# Internet for Beginners, Part I

INTRODUCTION

The internet is a vast, ever changing medium. The evolution of the internet has literally changed the course of history – the ease and speed with which information can be shared globally is a concept that even 30 years ago seemed far-fetched. In this digital age, more and more of what we do is somehow related to the internet. Want to apply for a job? You probably need to use the internet. Want to view your paycheck stub? You probably need to use the internet. Want to watch a movie, play a game, or listen to some music? You probably need to use the internet. By the end of today's lesson, you will be well on your way to doing all this and more! In this class we will discuss:

- The history of the internet
- Getting online
- Parts of a web address
- Links
- Using search engines
- Navigating web pages
- Online safety

SECTION I: THE INTERNET – A BRIEF HISTORY

What is the internet?

The *internet* is a massive "network of networks," a networking infrastructure. It connects millions of computers together globally. The computer you are sitting at (as long as it's connected to the internet) can communicate with the computer across the street, down the block, or even around the world so long as the computer on the other end is connected to the internet as well. Information that travels over the internet does so via a variety of languages known as *protocols*. The internet is a cooperative endeavor—no organization is "in charge" of the internet.
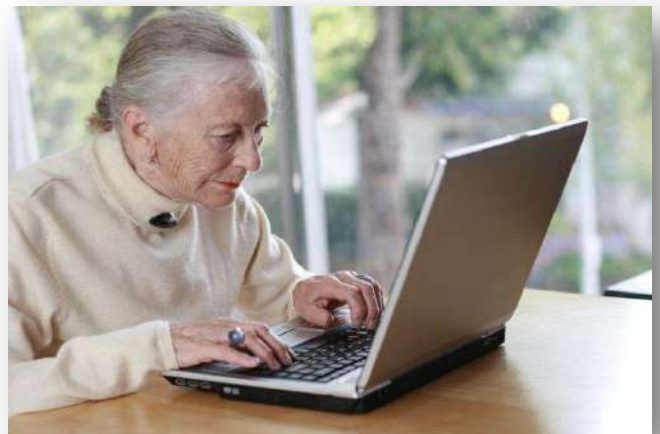
Is the World Wide Web (WWW) the same as the internet?

Many people use the terms internet and *World Wide Web* interchangeably, but in fact the two terms are not synonymous. The internet and the web are two separate but related things. The World Wide Web is a way of accessing information over the medium of the internet. The web uses the *HTTP protocol* (*h*yper*t*ext *t*ransfer *p*rotocol), which is only one of the many "languages" spoken over the internet, to transmit data. Email, instant messaging, and uploading and downloading files are all things that you do on the internet but aren't part of the HTTP protocol. The web utilizes special software called *browsers* to access web documents (more commonly known as *web pages*) that are linked to each other via *hyperlinks*. Web pages contain some or all of the following: text, images, audio, and video.

If you walk into a car dealership and say "I want to buy a vehicle..." Well, a vehicle can be any number of things: a car, a van, a truck, an SUV, a motorcycle, maybe even a boat. "Vehicle" is a very general term. If you walk into a car dealership and say "I want to buy a car," then you are being (somewhat) more specific and eliminating trucks, vans, SUVs, and so forth from your buying options. Think of the term "vehicle" as being similar to the internet. It's a broad term that covers a lot. Think of "World Wide Web" as a term similar to car—it's a bit more specific. While the vast majority of "vehicles" on the road are in fact cars, not all vehicles are cars. Similarly, while the vast majority of what you may do on the internet involves the World Wide Web, not everything on the internet is part of the web.

The bottom line is, the web is just a portion of the internet, albeit a large portion, but the two terms are not synonymous and should not be confused.

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What is the internet used for?

A lot of different things! People use the internet to apply for jobs, play games, do research, watch movies, listen to music, go to school, stay in contact with friends, family, and co-workers, run a small business, buy or sell products, and much more.

How do you connect to the internet?

There are many different ways to connect to the internet from your personal computer. The most popular ways are listed below.

- **Dial-up**: With a dial-up connection you can connect to the Internet via a telephone line and an *internet service provider* (ISP). This method is inexpensive, yet obsolete. It provides the user with the slowest overall connection speeds. However, it may suit the purposes of the occasional internet user without a need for a fast or consistent connection.

