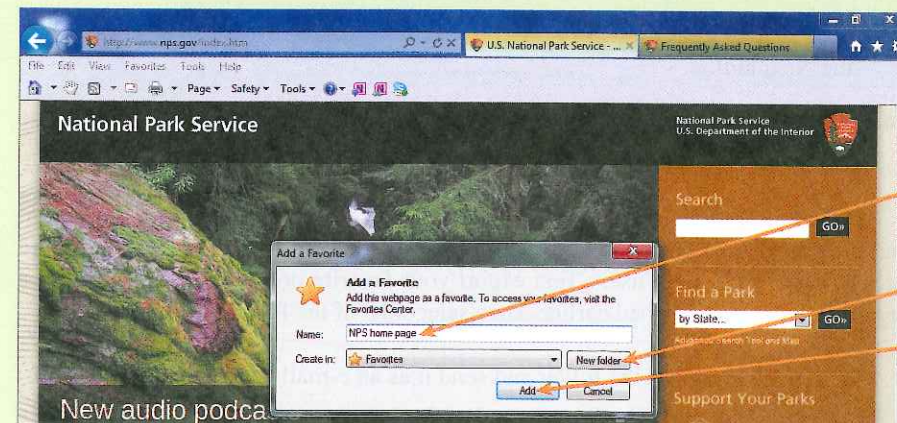
FIGURE 28–17
Favorites list

Add to favorites command

Favorites list

3. Click the **Add to favorites** command to display the Add a Favorite dialog box. In the Name text box, replace the Web site name with **NPS home page** (see **Figure 28–18**). This favorite name will appear in the Favorites list.

FIGURE 28–18
Adding a favorite site

Name for the favorite

New folder button

Add button

Courtesy National Park Service

4. Click the **New folder** button, and then type **environment** as the folder name.

5. Click the **Create** button to create the folder. In the Add a Favorite dialog box, make sure the Create in button displays *environment* as the location for creating the favorite, and then press the **Print Screen** key to copy an image of your desktop to the Windows Clipboard. Paste the image into your ic3-28 document, and then save the document.

6. In the Add a Favorite dialog box, click the **Add** button to add the environment folder and the *nps.gov* Web page to the Favorites list.

7. Click the **Close Tab** button ☒ on the Frequently Asked Questions page tab to close the Web page.

8. Keep your ic3-28 document and Web browser open for the next Step-by-Step exercise.

After you add a Web site as a favorite or bookmarked site, you can access a site, move a favorite or bookmarked site between folders, and share favorite or book-marked sites with other users. To access a favorite site:

1. Open Internet Explorer, click the Favorites Center button, and then click the Favorites tab, if necessary.

2. If the site is not stored in a folder, click the site name to access the site. If the site is stored in a folder, click the folder name and then click the site name.

To move favorite or bookmarked sites between folders:

1. Open Internet Explorer, and then click the Favorites Center button.

2. Click the Add to favorites button arrow, and then click Import and export to display the Import/Export Settings Wizard.

3. Click the Export to a file option button, and then click the Next button.

4. If necessary, click the Favorites box to insert a check mark. Click the Next button.

5. Select the favorites folder (or all folders) that you want to export, and then click the Next button.

6. Enter or select the location for the exported favorites, and then click the Export button.

Internet Explorer creates a file titled bookmark.htm in the folder you specified and then exports your favorites into this folder. To export favorites or bookmarked sites to share with other users, first export your favorite or bookmarked sites into a separate folder as described earlier. Then select one of the following options:

- Option 1: Compress the folder and send it as an e-mail attachment.
- Option 2: If you use the Google toolbar, look for an option to export the favorite or bookmarked sites.

IC³
3-3.1.11

Downloading a File from a Web Site

You can download a file such as a program, graphic, or document from a Web page. Note that you should download files only from reliable sources, but there are many of these on the Web, including shareware and freeware sites. These sites offer useful computer programs and games that you can download for a small fee or at no cost. In other instances, you may need to download a patch or an update from a software manufacturer for a program installed on your computer, or you may want to download clip art, an informational file, or an audio or video clip. Most sites that have files to download provide an interface that makes the process of downloading simple. In the next Step-by-Step exercise, you download clip art.

