NECA Training Curriculum

DIGITAL LITERACY – INTERNET ACCESS

MODULE ONE – INTERNET OVERVIEW

SLIDE-1: Digital Literacy Internet Overview

Introduction to the Internet and World Wide Web (WWW)

This module will provide information to allow the student to begin using the Internet and the World Wide Web. These lessons rely on the instructor to 1) present the material, 2) demonstrate the lesson for each section, 3) allow the students to practice the lesson, and 4) assist the students if problems are encountered. The notes will prompt the instructor when it is time to demonstrate the lesson and allow the students to practice, with the opportunity to receive immediate assistance if needed.

The instructor should determine prior to the class which websites will be used to demonstrate the lessons in this module. For example, when discussing Internet Domain names, the instructor should be familiar with various websites and their respective domain names. Where possible, the instructor should relate personal experiences regarding the selected websites. For example, why they use the site, when they use the site, how they learned about the site, etc. Personalize the demonstrations so the student is able to better understand the value of using the Internet and how quickly it is possible to learn new skills on their own.

This module is designed to provide information and hands-on experience to allow the student to confidently use the Internet to access information on the WWW. The concepts contained in this section will provide answers to the following often-asked questions.

- Why do I need the Internet?

- What can I do with the Internet?

- How can the Internet help me in my everyday life?

- What is the World Wide Web (WWW) and how is it different from the Internet?

- What is a domain name and what does it look like?

- What is a uniform resource locator (URL) and how is it used?

- What is an address bar, where is it located and what does it tell me?

- What is a home page?

- What is a web browser and how do I use it?

- What is tabbed browsing and why would one use it?

- What is a search engine, what does it look like and which one do I use?

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- What is a hyperlink and how do I use it?

- What is a bookmark and how do I use it?

- What is a modem and why is it needed to access the WWW?

- What is broadband and how do I get it?

The answers to these questions will be discussed in this module.

The instructor should encourage the students to ask questions and express their thoughts as the lesson is presented. Tell the students it is okay to initially feel uncomfortable with the subject.

SLIDE-2: Digital Literacy Curriculums

This slide provides a review of key points presented in the FIRST STEPS class. This review will be particularly important for any students who didn't participate in that class. If the student did not attend the FIRST STEPS class, they should participate only if they possess a basic familiarity with computer devices, keyboards, and mouse and how to use them. This prerequisite should be communicated to potential students prior to class registration.

Where applicable, congratulate the students for completing the FIRST STEPS class, and assure them when they complete the second class, they can confidently begin using the Internet and WWW on their own.

Mention the Internet Overview module is the first of this class. Other modules will address Electronic Mail, Internet Security, and Family Safety.

SLIDE-3: Instructional Plan

This slide displays the module agenda. It is a visual representation of the questions posed on slide 1.

SLIDE-4: Agenda

During this session, the instructor will discuss and demonstrate the topics referenced on this slide.

The first topic discusses how the Internet can be used to improve the student's quality of life. This is followed by a description of the Internet and the World Wide Web and how they differ. The discussion will then shift to the use of Internet addressing and how it is used to access desired information. Next is a discussion on the Address Bar, where it is located and how it is used. The discussion then turns to home pages, web browsers, search engines, and tabbed browsing. The student will first see slides discussing how these tools are used to navigate the Internet. They will then have time to practice using these skills on their classroom computer.

SLIDE-5: Agenda

Next, the students will learn about hyperlinks and bookmarks and how they are used to **more quickly** access desired information. They will also learn to download information such as photos, videos and documents. The discussion ends with an overview of services and equipment necessary to access the Internet and WWW.

SLIDE-6: Introduction to Internet

After completing this training, the student will be able to understand basic Internet and WWW terminology, browse the WWW for information, and perform transactions over the WWW.

SLIDE-7: Introduction to the Internet

In this section, the student will learn the basic components and terminology of the Internet and the WWW. In later slides the student will also learn to use a search engine to find information on the Web.