- **Broadband**: Cable, DSL, and fiber optics are in this category. With a cable connection, the user must subscribe to a cable television/internet service. These connections offer speeds up to 70 times faster than dial-up. They also allow the user to stay connected to the internet at all times; the user need only open a browser window to access the internet, as there is no log-on process to complete. Like cable internet service, DSL offers much faster speeds than those available with dial-up modems. However, there are a wide range of speeds available from different providers. With DSL, normal telephone wires are used to combine usually separate voice and data lines, allowing users to connect to the internet and talk on the phone via the same telephone line. The newest technology, fiber optics, allows speed even greater than DSL or Cable. Fiber optic connections are more expensive than DSL and Broadband, and are not available in all areas (yet).

- **Wi-Fi**: It's even possible to connect to the internet wirelessly from home or while you are out and about. Wireless technology allows users to have mobile connections, accessing the web where and when they need to. Wi-Fi networks can be found at many businesses, restaurants, and other public areas (parks, schools, libraries) or a home connection can be set up through your ISP. These technologies vary in terms of connectivity, reliability, and cost, but they all allow users to connect whether they are at home, school, work, or on the road.

SECTION II: GETTING ONLINE

A web browser is the computer program you use to retrieve and view webpages. On most computers, including those at the Library, the browser you will use is called Internet Explorer (IE). There are dozens of other web browsers (Firefox, Google Chrome, Safari, & Opera are some of the most popular). They may look different, but the same basic elements will be there and they all take you to the same place—the internet. Since we have Internet Explorer, we will focus on using that browser in today's class.

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Opening up the browser

One thing you will notice about the computer as you become more comfortable with it—there are usually at least three different ways to do everything. For example, on most computers there will be an icon on the desktop for your internet browser. Typically it will be the brand name of the browser, for example the icon will usually say "Internet Explorer." By double clicking on this icon, your browser should automatically open up and take you to your *home page*. The home page is the first webpage that is displayed when you open your internet browser. If you don't see the icon on the desktop for Internet Explorer, try clicking on the Start button on the lower left hand corner of the screen. Often right there on the start button menu you will see an option for Internet Explorer. A single click of the mouse will take you to the internet from here. Sometimes you might even have a little logo next to the Start button on your desktop taskbar. If you have IE on your computer, it will probably look like a lowercase blue "e" with a yellow ring around it. This is the logo for Internet Explorer, and clicking on it will open the browser. None of these options for opening up a browser are "right" or "wrong"—it's just a matter of personal preference. They all take you to the same final destination!

Basic parts of the browser

When you open your browser window, no matter which browser you use, you will usually see several main parts:

The *address bar* is where the web address of the page you are currently on is displayed. It's the white bar at the very top of your page. If you want to go to a new website and know the *Uniform Resource Locator* (*URL*), or *web address*, of the site you'd like to go to, you can click in the address bar and type in the address, click the enter button on your keyboard, and go directly to that page.
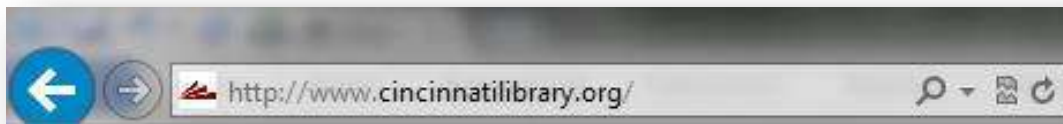
> **Tip: One cool thing about the address bar is that sometimes as you are typing, a drop down list of different webpages will open. This is called an *auto-suggest* or *auto-complete* feature (you'll see this later when we learn about search engines too!). If you see the site you want to visit on the list, you can click it with the mouse to go to the page without typing the whole address in.**

Next to the address bar on the left, you'll see the *Back* and *Forward* buttons/arrows. Once you leave the first webpage you are on, the back button (the arrow pointing to the left) will become active. Clicking on it will take you back— one page at a time – along your path since opening up your web browser. For example, if you start on www.cincinnatilibrary.org and go to www.cnn.com and finally www.cincinnati.com, clicking the back arrow button twice will bring you back to your starting point. Once you have gone back a page at some point during your session, the forward button (the arrow pointing to the right) will become active. This will allow you to move forward a page and revisit pages that you have already seen.