Step-by-Step 28.6

1. In your browser, type **microsoft clip art** in the Address box and then press **Enter**. A list of search results is displayed.

2. One of the links in the search results list is to the Office online clip art collection, located at *office.microsoft.com/en-us/images*. The link is identi-fied as *Images - Clip Art, Photos, Sounds, & Animations - Office.com*, or something similar.

3. Click the link to the Office online clip art collection to open the Office online clip art gallery. See **Figure 28–19**. The featured galleries change frequently, so the one displayed in your browser will probably differ from the one shown in Figure 28–19.
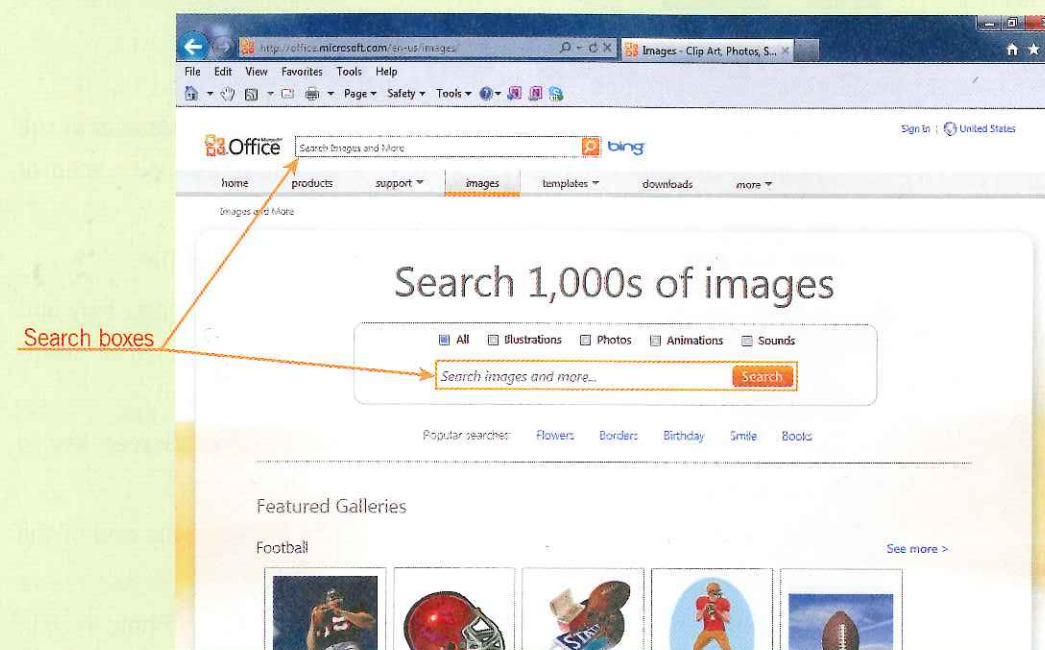
FIGURE 28–19
Office online clip art gallery

Search boxes

4. In a Search box, type **technology** and then press **Enter**.

5. When the results appear, point to a clip art image of a computer or a computer-related item to display a selection box with options for working with the image (see **Figure 28–20**).

Options appear
when you point
to an image

download link

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6. Click the **download** link in the selection box. A message appears at the bottom of the Internet Explorer window, asking if you want to open or save the image file.

7. Click the **Save** button to save the image as a downloaded file.

8. To open the downloaded image file, click **Tools** on the menu bar, and then click **View downloads**. The image file appears in the list of downloaded files in the View Downloads window.

9. Click the **Open** button to open the file. Press the **Print Screen** key to copy an image of your desktop to the Windows Clipboard.