The Internet connects multiple computers and forms networks to allow a computer to communicate with another computer. The WWW is the most notable of several services that operate on these networks. The WWW refers to the information that is accessible via the Internet. The information can be text, pictures, videos, and sound. Many people use the terms *the Web* and *the Internet* synonymously, but they are technically two different terms.

SLIDE-8: Internet versus the World Wide Web (WWW)

The Internet is a collection of hundreds of regional networks located throughout the world. This is a partial map of the U.S. portion of the Internet. The regional network connects hundreds of smaller networks. These many networks have been connected to each other through a process known as peering or interconnection. Each interconnected network is in turn connected to user computers, computer devices and a variety of other appropriately equipped devices. Any device connected to any of these interconnected networks can exchange information with another device on any other interconnected network (or the same network). Worldwide there are hundreds of millions of devices that may be interconnected to each other via the Internet. The WWW is an application that runs over the Internet. Other applications that ride over the Internet are email, on-line interactive games, instant and text messages, and Skype. Skype is discussed in a later slide. None of these services uses the WWW.

SLIDE-9: What Is the World Wide Web (WWW)

Various terms and concepts are associated with the use of the WWW. Each will be discussed in further detail over the next few slides. The following descriptions are provided to paint a complete picture of the WWW and allow the student to see the relationships among these terms as they are discussed in later slides.

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- **Web browser**: A web browser is a software program that allows the user to identify and search various resources on the WWW. An example of a widely used web browser is Microsoft Internet Explorer.

- **Web page**: A web page is an individual document on the Web. Most web pages on the Internet allow the user to quickly move to another web page. This is done by clicking **a hyperlink, commonly called *a link***. Clicking a link opens the new web page in the web browser. The hyperlink is text usually in a different color and often underlined.

- **Website**: A website is one or more associated web pages that reside on the WWW and is typically "owned" by a single entity. The main web page associated with a website is known as the home page. Every website has a unique home page.

- Every website is stored on a computer that is linked to the Internet. Each website has an IP address. Just as every house has a unique mailing address, each website has a unique IP address. The IP address is a numeric code that specifies the website's exact location on the Internet.

- The IP address is linked to a corresponding **domain name**. Domain names are used because it is easier to remember names than a string of numbers. For example, the domain name "proseware.com" corresponds to the IP address 127.0.0.1. Web browsers can access websites using either the domain name or the corresponding IP address.

- A website for a domain is accessed with the help of a unique alphanumeric address known as the web address. The web address is also known as the u**niform resource locator (URL)**, which specifies the location of the website.

SLIDE-10: What Is the World Wide Web (WWW)

The Internet by itself is a huge network of transmission facilities that allow communications in many forms to flow over it. The WWW, a.k.a. the Web, is simply one of many applications (albeit the largest) that ride over the Internet. The WWW is a service that uses a common language, known as HTTP, to allow users to exchange information. The Web has access to web pages connected to each other via the Internet. Each page can be a combination of text, pictures, audio clips, video clips, and animations. The most important characteristic of the Web is that you can search it — all ten billion or so pages – for specific information.

Slide-11: Why You Should Learn To Use the Internet

Tell the student to imagine planning a vacation to Disney World and that they need to obtain information about the resort, hotels, various theme parks, dining, available flights/travel directions and

so on. Where would they start? Would they speak to friends who have vacationed there already, search for books on Disney World in the library, contact AAA and request travel information and material?

This approach can be time consuming and produce minimal details. Using a computer with access to the Internet and WWW, the student can quickly obtain this information from one or more locations on the WWW known as websites. From these websites they can obtain a variety of information including maps of the resort and park, a list of nearby hotels, the hotel prices, amenities at each hotel, driving instructions, available flights and rental cars, weather information, nearby shopping, and much more. They can then book their vacation accordingly using the WWW.

This lesson will discuss the WWW navigation skills needed to accomplish this.