This is a good time for a tip that applies to many things when dealing with the computer. If a button or word or image appears to be grayed out – some would say "ghostly" or "see through" or "not bold" or "faint" – that means it is an option that is currently inactivate for the time being. In other words, it's an option that, under the right circumstances, you will be able to access later. Think of this way – the radio in your car is always there, but it will only work once the key is in and the ignition has been turned on. You have to follow a series of steps in a certain order to allow the car radio to be turned on. In the example above, the Forward arrow only becomes available once you have gone back a page.

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The Toolbar

In most computer programs, the *toolbar* is located on the top of the screen and contains all of the various options, effects, and well, tools, you might need while using that particular program. In the most recent version of Internet Explorer the Toolbar is located on the upper right side of the page.

The Internet Explorer toolbar contains buttons for some of the tasks you are likely to want to do while on the web. Here are the ones you'll use most:

- Home will take you back to your home page. On library computers this is the library's website; if you have a home computer, you can set it to any page you want.
- Favorites. The star button is for adding sites for your favorites – making it easier to find them in the future (we will discuss this option more in *Internet for Beginners, Part II*).
- Tools (the button that looks like a gear) is the place to go for many different options, including printing, zooming in on a page, and adjusting your Internet Explorer options.

SECTION III: PARTS OF A WEB ADDRESS

There are typically four main parts to a URL or web address. Let's look at the example below.

http://www.cincinnatilibrary.org

- The **http://** stands for hypertext transfer protocol which we discussed earlier. This helps your web browser locate the webpage or website, and to display it for you to see. Most browsers will automatically add this prefix, so you don't have to worry about typing it every time.
- The **www.** stands for World Wide Web. This means that the page you're looking for is somewhere on the World Wide Web. For some websites, it's not even necessary to type in the "www" part.
- The next section, which is "**cincinnatilibrary**" in this example, is the name of the webpage or website (aka the "host"). It is flanked by dots on either side which separate it from other sections of the web address.
- The **.org** here is the *top level domain name*. This tells you where the webpage is registered, and often tells you what kind of website it is. For instance, .com usually means that you're looking at a commercial site, or a site that someone has paid to use. Some other common domain names are .edu (sites for educational institutions), .org (sites belonging to organizations), and .gov (sites sponsored by local, state, or federal governments).

Having an exact web address is extremely important if you want to find exactly what you want. A great example is the Internal Revenue Service (IRS). Many people venture to www.irs.com – but that site has nothing to do with the April 15th folks! To access the real IRS site, you must visit www.irs.gov. To access YouTube, you must go to www.youtube.com – www.utube.com is a different site. One thing that doesn't matter is capitalization; WWW.KROGER.COM is the same as www.kroger.com.

Somewhat related is the idea of a web page vs. a web site. A web *page* typically refers to a single page on the web – for example www.cincinnatilibrary.org/programs/ while a web *site* refers to the entire domain (www.cincinnatilibrary.org) and all of its' sublevels. Think of it like your house; your kitchen is just a single room (web page) within your house (web site).

SECTION IV: LINKS

When you move the mouse around on your desk it will move your little pointer in the same direction around the screen. If you took the *Computers for Beginners, Part I* class here at the Library, you may remember the different shapes that your mouse cursor may take. Here's a quick review. The hand pointer cursor is the one you will be looking for most often on the internet. When you put your mouse on top of a word or picture or video and it changes to the hand pointer, you know that you can click on that spot and it will take you to another webpage. Text, images, video or other content that is clickable and takes you to another website are called hyperlinks, or just links for short. The entire World Wide Web is based on this idea— pages being "chained" together through the use of hyperlinks.

Often times (although not always) text links will be either underlined or they will be in a different color (usually blue) to help them stand out from other text. As you click on a text link it will usually change color (usually to red) indicating that you have clicked on it. Once you have clicked on a link and you return back to the same page, the link may be yet another color (usually dark purple) indicating that it is a link you have already visited.