10. Open the **ic3-28** document and then paste the image at the end of the document. Save the document.

11. Close the program displaying the image, such as Windows Photo Viewer, and then click the **Close** button to close the View Downloads window.

12. Keep the ic3-28 document and your Web browser open for the next Step-by-Step exercise.

Copying and Printing Information from a Web Page

3-3.1.10
3-3.1.12

You can copy and save specific elements of a Web page to disk and use them in a new document or file. For example, you might want to save a photographic image to disk or copy a paragraph of text you want to quote in a report. You can then open these in other programs or paste them into new files, such as a word-processing document, where you can edit and manipulate them as desired.

You can also print a copy of a Web page directly from your browser. Most browsers provide previewing and page setup options that enable you to control how the Web page prints. Make sure your instructor has given you permission to print a Web page before completing the following exercise.

In Step-by-Step 28.7, you copy text and an image from a Web site to a Word document and then print information from a Web site.

Step-by-Step 28.7

1. Return to the NPS Home page you accessed earlier. (*Hint*: Use the Favorites list to return to the page.)

2. Click the **Explore Nature** link in the Links bar to display the Explore Nature page. Select a paragraph of text, right-click the selected text, and then click **Copy** on the shortcut menu to copy the text.

3. Switch to Word, and then paste the text into a new blank document.

4. Save the document with a name of your choice in the location where you save your assignments.

5. Return to your browser. Right-click a graphic image of your choice to display a shortcut menu (see **Figure 28–21**), and then click **Save picture as**. Save the picture with its default filename in the location where you save your assignments.

Shortcut menu
for picture

Save picture as
command

Courtesy National Park Service
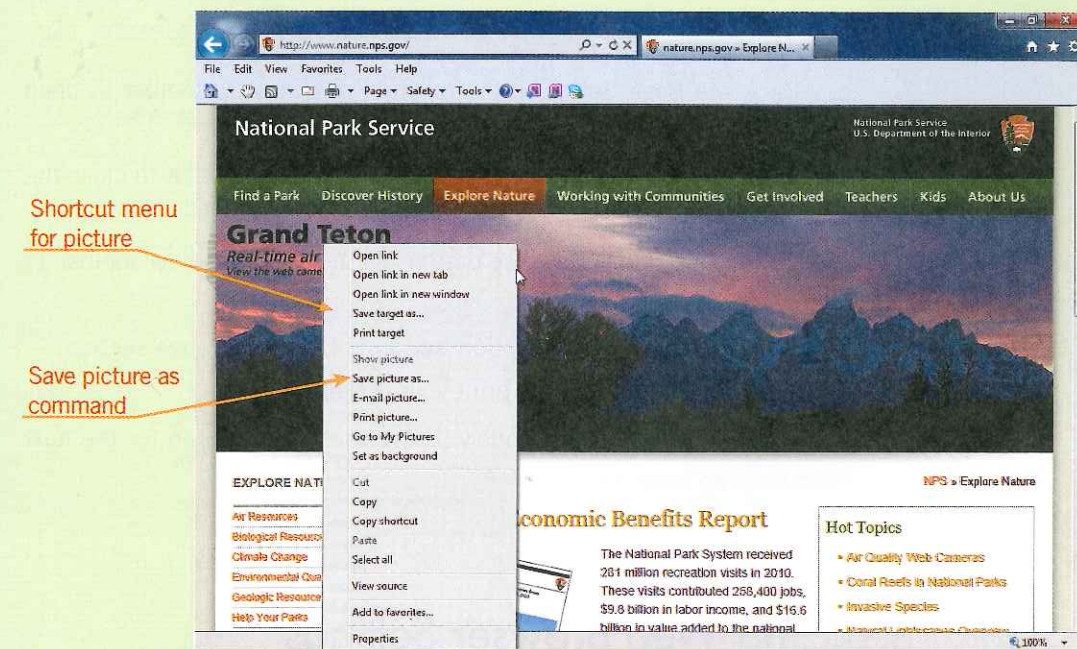
6. In Word, click the **Insert** tab and then click the Picture button in the Illustrations group to insert the picture in the same document in which you saved the text in Step 4.