SLIDE-12: Education

On line education allows students to earn degrees or certification without the need to travel away from their homes. On line courses are available for completion of high school diplomas, collegiate undergraduate degrees, GRE prep courses, collegiate graduate degrees as well as home school courses and programs for K through 12.

Technical certifications are available for many job skill areas, including Pharmacy Tech, HVAC and nursing assistants.

SLIDE-13: Business Opportunities

The WWW can provide valuable information regarding business opportunities. For example, the user can access information on loan availability, how to start a business, and how to find sources for business capital. For many, its most important attribute is its ability to assist users with a job search. Today, the majority of employers use the Internet to attract job applicants.

SLIDE-14: Business Opportunities

The WWW also helps identify franchising and other business opportunities. A quick search of franchise opportunities results in over 32,000,000 web pages regarding franchising. Information includes what franchises are available and its costs.

SLIDE-15: Business Opportunities

The WWW can be used by businesses to increase demand for their products and services and to conduct sales transactions. This practice is commonly referred to as e-commerce.

This is accomplished by establishing an Internet presence via one or more websites. In addition to creating their own website, many businesses advertise or sell their products on other companies' websites (e.g., Amazon.com).

SLIDE-16: Shopping

Through the use of the WWW, one can purchase almost any item or service. In other words, the WWW is a **global** marketplace of buyers and sellers. In this respect, the WWW is particularly useful for those who live in rural areas and who may have limited access to stores and service providers. While access to nearby shopping may be limited, there's usually a UPS, FedEx, or other delivery service that will deliver almost everything from anywhere in the world. Much like the past use of catalogs, the WWW facilitates this "remote" shopping.

The WWW allows consumers to purchase wool clothing from England, fresh fruits from throughout the world, hard-to-find parts for any vehicle or product. The Internet also allows individuals to sell their products. For example, one woman sold painted tumbleweed as Christmas decorations through the Internet and received orders from consumers in Asia and Europe.

SLIDE-17: Support Group

Some communities may not have readily available information on how to live with or address certain health issues. The local health center or hospital may not have sufficient resources to properly provide needed services for patients or support services for their families. The WWW provides access to medical resources and/or support groups.

The WWW can also provide access to mental health resources, recipe suggestions, diet plans, exercise programs, discussion groups, and other self-improvement endeavors.

SLIDE-18: Social Media

Social network sites allow WWW users to communicate with other users or groups of users. There are more than 200 social networking sites allowing users to interact and exchange ideas related to diverse categories of interests.

Facebook is by far the largest social networking site. Facebook users can search for acquaintances, past and present, and "friend" them. The site allows users to post messages, share photos and videos and links to popular sites and WWW services.

LinkedIn, with over 100 million subscribers, is a business and professional contact network. It is often used to find employment, people and business-related opportunities. For example, employers can list jobs and search for potential candidates. Job seekers can review the profile of hiring managers and discover which of their existing contacts can introduce them. Users can post their own photos and view photos of others. Users can also follow different companies and comment on common interests.

Google+ amassed over 500 million subscribers and is the second largest social media site behind Facebook.

Twitter allows the mass exchange of short text messages of up to 140 characters. These messages are known as tweets. On an average day, 58 million tweets are exchanged.

SLIDE-19: Entertainment-Music

The WWW allows users to access music from radio stations throughout the globe. It also allows the user to purchase songs. For example, the Apple iTunes store has more than 28 million songs available for a price ranging from 69 cents to $1.29 per download.

Services such as Spotify and Pandora allow users to create customizable song lists and "stream" them to their computer, smartphone or tablet.

I Heart Radio allows subscribers to listen to over 1500 broadcast radio stations through the world.

SLIDE-20: Entertainment-Video

As with music, video content is readily available through a variety of providers such as YouTube, Hulu, Netflix, Amazon, and Walmart. Netflix is currently the largest provider of these services.

Hulu is a service offering ad-supported, on demand TV shows, movies, trailers and behind-the-scenes footage. This information is transmitted in real time (versus downloading and storing on the computing device). This kind of transmission is known as streaming video.

