

Lesson 28

Using the Internet and the World Wide Web

**Computer Literacy
BASICS: A
Comprehensive Guide
to IC³, 4th Edition**

Objectives

- Explore the Internet and the Web.
- Define Internet terminology.
- Connect to the Internet.
- Understand browser basics.
- Select Web browser settings.
- Identify browser issues.

Vocabulary

- 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

Vocabulary (continued)

- portal
- Secure Sockets Layer (SSL)
- social networking site
- Uniform Resource Locator (URL)
- Web 2.0
- Web app
- Web cache
- wiki

Exploring the Internet and the Web

- The Web is part of the Internet.
- The Internet can exist without the Web, but the Web cannot exist without the Internet.
- The Web began in 1990, when Dr. Tim Berners-Lee wrote a small program for his own use called Hypertext Transfer Protocol (HTTP).
- HTTP became the language computers use to transmit hypertext documents over the Internet.
- Dr. Berners-Lee then developed Hypertext Markup Language (HTML), which creates hyperlinked documents.

Exploring the Internet and the Web (continued)

- In 1993, the number of people using the Web increased significantly.
- Marc Andreessen, working for the National Center for Supercomputing Applications at the University of Illinois, released Mosaic, the first graphical browser.
- With the introduction of Mosaic and Web browsers that followed, the Web became a communications tool for a much wider audience.
- In 2004, the phrase Web 2.0 was coined. The most popular definition refers to Web sites where users can modify content.

Defining Internet Terminology

- Active X 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.
- A cookie is a small text file that Web sites put on your computer to store information about you and your preferences.
- You need to balance the ease of use provided by cookies with security concerns and the amount of storage space available on your computer.

Defining Internet Terminology (continued)

- A digital certificate is an electronic document similar to an ID card that verifies the identity of a person or company and confirms that they own a public key.

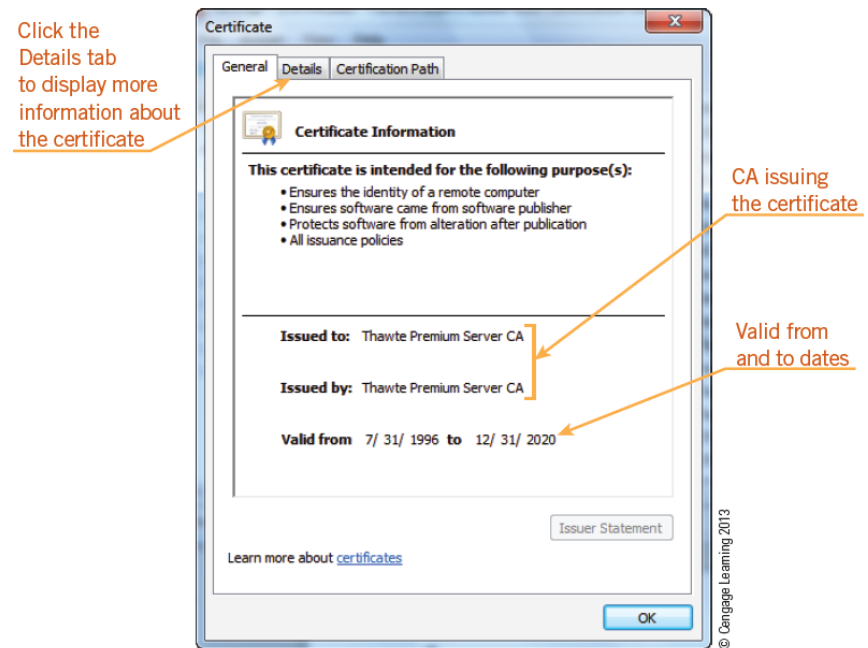


FIGURE 28–4 Digital certificate

Defining Internet Terminology (continued)

- A domain identifies a computer or Web site on the Internet.
- 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.
- File Transfer Protocol (FTP) is used to transfer files between computers.
- A home page is the first page that appears in the browser when you visit a Web site.