7. Save the document, then close it and return to your browser.

8. Click **File** on the browser's menu bar, and then click **Print preview** to preview the Web page (see **Figure 28–22**). Your image will differ.

FIGURE 28–22
Displaying a Web page in Print Preview

Print Document button

Page Setup button

Used with permission from Microsoft Corporation
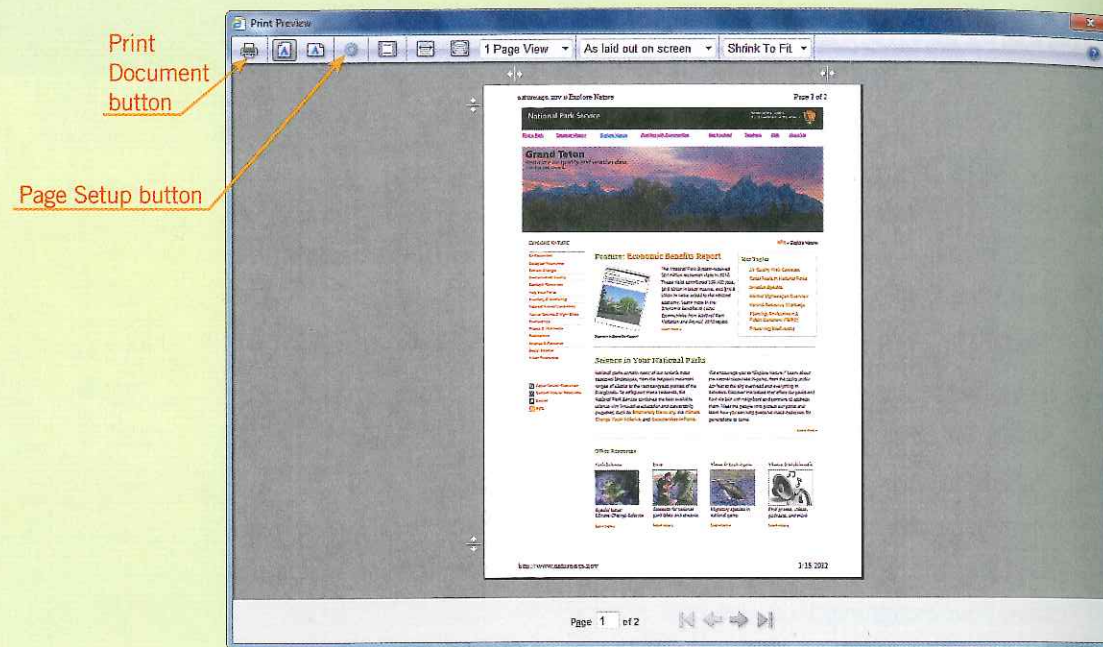
9. To print the Web page:

   a. Click the **Page Setup** button on the Print Preview toolbar to open the Page Setup dialog box.

   b. Change the top margin to **0.5** inches and then click **OK** to close the Page Setup dialog box.

   c. Click the **Print Document** button on the Print Preview toolbar to open the Print dialog box.

   d. Click the **Current Page** option button in the Page Range section.

   e. Click the **Print** button to print your document.