Amazon, a website known for selling goods, introduced streaming video for free to its Amazon Prime customers with access to over 17,000 movies and TV shows.

Walmart also provides streaming video via a recent acquisition of Vudu. Walmart plans to both sell and rent videos. If a customer purchases the video, they will be able to stream the movie or program through Vudu-enabled devices.

SLIDE-21: Home Networking

The Internet allows communication between appropriately equipped consumer electronic devices such as desktop computers, printers and mobile computing devices. Other consumer electronic products are now incorporating built-in Internet connection. For example, manufacturers such as LG, Samsung, Sony, Phillips, and Visio have smart TV products that allow Internet video streaming without the use of a separate computer device.

Using the WWW, consumers are able to purchase security monitoring systems that allow real-time remote access to in-home video and sound. They may also purchase the ability to remotely lock and unlock doors or control thermostat temperature settings. The consumer may also choose to be notified via text or email when undesirable conditions exist. For example, they can be alerted on their

smartphone when a home sensor detects excessive temperatures or an unauthorized entry into the home.

SLIDE-22: General Information

The WWW is also used to access general information. For example, a site called Internet Movie Data Base (imdb.com) provides information regarding any American made movie. The site provides the list of cast members, the names of the producer and director, a summary of the movie and often access to movie trailers.

Google Earth provides 3-D images of any location in the world.

The user can also conduct financial transactions such as paying bills, transferring assets from one account to another or to see if a check has cleared. There are thousands of other useful services available. It should be noted that while most websites are free to use, some websites require a subscription to see all of the site's content (e.g., Consumer Reports) or are restricted to those who have proper authority.

SLIDE-23: Uniform Resource Locator

A uniform resource locator, or URL, is the global address of documents or other resources on the WWW.

SLIDE-24: Uniform Resource Locator

Displayed here is an example of a URL. The http: identifies the website as being an unsecure website. When https: is used in the identifier, it identifies the website as a secure website. The user should ensure that the website has the https: protocol identifier for financial transactions. The "S" at the end indicates the site is secure and the transactions are encrypted to avoid theft or other actions. The other information is a specific address within the website. A given domain can, potentially, contain millions of host names as long as they are all unique within that domain. A URL also includes a domain name suffix that indicates the type of organization to which the website belongs. For example, in the domain name Microsoft.com and Microsoft.net, the two URLs are separate and unique for the domain name suffix .com and .net.

SLIDE-25: Domain Name System

The **Domain Name System** (DNS) maps text names to IP addresses automatically. As previously mentioned, this allows the user to remember names instead of numerical IP addresses. For example, when the URL www.example.com is typed into a browser, the browser contacts a DNS database to determine the corresponding IP address. It is easier to remember names than up to 12 numbers in the correct sequence.

SLIDE-26: Domain Name System

Domain names are divided into top level domains and sub-domains. Top level domains appear at the end of the domain name. For example, in the domain name www.xyz.com, **.com** is the top level domain. (For convenience and time the instructor may choose to only point out a few of the DNS that students may use.) Following are examples of top level domain names and their uses:

.biz designates a person or commercial business. It was added to relieve the overuse of .com.

.com is largely used by commercial enterprises and is currently the most popular top level domain name. Although non-profits and educational institution have other domain names, like .org and .edu, some of these institutions use .com.

.coop is limited to cooperatives as defined by the Rochdale Principles.

.edu is limited to specific educational institutions such as primary, middle and high schools, colleges, universities, and accredited post-secondary schools.

.gov is limited to governmental entities and agencies in the United States.

.jobs is used by commercial enterprises to advertise job opportunities.

.name is used by individuals who want to have their own domain name.

.net is used by persons or entities to point to a distributed network of computers or any network of smaller websites.

.org is used by a person or entities primarily engaged in non-profit activities.

.us is the country code for the United States and can be used by state and local governments in the U.S. instead of .gov.