SECTION V: USING SEARCH ENGINES

Use a *search engine* if you know the kind of information you are looking for but are uncertain of the exact address to go to with your browser. A search engine is a tool for searching for information on the internet. Most search engines use a simple keyword search, which means you don't have to type in your whole question, just the most important words. The most popular search engines are Google (www.google.com), Yahoo (www.yahoo.com), and Bing (www.bing.com), although there are many other search engines out there. For our purposes today, we will focus on Google. It should be noted, however, that most search engine work basically the same.

Google it!

Google is pretty much just a simple search box. As you begin typing, Google will begin to autosuggest words or phrases which it thinks you might be searching for. The suggestions become more specific the more letters you type. If you see what you are looking for in the autosuggest drop down feature, click it with your mouse—you don't have to type in the whole entry. You can also perform a search by typing in your keyword(s) and pressing the Enter button on your keyboard.

Google, like all search engine sites, makes money by advertising. In most cases, this takes the form of *sponsored links*. Search engines usually indicate sponsored links by putting them on a different section of the page of search results and/or by labeling them as "sponsored links." So for example, when you type in a search for "pizza" you are likely to get sponsored links from pizza restaurants.

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Deciphering your search results

Once you do a search, you'll be taken to a new page with results for your search keyword(s). For instance, if you do a search for pizza, in the middle part of the page you will see the list of results for the search "pizza." The title of each result is a link to the page (for example, clicking on "Dominos" will take you to www.dominos.com). There will also be a brief description of the site underneath the link. After looking at the site, you can click the back button on your browser to go back to your list of search results so you can explore the next site.

The more information you provide in your keywords, the more precise your results will be. For example, you'll notice that the first result for pizza is Dominos (or perhaps Pizza Hut). But maybe you are looking for Papa John's. So, instead of typing in "pizza" try doing a search for "Papa John's." To make it even more exact, try doing a search for "Papa John's Cincinnati." While it is possible to be too specific, generally speaking the more information you provide, the more relevant your results will be.

At the top of the page on the far right you will notice it says "Results 1-10 of about…." That means that results displayed on the page right now are just the first 10 of however many total results there were for your keyword (sometimes the search engine will get fancy and tell you it only took .23 seconds to retrieve all those results). At the bottom of your search results page, you may see links to related searches as well as a series of numbers. The numbers are all the different pages of search results. Most search engines will only display around ten sites on a page. In order to view the next ten, you'll have to click on the next page number of your search results, or the link that says next.

Oh, and by the way, yes you can order your pizza online.

More great things about search engines

Using a search engine is also a good idea for the spelling impaired among us. Google will autosuggest the proper spelling of words (as long as you come somewhat close) as you type in your search and once you arrive on the search results page.

Using a search engine is a great way to show the sheer size of the internet. Even obscure sounding keyword searches like "lemon flavored sardines" returns over 3,000,000 hits! Virtually any topic you can imagine can be found through a search engine. Just for another example, try typing in Abraham Lincoln as a search. You will get a biography, pictures, quotes, and more all within a second. By the way, all told there are over 66 million websites that mention Lincoln!
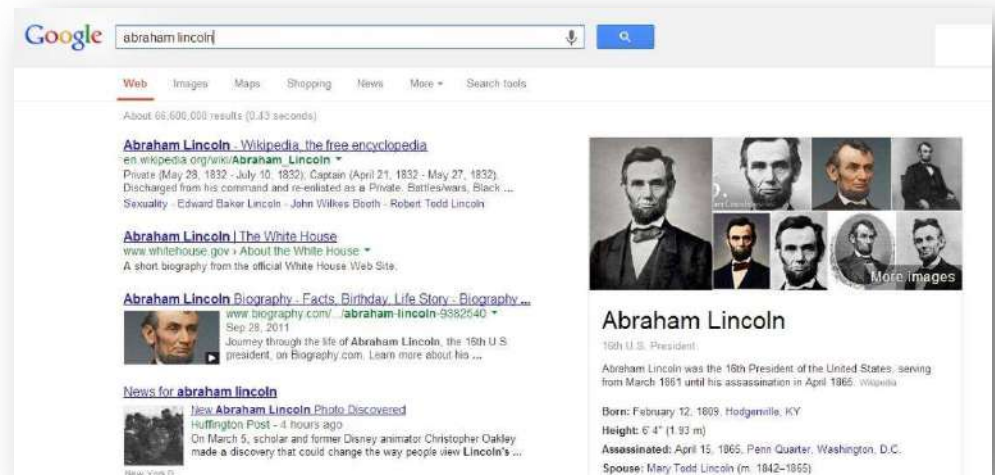
Google provides a lot of other services, including maps, local weather, image and video searching, free email accounts, and more.