Defining Internet Terminology (continued)

- An Internet service provider (ISP) is a numerical addressing system that uniquely identifies computers and networks linked to the Internet.
- An Internet Protocol (IP) address is a numerical addressing system that uniquely identifies computers and networks linked to the Internet.
- 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 personal digital audio player.

Defining Internet Terminology (continued)

- 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.
- Web cache is a temporary storage area on your computer for collecting data.

Defining Internet Terminology (continued)

- A wiki is a collaborative Web site that people can use to add, edit, remove, and organize Web page content.
- Extensible Markup Language (XML) is a flexible text format for creating structured computer documents.

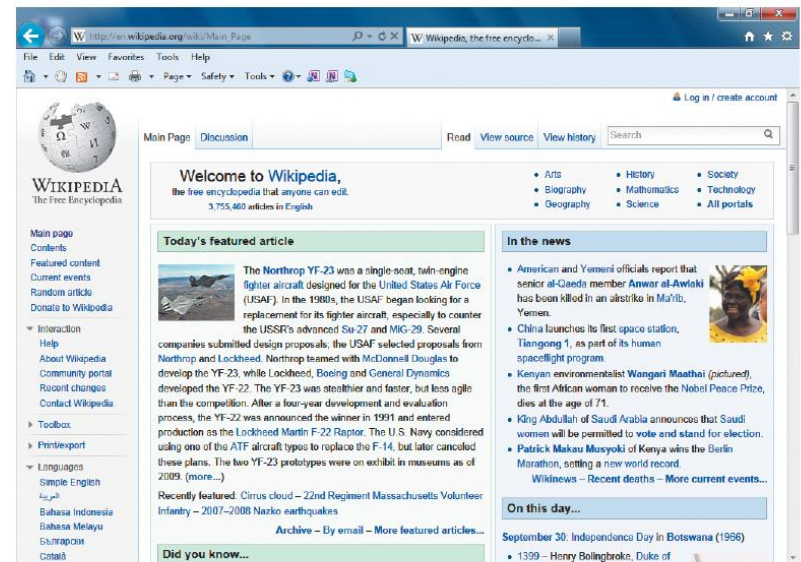


FIGURE 28-6 Wikipedia Web site

Defining Internet Terminology (continued)

- **Understanding Web Page Elements:**
- A Web page can be a simple text document or it can contain 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

Defining Internet Terminology (continued)

- Understanding Web Page Elements (continued):
- A Web page that contains most of these elements