10. You return to the browser window. Leave the browser open for the next Step-by-Step exercise.
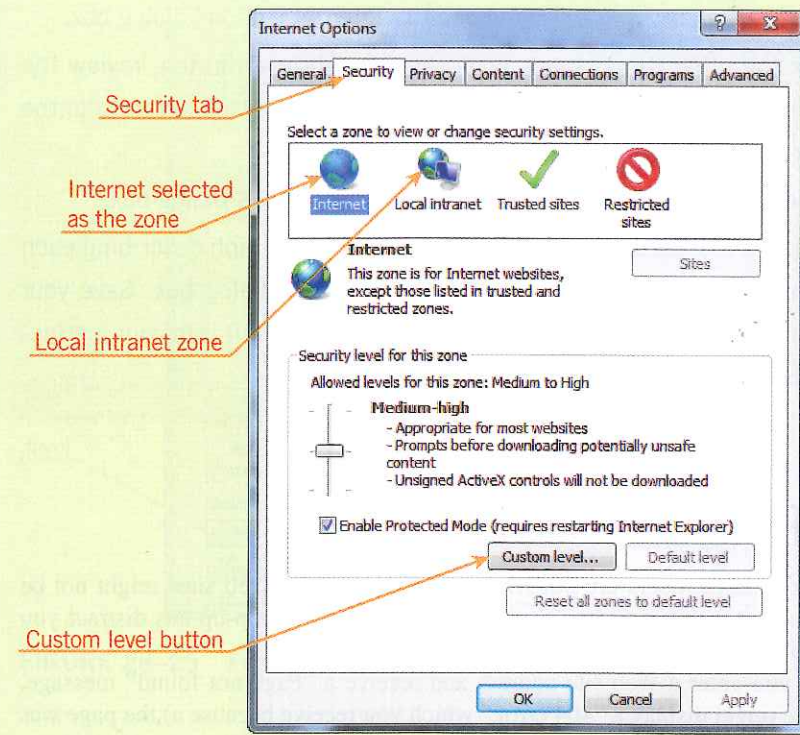
IC³
3-3.1.13

Selecting Web Browser Settings

As you become an experienced Internet user, you may find that you want to change your browser's security settings. In Step-by-Step 28.8, you review these security options.
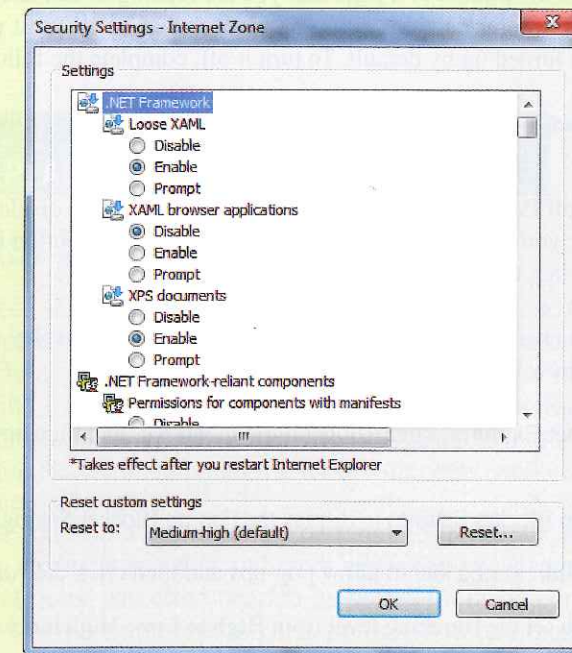
Step-by-Step 28.8

1. In Internet Explorer, click **Tools** on the Command bar, click **Internet options** to open the Internet Options dialog box, and then click the **Security** tab. See **Figure 28–23**.

FIGURE 28–23
Security tab in the Internet Options dialog box

Security tab

Internet selected as the zone

Local intranet zone

Custom level button

Used with permission from Microsoft Corporation

2. Internet should be selected as the zone. Click **Local intranet** and review those settings. Then review the settings for Trusted sites and for Restricted sites.

3. Click the **Internet** zone icon and then click the **Custom level** button to display security settings for the Internet zone. Use the scroll bar to view the various options (see **Figure 28–24**).

FIGURE 28–24
Security Settings - Internet Zone dialog box

Used with permission from Microsoft Corporation

4. Click the **Cancel** button to return to the Internet Options dialog box.

5. Click the other three zones, click the **Custom level** button, review the settings for each zone, and then click the **Cancel** button to return to the Internet Options dialog box.