SECTION VI: BASIC WEBSITE NAVIGATION

You know how to use the browser. You know how to use Google to find the page you are looking for. But how do you find the information you are looking for once you arrive at a page? Every website you visit is unique. However, most well designed websites will have similar navigation options. Navigating—or moving around a website from page to page—is a skill that takes a bit of practice and a lot of experience. That said, being able to recognize where to look for the information you seek is crucial to improving your navigation techniques – and it can drastically cut down on the amount of time you spend searching for what you need.

Typically, when you first pull up a website there will be a row of links across the top of the webpage or down one side. These links divide the website's content into categories. Some of the categories you are likely to find:

- Home – This allows you to return to the main page (or "Home page") of the website at any time.
- About Us – This usually lists some information about the purpose, history and owners of an organization.
- Locations – This will give you information about the various locations of an organization as well as telephone numbers and street addresses.
- Register New User - This allows you to create an account with the website
- Sign In – This allows you to log in to an existing account

Across the bottom of the page you will generally find a small print that act as links to even more categories, such as:

- Contact Us – This will give you one, or several methods to contact the organization (phone, mail, or email).
- Privacy Policy and/or Terms & Conditions – Legal information about the terms of using the website and about what the organization may or may not do with your personal information, etc.
- Help – This is a good place to start if you are having trouble locating what you need.

There will also likely be a *search box* located somewhere on the page. You use a search box to type in keywords to help you find website content. For example, on the Library's website you can type in the title of a book you are trying to locate and the search function will list books in our catalog with that title. One important thing to note about a built in search box – it will only search the site you are on for that keyword.

The exact wording and location for links may vary from site to site. What one site calls "Locations" another site will call "Find a store." "Contact us" may be replaced with "Ask us a question." The point is not to look for one certain heading or terms, but to be able to identify where to begin your information quest and know which path to choose to get there.

SECTION VII: ONLINE SAFETY

Malware. Trojans. Spyware. Phishing. Viruses. They have different names depending on what their intent is, but these are all programs designed to infect your computer without you knowing it and they can slow down your computer, spy on you, or possibly even destroy data and cause your computer to "crash" (or stop working).

You can do a few things to take precautions when you use the internet. If you have a home computer, always be sure to run current, updated *antivirus software* to help protect yourself from the many different types of computer viruses and other malware. You can also help yourself stay protected from viruses by not opening any emails (especially email attachments) that seem strange or are from people you don't know. Avoid websites offering "free" music or movies as these sites are often rife with bad stuff. To protect yourself from scam artists and identity thieves, avoid giving out personal information on the internet, and always remember: if it sounds too good to be true, it probably is. Online safety is a continuing process, and if you are interested in learning more be sure to ask about our *Computer Safety for Everyone* class.

SECTION VIII: PRACTICE

The best way to learn anything on the computer is simply to practice. A lot of new users have a fear of "breaking" something on the computer. This is rarely possible on most new computers, and especially on computers at the Public Library because of restrictions and security settings in place on the machines.

The trick with the internet is to find something that is of interest to you. Perhaps you like listening to music—there are websites that you can listen to music from around the world and from virtually any artist or genre you can imagine. Perhaps you like cooking – there are thousands of websites devoted to recipes, diets, and healthy living. Maybe you enjoy reading the news —try USA Today's website. The amount of information available on the internet is virtually limitless—and more content is being added every second of every day!

Here are some fun ideas to get you going:
Try going to Google and type in your home address in the search field—see what comes up!
Visit www.CincinnatiLibrary.org and navigate to the "Programs & News" section.
Look up "Abraham Lincoln" on Google. See if you can find videos, pictures, and quotes from the 16th president.