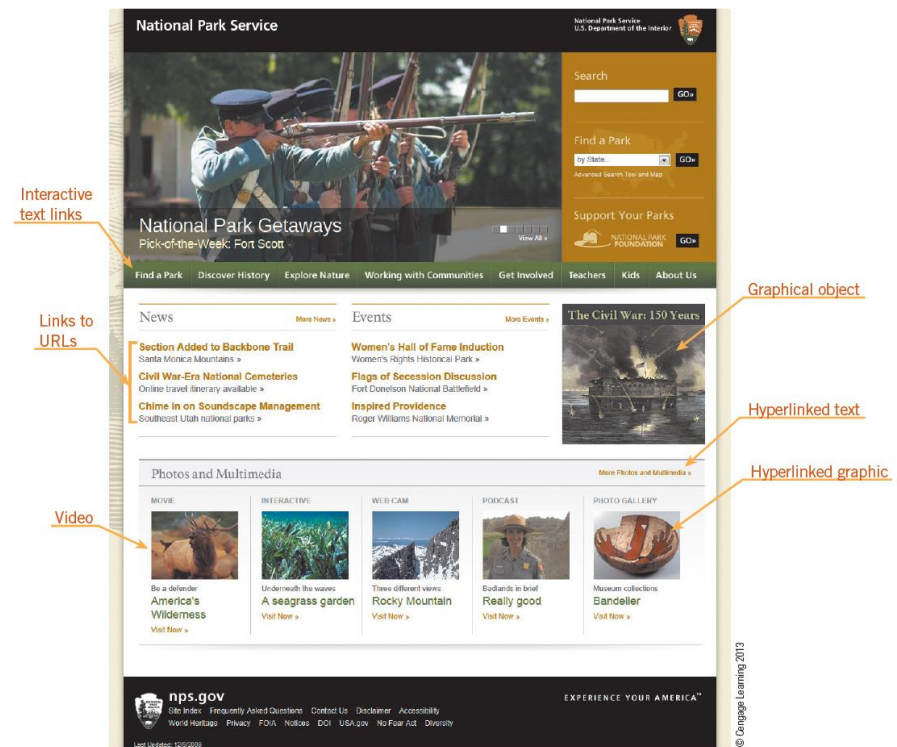


FIGURE 28-7 nps.gov Web page

Defining Internet Terminology (continued)

- **Understanding Web Page Elements (continued):**
- Web sites can be organized into categories, each with a different purpose, such as the following:
 - Commercial: Known as e-commerce, sites that sell or promote products or services.
 - Academic: Most educational facilities, elementary to university and public to private, have a Web site.
 - Organizational: Web sites of nonprofit organization and advocacy groups.

Defining Internet Terminology (continued)

- **Understanding Web Page Elements
(continued):**
 - Governmental: Most local, state, regional, and national governments have Web sites.
 - International: Web sites hosted in other countries.
 - Search sites: A search engine is a software program used for online searching.
 - Secure sites: Web sites used for financial transactions or e-commerce are more secure than sites that simply provide information.

Defining Internet Terminology (continued)

- **Understanding Web Page Elements
(continued):**
 - Online applications: Known as Web apps, these sites host programs you can access with your Web browser.
 - Portal: A portal is a Web site that features useful content but also contains links to other sites.
 - Weblog: A Weblog, or blog, is a Web site designed as an online journal.
 - Social networking: A social networking site is an online community that provides interaction for groups of people who share a similar interest or activity.

Defining Internet Terminology (continued)

- **Understanding Web Page Elements
(continued):**
 - Geographic imaging: Mapping and geographic imaging
Web sites use technology to change imagery of the
Earth's surface into valuable information.

Connecting to the Internet

- If you connect to the Internet from an office or academic setting, you probably are connecting through a local area network (LAN).
- A network interface card (NIC) is a special card inside your computer that allows the computer to be networked.
- Home users connect using a high-speed digital telephone line, a cable modem, or a wireless connection.

Connecting to the Internet (continued)

- Connecting to the Internet involves the following steps:
 1. Locate an ISP or an online service.
 2. Install some type of telecommunications software.
 3. You need a Web browser. Most computers come with a browser already installed.

Connecting to the Internet (continued)

- You can use hotspots, public wireless hookups, to connect to the Internet when you cannot use your ISP.