6. Click the **Cancel** button to close the Internet Options dialog box.

7. Open the **ic3-28** document, and then write a paragraph describing each of the four zones listed in the Internet Options dialog box. Save your document, and then close your ic3-28 file and submit it to your instructor as requested.

Identifying Browser Issues

3-3.1.14

The Internet and browsers are not without their problems. Web sites might not be displayed, a page is slow to load or the text is garbled, or pop-up ads distract you from or block the content on the page.

When you enter a Web site address and receive a "Page not found" message, the Web site might display a "404 error," which you receive because a) the page was moved, b) an old index is still maintained in a search engine, or c) you made a typing error when entering the Web site address. In some instances, the Web site is temporarily unavailable because the server is offline or the site is being updated.

A Web page may load slowly because of heavy server traffic or the page may contain a large number of images. A garbled or offset page could result from a number of issues, such as the rendering technique used by the browser. If you are using a recent browser, such as Internet Explorer 9, you can use the Compatibility View command to try to display the Web page using older settings.

Pop-up ads are another annoyance. Advertisers place these ads on Web sites and they pop up in the middle of a page that you are reading to call attention to their content. Internet Explorer contains a pop-up blocker that limits most pop-ups. The pop-up blocker is turned on by default. To turn it off, complete the following steps:

1. Open Internet Explorer, click Tools on the menu bar, and then point to Pop-up Blocker.

2. Click Turn off Pop-up Blocker. If a confirmation window is displayed asking if you are sure you want to turn off the blocker, click the Yes button to turn off the blocker or click the No button to cancel the request.

You can also change the settings to allow specific sites to display pop-ups. The following steps show how to select specific sites:

1. Open Internet Explorer, click Tools on the menu bar, and then point to Pop-up Blocker.

2. Click Pop-up Blocker Settings to display the Pop-up Blocker Settings dialog box.

3. Select the address of a site to allow pop-ups and then click the Add button.

4. You can also set the Blocking level from High to Low: High blocks all pop-ups, Medium blocks most automatic pop-ups, and Low allows pop-ups from secure sites (see **Figure 28–25**).
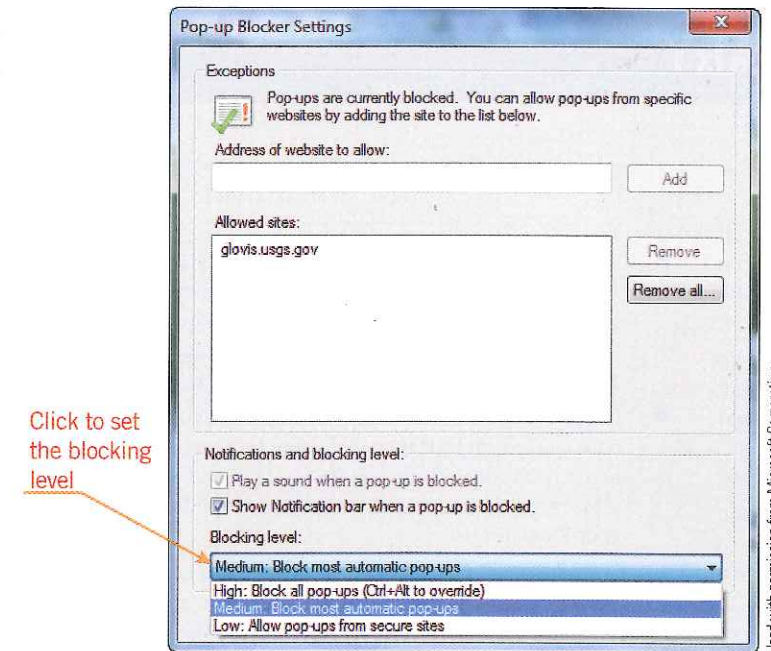
FIGURE 28–25   Pop-up Blocker Settings dialog box

WORKPLACE READINESS

Digital Literacy

To succeed in today's workplace, you need digital literacy, the ability to find, organize, understand, and analyze information using digital technology, including computing devices and the Internet. If you have digital literacy, you can communicate, collaborate, and work effectively, especially using online tools.