Once you feel comfortable with the basics on the internet, you may be interested in taking "Internet for Beginners, Part II" here at the Library. This class will cover topics like the importance of creating a secure username and password for websites, uploading and downloading files, and more.

SECTION IX: ADDITIONAL RESOURCES

Classes

The TechCenter at the Main Branch of the Public Library of Cincinnati & Hamilton County hosts over two dozen technology related classes each month. Ask your instructor today for a calendar of upcoming events or visit our website at http://www.cincinnatilibrary.org/programs for a complete list of all Library events.

If you are liked our *Internet for Beginners, Part I* class, you may also find these related classes of interest:

- *Computers for Beginners, Part II*
- *Internet for Beginners, Part II*

Feel free to ask for a copy of any class handout at the Technology Center desk or talk to your instructor today.

Online

The Public Library of Cincinnati & Hamilton County offers a variety of databases to all card holders which provide excellent learning opportunities on a variety of topics, including computers and technology.

Learning Express Library offers a wide variety of interactive computer classes (Complete Microsoft Office Suite, Adobe CS3, Windows, and Mac OSX). Videos and screencasts make learning easy while quizzes help assess your progress. Free with your library card. From http://www.cincinnatilibrary.org, click on Research & Homework > Research Databases > Education > Learning Express Library.

Universal Class offers more than 500 classes on many topics. These classes are instructed by real teachers who guide your learning and provide feedback on your work. Learn about Microsoft Office, Web Design, Computer Basics, Business Applications, and more! Free with your library card. From http://www.cincinnatilibrary.org, click on Research & Homework > Research Databases >Education > Universal Class.

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SECTION X: FUN FACTS

- There are roughly 2.2 billion internet users in the world, which is only about 1/3 of the estimated world population (as of 2011).
- The top 5 most popular websites in the world are: Google, Facebook, YouTube, Yahoo, and Baidu (basically the Chinese version of Google).
- Google is the most popular search engine in the world. 79% of internet users use Google as their search engine, followed by Bing (9%), Yahoo (8%), and Ask.com (1.5%).
- Most people (98.5%) never go beyond the first page of search results on Google (or any search engine for that matter).

SECTION XI: GLOSSARY

Anti-virus Software: Software that is installed on your computer that attempts to prevent viruses and other dangerous software from getting onto your computer.

Auto-suggest (or auto-complete): A popular feature in web browsers and on websites that begins to display commonly searched for keywords or web sites as you begin typing.

Back Button: Located in a web browser, allows you to go back to the previous page you were on.

Broadband: A way of connecting to the internet that offers faster connection speeds than dial up. Cable, DSL, and Fiber Optics all fall into this category.

Browser: A software program on the computer that is used to display web pages.

Dial Up: A way of connecting to the internet over a phone line.

Forward Button: Located within your web browser, allows you to return to a page after you have clicked the back button.

Home Page: The first web page you see when you connect to the internet.

HTTP: Hypertext Transfer Protocol, one of the many languages used on the internet, controls how web pages are displayed.

Hyperlink: Clickable text, images, or videos that forward you to another web page.

Internet: A massive "network of networks" that connects millions of computers together globally.

Keyword: One word that is most important in doing a search; for example "pizza" if you are looking for a pizza restaurant.

Protocols: Rules.

Search Box: Located on many websites, typing in a keyword here only search the current site you are on.

Search Engine: A web site used for searching the internet for information. Google, Yahoo, and Bing are popular examples.

Sponsored Links: Paid advertisements that appear when you a search using a search engine. Companies pay money to have these links appear first when you do specific keyword searches.

Toolbar: Located on the top part of most computer programs, this is where all of your options, effects, and other preferences will be located.

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Top Level Domain Name: Located at the end of every web address, this tells you what type of website you are dealing with (.com, .org, .gov, etc.)

Web Address: The specific location of a web domain on the internet, for example www.cincinnatilibrary.org.

Web Page (or web document): Refers to a single page on the internet.

Web Site: Refers to an entire web domain and all of it's' sublevels.

Wi-Fi: A way to connect to the internet wirelessly. Works on technology similar to mobile phones.

World Wide Web: A way of accessing information over the internet; an information sharing model that's built on top of the internet.