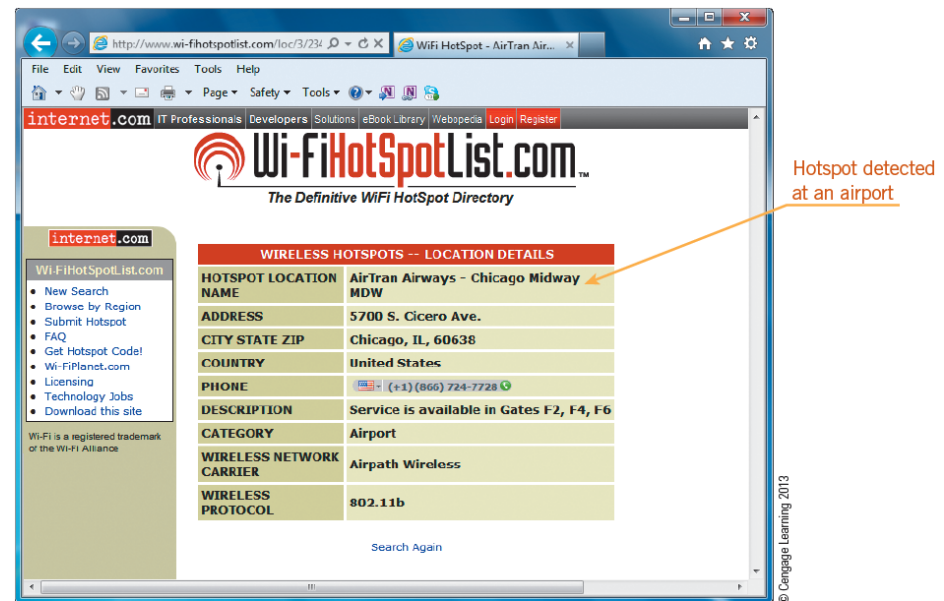


FIGURE 28-9 Searching for a hotspot

Understanding Browser Basics

- A browser is a software program you use to retrieve documents from the Web and to display them in a readable format.
- Browsers can display both text and images as well as multi-media information, including sound and video.
- You navigate through the Web by clicking hyperlinked words and images.

Understanding Browser Basics (continued)

- Parts of the Browser Window:

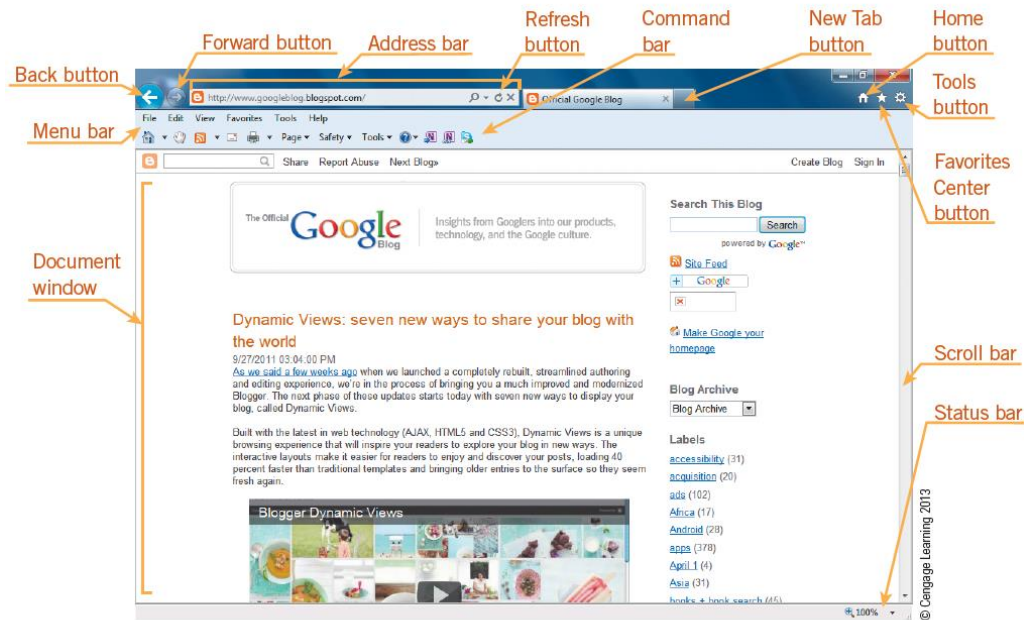


FIGURE 28-10 Parts of the browser window

Understanding Browser Basics (continued)

- **Parts of the Browser Window (continued):**

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

Understanding Browser Basics (continued)