To find a job or select a career, you can take advantage of Web sites that provide information about job openings. Most of these sites also offer articles and videos about developing job-seeking and career-building skills, such as preparing for an interview, working with colleagues on a team, and solving typical workplace problems.

After you find a job, you may be required to have at least a basic knowledge of computers and the Internet; some careers demand more advanced knowledge or mastery. To be promoted in white collar or blue collar jobs, you often need to be proficient using portable devices such as smart phones and tablets. Digitally literate employees are also proficient in text messaging, blogging, creating a Web page, participating in social networking sites, creating and sharing podcasts, conducting and analyzing online searches, and using online collaboration tools.

SUMMARY

In this lesson, you learned:

- The Internet and the Web have their own terminology. You should be familiar with terms such as ActiveX, cookies, digital certificate, and domain.

- A Web page can be solely a text document or it can be made up of elements such as Web site addresses that link to other Web sites; audio, video, graphics, or other media; hyperlinked text and hyperlinked graphics; and interactive objects such as buttons, text boxes, option buttons, check boxes, menus, and lists.

- Select an Internet connection to balance the features you want, such as connection speed and reliability, with the cost and availability of the different options. For example, broadband connections allow multiple channels of information to be transmitted over a single link so more than one channel of video, voice, and computer data can be carried simultaneously.

- Parts of the Internet Explorer browser window include the Address bar, document tabs, status bar, and Command bar.

- A browser displays a home page when it starts. You use the Address bar to verify the address of the current page and enter addresses to visit other pages. A Web address is called the Uniform Resource Locator (URL), which uniquely identifies each Web page and tells the browser where to locate the page.

- Internet Explorer and other browsers provide a favorite or bookmarked sites list to make it easy for you to return to a particular Web site you visit frequently. Internet Explorer provides a Favorites Center that lists and organizes the Web pages in your Favorites list.

- Web sites used for financial transactions or e-commerce usually use encrypted communication to make them more secure than sites that simply provide information. Some Web sites also require you to log on using an account or user name and a password.

- Problems associated with using the Web include not being able to display Web sites, navigating to pages that are slow to load or contain garbled text, or finding pop-up ads distract you from or block the content on the page.

LESSON REVIEW

TRUE / FALSE

Circle T if the statement is true or F if the statement is false.

T   F   **1.** You can print a copy of a Web page directly from your browser.

T   F   **2.** Online Web applications are known as Web apps.

T   F   **3.** It is safe to download any document from the Web.

T   F   **4.** A browser displays the last page viewed when it starts.

T   F   **5.** Internet Explorer is considered a Web browser.

MULTIPLE CHOICE

Select the best response for the following statements:

1. A _____ _____ can be a simple text document, or it can contain hyperlinked text and graphics along with other elements.

   A. Web cache   C. Web site

   B. Web page   D. client page

2. Web sites used for financial transactions generally use _____ communications.

   A. accessible   C. encrypted

   B. personal   D. graphical

3. A Web page may load slowly because of _____.

   A. heavy service traffic C. domain overload

   B. bookmarked sites   D. missing Command bar

4. Which of the following is *not* a reason you might receive a "Page not found" or "404 error"?

   A. You made a typing error when entering the Web site address.   C. The page was moved.

   B. The browser uses "fit-to-width" rendering.   D. The site contains pop-up ads.

5. The first graphical browser was named _____.

   A. Mosaic   C. Internet Explorer

   B. Netscape   D. Wiki

FILL IN THE BLANK

Complete the following sentences by writing the correct word or words in the blanks provided:

1. Web sites store _____ on your computer so that when you return to a site, it displays any preferences or other customized settings you selected.

2. A(n) _____ identifies a computer or Web site on the Internet.

3. When data is stored in a(n) _____ _____, a Web site can quickly access the stored copy rather than downloading the data again.

4. In Internet Explorer, the _____ _____ button lets you open an additional Web page in the same browser window without closing the active page.