SLIDE-27: Domain Name System

The domain name is like a crossroads sign. It helps the Internet to route the user to the appropriate server that contains the information the user is requesting.

SLIDE-28: Address Bar

An **address bar** (also **location bar** or **URL bar**) is a text box in a web browser that shows the current URL and allows the user to enter new URLs to navigate to a specific website. Many address bars offer a list of suggestions while the address is being typed in. This is called **auto-completion**. This feature bases its suggestions on sites previously visited. This list of visited sites is commonly referred to as the browser's "history."

Some WWW browsers have replaced the address bar with an oOmnibox. The omnibox is a text box that supports not only URLs, but also allows WWW browsing without the need to open a search engine website.

SLIDE-29: Address Bar

This slide highlights the location of the address bar/omnibox in the Explorer web browser.

SLIDE-30: Address Bar

The search engine has a text box that appears similar to the address box. This slide shows the distinct locations for the address bar text box and the search engine text box.

SLIDE-31: Home Page

A **home page**, **index page**, or **main page** is the main page of a website, sometimes called the "front page" (by analogy with newspapers).Note, the first page that appears upon opening a browser is also referred to as a home page.

SLIDE-32: Home Page

This slide shows the Amazon.com home page. It contains a number of available features. Draw the student's attention to the location of the internal search engine and the hyperlinks to various departments, e.g., instant videos, today's deals, etc., and the log in box.

SLIDE-33: Home Page

This slide shows the Weather.com home page. Draw the student's attention to the search box that allows the user to identify the desired location and where to view interactive maps.

SLIDE-34: Home Page

This slide shows the maps.google.com home page. Draw the student's attention to the search box that allows the user to obtain driving information between two or more destinations.

SLIDE-35: Web Browser

A **web browser** (commonly referred to as a **browser**) is a software application for retrieving and presenting the information stored on the computer of the URL. It may be a web page, image, video or text. Hyperlinks contained in the resources allow users to easily navigate their browsers to related resources.

SLIDE-36: Web Browser

By far, Microsoft Internet Explorer is the most common browser in use. However, as users become more experienced, they may choose other browsers based on feature preferences. Major web browsers include Google Chrome, Firefox, Internet Explorer, Opera, and Safari. During the demonstration phase of the lesson, explain that Internet Explorer is most often used because it is pre-loaded on most non-Apple computers.

SLIDE-37: Web Browser

Notice the **favicon** at the top left margin of this slide. The favicon is a small icon that identifies the website in use. Internet Explorer is used in this example. The favicon is usually the brand image used by a company. Show the students the favicon of Google in the favorite bar.

SLIDE-38: Web Browser

Google Chrome is used in this example.

SLIDE-39: Tabbed Browsing

Tabbed browsing enables a user to access multiple web pages from a single browser window. Selected web pages are opened in new tabs. The user can switch between the websites by clicking the desired tabs. Tabbed browsing reduces the number of items that are displayed on the taskbar.

SLIDE-40: Tabbed Browsing

This slide displays the tabbed browsing feature of Internet Explorer. It shows the opened tab and another tab that is available to be opened. Explain that the user clicks the tab it wants to view and can toggle back and forth in the same manner. If the user wishes to open another website, the next tab is clicked and the user then types the new URL in the address bar that appears in the new tab.

Notice the bottom of the slide. This highlights the task bar. The task bar displays all the open applications running on the computer. This is to allow the user to toggle between applications without having to close an application and opening another. In this way, the task bar and the tab browser allows the user to easily toggle between websites and applications.

SLIDE-41: Search Engine

A **search engine** is a website designed to locate WWW information on desired topics. To find information relevant to their search, users type **keywords** into the search box and click enter.

SLIDE-42: Search Engine

The search engine can quickly provide the list of websites related to their search keywords because documents and web addresses are collected and stored in a large storage area known as a database. When the user types their keywords, a database search is performed. The search engine assembles a web page that lists the results as hypertext links. Here are examples of the more commonly used search engines.