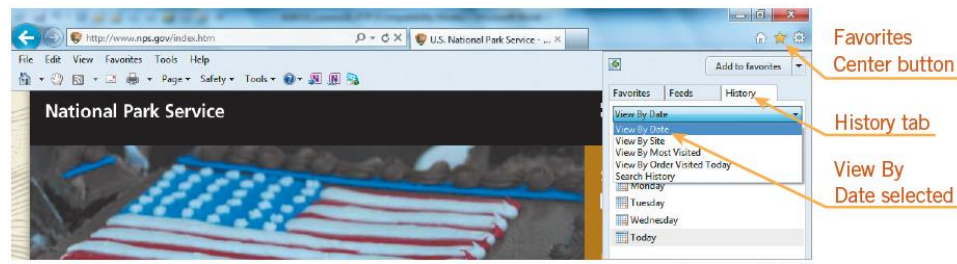
- **Navigating the Web:**
- If you have a direct high-speed connection or a wireless connection, you start your Web browser to display your home page.
- Your browser was installed with a default home page.
- The Address bar near the top of the browser window contains the URL of the current page. If you want to visit a specific Web site, you enter the address in the Address bar.

Understanding Browser Basics (continued)

- **Refreshing or Reloading a Web Page:**
- Cache memory is high-speed RAM that serves as temporary storage 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.
- You can refresh a Web page that contains updated information by clicking the Refresh button on the Address bar, selecting View on the menu bar and then clicking Refresh, or by pressing the F5 key.

Understanding Browser Basics (continued)

- **Recent History:**
- Your browser tracks the sites you have visited for a specific period of time.
- You can view a list of recently visited Web sites by clicking the Favorites button and then clicking the History tab.

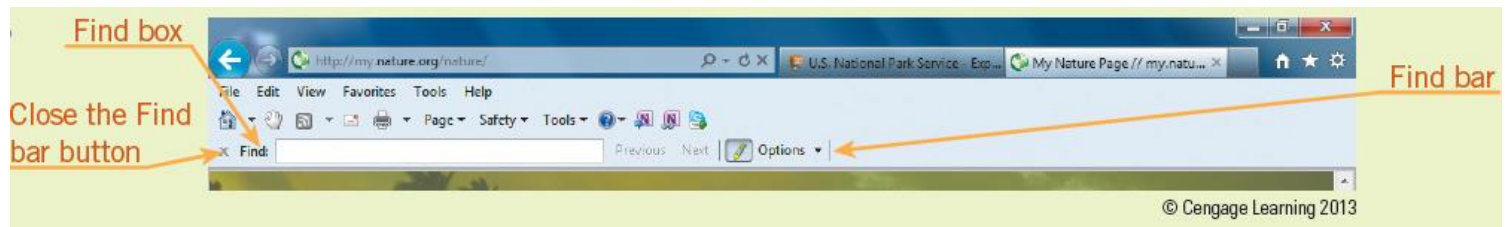


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FIGURE 28-12 Displaying a recent history of visited Web sites

Understanding Browser Basics (continued)

- **Finding Text on a Web Page:**
- Large Web sites contain many pages and links, and often provide a search tool specific to the site.
- You can also use the Find bar to find text on a Web page.



Understanding Browser Basics (continued)

- **Organizing and Managing Favorites:**
- The Favorites list contains the addresses of Web sites that you visit frequently, making it easy for you to return to a particular site.
- When you add a Web site to your Favorites list, you can access the site by clicking the site name.

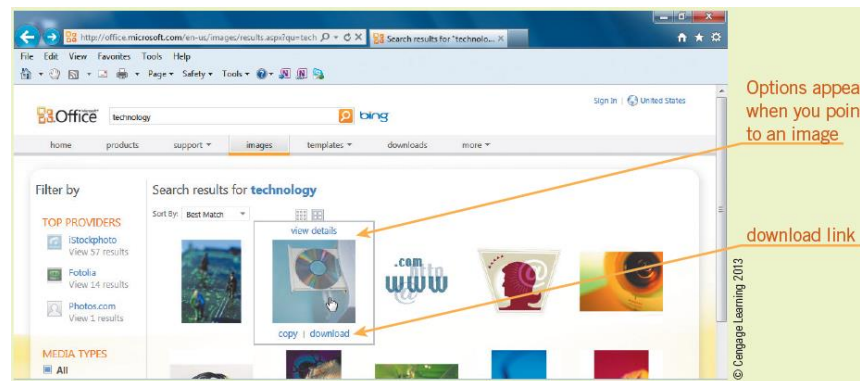


Understanding Browser Basics (continued)