5. The protocol used for secure Web sites is _____.

PROJECTS

PROJECT 28–1

IC³ 3-3.1.2

A digital certificate was briefly discussed in this lesson. Use your Web browser and search for information referring to a digital certificate. Then write a paragraph or two describing the function of a digital certificate and how it is used. Answer the following questions:

1. To what is a digital certificate attached and why?

2. What is the most common use of a digital certificate?

3. Which companies provide digital certificates?

4. What types of files are public keys and private keys?

5. What is the most widely used standard for digital certificates?

PROJECT 28–2

IC³ 3-3.1.1

Domains and the domain name system (DNS) are discussed briefly in this lesson. Using the Internet and other resources, prepare a short report that includes the following information:

- Purpose of a domain name

- Definition of DNS

- Purpose of DNS

- How DNS makes it possible to assign domain names to groups of Internet resources

PROJECT 28–3

Several countries, including the United States, have proposed a taxing plan for the Internet. Complete the following:

1. Research the proposal for taxing Internet usage online. What are Internet taxes and how are they charged?

2. Prepare a one-page report discussing this topic. Answer questions such as the following:

   - Do you think Internet usage will eventually be taxed? Why or why not?

   - Do you think Internet usage should be taxed? Explain your answer.

   - Discuss the pros and cons of taxing the Internet.

TEAMWORK PROJECT

IC³ 3-3.1.5 3-3.1.6 3-3.1.7

This lesson describes several features of Web browsers such as Internet Explorer. Work with a partner to determine which of these features each of you would most likely use and why you would use it.

1. Make a list that includes all the browser features that were mentioned in this lesson, and make two columns, one for each member of your team.

2. Use a ranking scale of 1 to 5 (1 means you would probably never use this feature and 5 means that you would definitely use it) to rank how important you and your partner think each feature is.

3. Work together to prepare a report that explains your rankings and why you ranked each feature as you did.

■ CRITICAL THINKING

Wikis are quickly becoming a popular way to share information on the Internet. Use your favorite search engine to find out more about wikis, including the following information:

- Definition of "wiki"
- Why wikis are useful

- How businesses use wikis
- Characteristics of wikis
- Security concerns
- Examples (4–5) of wikis

IC³
3-3.1.4

■ ONLINE DISCOVERY

Google is more than a search engine. It provides services and Web apps in categories such as Mobile, Media, Geo, Home & Office, and Social. Visit the Google Products page by opening the Google home page in your browser (*www.google.com*), clicking the More button on the bar at the top of the page, and then clicking Even more. Select one tool or Web app that you have not used before. Research the following information about the Google tool you selected:

- Purpose of the tool
- Examples of how people use the tool
- Steps you perform to complete a typical task

■ JOB SKILLS

As mentioned in the Workplace Readiness sidebar, career Web sites such as *careerbuilder.com* and *monster.com* provide articles, videos, advice, and other resources to prepare for a job search, develop a career, change careers, and other topics. Visit a career Web site in the following list, and then search for an article that discusses using the Internet and the Web in a job search or on the job. List at least four ideas, tips, or steps mentioned in the article.

- *www.onestopcoach.org*
- *www.rileyguide.com/prepare.html*
- *www.job-hunt.org*
- *www.careerbuilder.com*

Estimated Time:
1 hour

LESSON 29

Web Content

■ OBJECTIVES

Upon completion of this lesson, you should be able to:

- Understand Internet content.
- Search for information on the Web.
- Use a search engine.
- Evaluate the quality of Internet information.
- Identify how to evaluate the quality of information.
- Observe intellectual property laws.

■ DATA FILES

You do not need data files to complete this lesson.

■ WORDS TO KNOW

blog

Boolean logic

copyright

directory

feed

index

keyword

libel

link list

math symbol

news feed

phrase searching

plagiarism

podcatcher

public domain

related search

search engine

shared bookmark

trademark

wiki

wildcard character