SLIDE-43: Search Engine

Most search engines are commercial ventures supported by advertising revenue. The owners of these search engines often allow advertisers to have their listings ranked higher in search results for a fee. Search engines that do not accept money for their search results make money by running search-related ads alongside the regular search engine results. The search engines then make money every time someone clicks on one of these ads.

SLIDE-44: Search Engine

Recall the discussion regarding planning a trip to Disney World in an earlier slide. This slide displays typing Disney World in the search box. Note it does not have to be properly capitalized. As the words are being typed, the search engine makes suggestions in a dropdown box; in this example, the words Disney World, Disney World Tickets, Disney World Packages, etc. The searcher can simply select the description that matches the topic being searched. Select Disney World Package.

SLIDE-45: Search Engine

The search engine will list the various websites that fit the criteria for Disney World Packages. The searcher will simply select a hyperlink that looks most promising and view the home page. If the searcher does not like the selected hyperlink, simply select the back arrow and the searcher is returned to the initial search results page to select another hyperlink. Another item to note is the listings at the top of the page. Companies pay the search engine provider to list their companies at the top of the search results. This particular search netted over 30,800,000 results so companies pay to have their links listed among the first pages displayed.

SLIDE-46: Search Engine

Many websites contain an enormous amount of information. To help the user find specific items contained within the website, some website owners have incorporated search engines into their site. Unlike a commercial search engine that searches the entire WWW, these search engines only identify information contained within the website itself. This allows the user to view a page(s) contained within a website pertaining to their desired topic.

SLIDE-47: Search Engine

This is a Chinese based search engine, the third most used in the world. Notice that the format is very similar to the Google page displayed in a previous slide.

SLIDE-48: Hyperlink

Hyperlinks connect the user to another place on the website or on a different website. By clicking on the hyperlink, the user is taken to the desired website without having to enter a URL.

Hypertext is a word or series of words with a hyperlink embedded within. Hypertext is often used to provide quick access to reference items such as tables of contents, footnotes, bibliographies, indexes, letters, and glossaries. For example, Wikipedia, an on-line encyclopedia, contains hypertext terms that allow the user to view definitions of those terms.

SLIDE-49: Hyperlink

When the mouse is positioned over hypertext, the cursor is shaped as an arrow, pointing to the location of the cursor on the web page.

SLIDE-50: Hyperlink

When the mouse is positioned over a hyperlink, the arrow cursor will turn into a pointing hand cursor. If the user clicks the mouse while the cursor is a hand, the hyperlink will direct the user to the associated URL web page.

The destination address of the hyperlink becomes visible in the status bar when the user hovers the mouse pointer over the hyperlink. In most cases, the status bar is located in the bottom left hand corner of the web browser.

The default style of unvisited text hyperlinks is blue and underlined while the default color for visited hyperlinks is purple and underlined. This is a reminder to the user that the hyperlink has already been viewed and is contained in the user's website history.

SLIDE-51: Pop-Up

A pop-up will sometimes occur when a hyperlink is opened. It can be blocked by your internet browser security. If the pop-up blocker is activated, pop-ups will be prevented from opening another tab browser and a note will appear on the web page that a pop-up has been blocked.

SLIDE-52: Pop-Up

If user wants to allow pop-ups on a temporary basis, move the cursor over the message and click the mouse. A dropdown menu will appear and select temporarily allow pop-ups. If the user is confident that the web page is a secure website, the user can select always allow pop-ups.

SLIDE-53: Bookmark

A **bookmark** allows a user to store frequently-visited URLs for quick access. Bookmarks are also known as **favorites** and are normally accessed through a menu in the user's web browser. Folders are commonly used to organize favorites.

SLIDE-54: Bookmark

This slide displays a sample favorites bar. The user can add or delete URLs at any time. The favorites bar is under the user's control. While some browsers may have certain URLs prepopulated, the user can delete and add URLs at any time. Some web browsers have a single click add to favorites bar feature. If available, open the URL and click the add to favorites icon. If the user wishes to change or shorten the name the browser assigns the URL, they move the cursor over the URL on the menu bar, right click , select rename from the menu and type the new name. To delete the URL from the favorites bar, move the cursor over the URL on the favorites bar, right click, and then select delete.