- **Organizing and Managing Favorites (continued):**
- 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 bookmarked sites with other users.

Understanding Browser Basics (continued)

- **Downloading a File from a Web Site:**
- You should download files only from reliable sources.
- Most sites that have files to download provide an interface that makes the process of downloading simple.

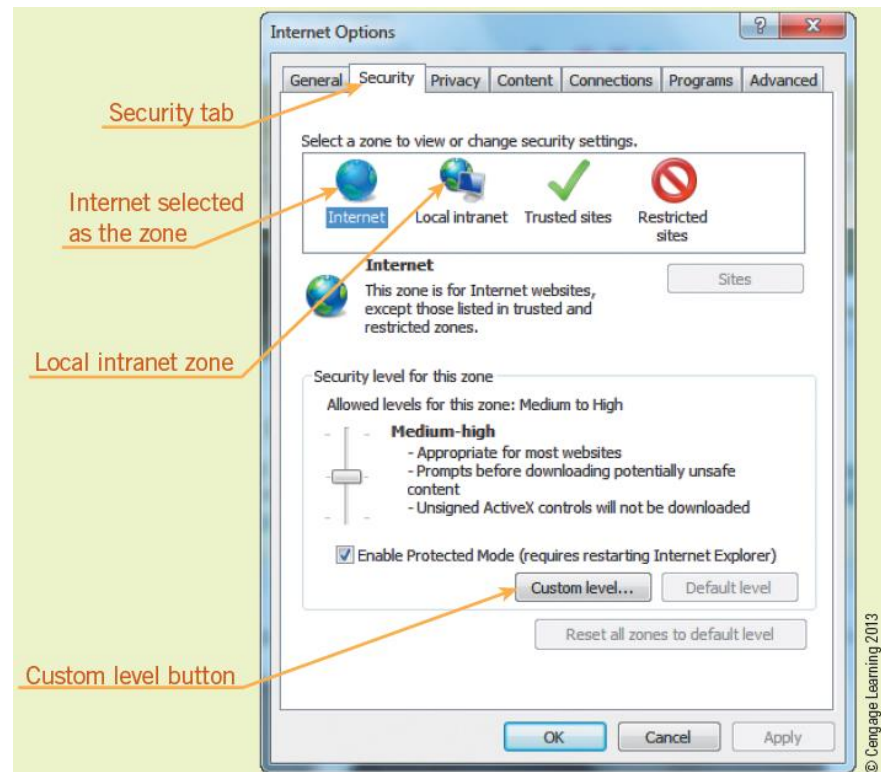


Understanding Browser Basics (continued)

- **Copying and Printing Information from a Web Page:**
- You can copy and save specific elements of a Web page to disk and use them in a new document or file.
- You can also print a copy of a Web page directly from your browser.

Selecting Web Browser Settings

- As you become an experienced Internet user, you may find that you want to change your browser's security settings.



Identifying Browser Issues

- Page not found or 404 errors might occur because of the following:
 - The page was moved.
 - An old index is still maintained in a search engine.
 - You made a typing error when entering the Web site address
- Web pages may load slowly because of heavy server traffic or the page contains a large number of images.
- Pop-up ads can be annoying, but can be blocked.

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.

Summary (continued)

- 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.

Summary (continued)

- 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.

Summary (continued)

- 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.

Summary (continued)

- 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.