Inform the students time has been set aside for practicing this skill.

SLIDE-55: Bookmark

Most web browsers include bookmark features. Each browser has a built-in tool for managing the list of bookmarks. This slide shows examples of folders that are created to store favorites in a manner that can be easily accessible. The folders contain bookmarks of URLs with similar themes, e.g., shopping sites, hobby sites, information sites, educational sites, etc.

SLIDE-56: Downloading and Uploading Files

Downloading is the transmission of information to the user's computer. For example, a student may download a research document to assist with a class assignment. A user may also download a photo or video for viewing at a later time.

Conversely, **uploading** is the transmission of information from the user's computer to the WWW or another user's computer. For example, a user may wish to upload a photo to a social media website so others may view it. They might choose to upload a video to share on sites such as YouTube. They may also wish to upload a resume to a job search website.

SLIDE-57: Downloading and Uploading Files

This slide displays additional hyperlink options. When the user hovers the cursor over a hyperlink and right clicks the mouse, a menu appears. From this menu the user can take several actions including 1) open the document in the current window and tab, 2) open the document in a new tab, 3) open the document in a new window, 4) save the document to open at a later date, or 5) print the document.

SLIDE-58: Downloading and Uploading Files

If the user decides to save the document for viewing at a later date, the document will download. Another dialog box will appear and the user must instruct the computer where to store the file and assign a name to the file so the user can open the document later. The user may choose to store the file on their desktop to make it easy to find. If they do so, they can later access the file at any time by double clicking the associated desktop icon with the file name.

SLIDE-59: Downloading and Uploading Files

Uploading files is a function of specific applications on the Web. Certain applications on the Web allow for automatic uploading of files to the cloud. These applications allow the user to safely store files on the internet and have the knowledge that the files can be retrieved in the event of a computer malfunction and the files are lost from the computer hard drive. Various photo, music, and video applications allow users to store digital photo, music, and video files to share with others. These applications have specific requirements and the uploading directions vary by applications. The user must follow the upload instructions of the particular application to upload their file.

SLIDE-60: Downloading and Uploading Files

This slide displays the instruction for a Facebook user to upload photos to share with the user's friends.

SLIDE-61: Required Tools and Services

The student has the knowledge to begin searching the Web for information. In the classroom environment, all the tools are made available to access the Internet. The student needs to know what tools are required to gain access to the Internet. The following slides discuss modems and broadband services to be able to connect to the Internet.

SLIDE-62: Modems

A **modem**, short for *modulator-demodulator,* is a required device that converts computer information into a format suitable for transmission over the Internet.

SLIDE-63: Wireless Modem/Router

This slide displays various modems types. Modems can be built into the computer or provided as a peripheral device. Regardless of the location, the same function is performed.

SLIDE-64: Broadband Services

Connecting multiple devices to the same Internet connection via the modem may be very burdensome. A **wireless router** is a tool that allows one Internet connection to be **wirelessly** shared with multiple computers and Internet enabled devices. Wireless routers use a technology called WiFi. With this technology, devices can communicate with radio waves. Examples of devices that use this technology are: computers, iPods, MP3 players, gaming consoles, tablets and smartphones. Some wireless routers provide Internet safety features such as parental controls. Internet security and family safety are discussed in a later module.

SLIDE-65: Broadband Services

The term ***broadband*** refers to a connection between the user and the Internet. Broadband is sold by a variety of vendors including telephone companies, cable providers and wireless cellular companies. The connection can be provisioned using coaxial wire, optical fiber, twisted copper pair or wireless. The next three slides illustrate the use of these transmission media.

Note to instructor: This may be an ideal time to discuss and promote your telephone company's/ISP's broadband services.

Prior to the development of broadband technology, dial-up Internet access was the only means to access the Internet. This access method is considered very slow when compared to today's broadband technologies. For example, it would take anywhere from 10–30 minutes to download one song (3.5 MB) and over 28 hours to download a movie (700 MB). With considerably faster broadband connections, those downloads are accomplished in a small fraction of that time.

SLIDE-66: Broadband Services

This slide displays satellite broadband network providers. Satellite companies can offer slow to midlevel speeds and are susceptible to the same limitations as satellite TV services. For example, weather (accumulated snow on the dish) can affect transmission quality.

SLIDE-67: Broadband Services

This slide displays wireless broadband providers. Mobile wireless companies can offer slow to midlevel speeds and are susceptible to limitations based on the number of towers that cover a specific area.

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Speed is also affected by the type of technology the provider is using. Long Term Evolution (LTE) is capable of broadband speeds greater than older 3G technology

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SLIDE-68: Demonstration and Practice

It is now time for the students to practice the concepts contained in this lesson.

Demonstration and practice

Prior to the training, the instructor should have a few websites selected for demonstration and practice purposes. If possible, select websites that may appeal to the students attending each class.

Below are recommended demonstrations and practice steps related to this module.

Step 1

Demonstrate opening Internet Explorer using both the start menu and a desktop icon.

Step 2

Remind the students that the Internet Explorer default homepage is determined by the user. Demonstrate how the user can set up the default home page by clicking on the Tools button on the Command Bar, then Internet Options, selecting the General tab, typing the URL in the Home Page box, and selecting OK.

Step 3

Demonstrate opening a website using the **address bar**.

Step 4

Demonstrate how the History drop down box appears as the user types in the address bar. Remind the student the drop down box contains recently-visited URLs. Demonstrate the autocomplete function.

Step 5

Demonstrate what happens when the **URL** is incorrectly typed in the address bar. The search engine will automatically anticipate what the user mistyped and provide alternate (correct) options. For example, type "Barns and Nobel" and demonstrate how the search engine will produce a number of sites that relate to Barnes and Noble. Tell the students to click on the appropriate description to bring up the appropriate web page.

Step 6

Demonstrate how the Barnes and Noble website **search engine can be used** to help find specific authors or books or topics. Ask the students to use the search engine to find a book or author.

Step 7

Demonstrate a few available dropdown menus by placing the cursor over the menu bar atop the Barnes and Noble **home page**.

Step 8

As the cursor is positioned on various parts of the page, tell the students to take notice of what is happening on the status bar (see discussion on slide 49). As the cursor passes over a **hyperlink**, the destination address of the hyperlink is displayed in the **status bar**.

Step 9

Demonstrate tabbed browsing. Open another website by clicking the **tab** next to the active **tab** to open another website without leaving the current website. Open Amazon.com. Select the same book in Barnes and Noble and amazon.com then demonstrate how to tab between the two websites to compare prices.

Step 10

After viewing a couple of web pages **on the same tab**, demonstrate the back button to show how the user can return to a previously opened web page without having to retype the URL.

Step 11

Demonstrate the forward button.

Step 12

Demonstrate how to add new websites to the **favorites bar**. (Select the **URL** of the web page the user wants to add to the **favorites bar**. Select the one-click add to favorites button).

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Step 13

Demonstrate how to rename the favorite button. Place the cursor over the icon on the favorites bar and right click. A drop down menu will appear. Select **Rename**. Another box will appear with the current description highlighted. While the selection is highlighted, type the new name and click OK.

Step 14

Demonstrate how to delete a website from the favorites bar. Place the cursor over the icon to be removed. Right click and select Delete.

Step 15

Provide free time to allow the students to practice using the search engines. Encourage them to make mistakes while practicing in the classroom where assistance is available to help them.

Step 16

Demonstrate how to close the browser by clicking the close button. If the user has more than one Tab opened when the close button is selected, the Internet Explorer will ask if the intent is to close the current tab or all tabs. Discuss and demonstrate each option.