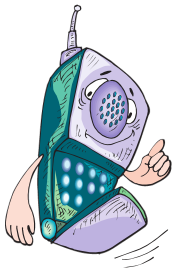
Unit 1: Using Technology—Navigating the Internet

Overview

At one time it was the telephone. Then it was the television. What a stir these new *gadgets* caused! Most people thought they were just a passing fancy. History shows how wrong they were. The telephone and television are now part of our everyday lives. We are surprised when we don't find them in people's homes.



Most people thought the telephone was just a passing fancy.

So it was with the computer. In the 1960s, it too was a newfangled *gadget*. Few people imagined how important computers have become in the past 40 years. Our telephone system, our television networks, and even our traffic lights are run by computers. It's hard to imagine our lives without them at this point.

Computers and online technology have given us new learning methods and materials. You now have a chance to use word processing programs to design and check your written assignments. Technology has also changed the way you find information. In the past, your research for a school project would have been limited. You could use the materials available in your school's media center. If you were fortunate, you would have access to a city or university library. You could have gotten documents from distant libraries. However, the process would have taken weeks. Computers and online technology have changed all that. Today, you have more materials available than you can possibly use. They are available to you in the time it takes to get on the Internet, locate the document, and view it. Often, this can be done in minutes.

Computers and online technology have also helped us create a new mail system. In a matter of seconds you can send a message on the Internet to any other computer system that is online. You can be anywhere and read the mail, even on vacation or at the beach. Sending a letter from Florida to California over the Internet takes seconds. All you need to do is make a few key strokes and a few clicks of the mouse.

Computers and online technology have also helped us create a new mail system.

The computer can help with your class assignments, too. It can do this in two major ways:

- It can help you prepare your written work.
- It can help you find information.

In this unit, you will learn about using computers. Specific areas of focus include the following:

- using a computer to design your writing
- using a computer to correct your writing
- researching information on the Internet
- communicating through the Internet
- publishing your writing on the Internet
- documenting information from electronic sources.

The computer can help you find information.

Considering Computer-Related Occupations

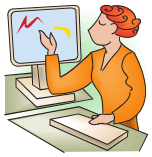
Computers are everywhere. Today, almost every career you can imagine uses computers. Certain careers are specifically related to computers. Some jobs in the computer field require higher education; others require special training. If you especially enjoy working with computers and computer technology, there are many career opportunities. Look at the chart below.

Computer-Related Occupations

Computer Teacher—teaches people in schools and businesses to use computers

Programmer—writes computer software programs to tell the computer what to do

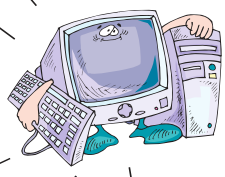
Computer Engineer—designs and builds computers, printers, modems, chips, circuit boards, etc.



Systems Manager—supervises the computer system of an organization

Software Librarian—files and organizes software in a software library

Data Entry or **Keypunch Operator**—puts data into the computer



Systems Analyst—works with companies to plan the use of computers based on needs

Computer Technician—tests parts and components designed and built by engineers for defects or flaws and repairs hardware

Computer Operator—runs the computers and prints hard copies

Sales Representative—sells computers

Technical Writer—writes manuals that tell how to operate the computer

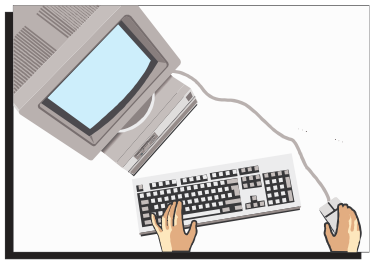
Can you think of other careers related specifically to computers?

Writing with a Computer

Getting Started

Many of you already use a computer when you write. Do you have trouble writing with pen and paper? If you do, you know how helpful computers can be. If you are a new computer **user**, there are some things you should know. Even if you regularly use a computer, these hints can be helpful.

- Creating a draft on a computer can be hard. It will take time to get familiar with the computer **keyboard**. Until you do, write your first drafts as usual.
- Using a computer gives you many advantages. You can enter information. You can also *delete* or remove the information. And you can move it around. Most **programs** check your spelling. Many check your grammar. However, none are foolproof. You should still proofread your copy carefully.



Using a computer gives you many advantages.

- Saving your work is important. Don't wait until you have finished the draft. Stop frequently to **save** your work.
- Knowing all about a computer takes time. Your teacher is there to help you learn. Ask questions as you work.

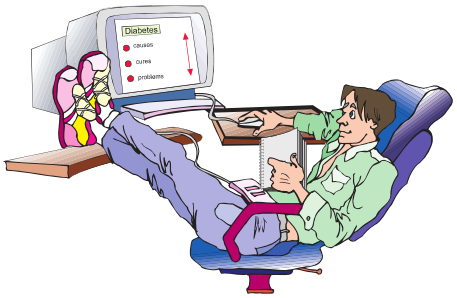
Previewing the Word Processing Program

Before continuing, look at the example of a **window** on the following page. The *window* is the first page of a **word processing** program. Yours will look similar. Use this illustration while you practice and review using word processing vocabulary.

Proceeding with Caution

A word processing program can be a writer's best friend. However, it cannot replace the writer. A beautiful design will not hide poor writing.

You must be careful in using the tools available to you. Let's take a moment to practice with one of these tools.



A beautiful design will not hide poor writing.

Designing Your Writing

Choosing a Font

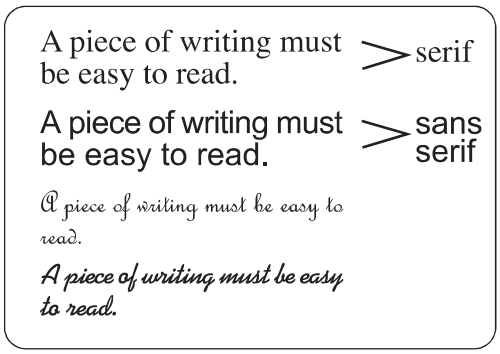
It is easy to get excited about all the options you have. You can use different **fonts**. You can make your type *font* different sizes. You can add **graphics** or pictures. As you work with all these options, remember your purpose.

> A piece of writing must be easy to read.

Don't overuse the available options.

Ask your instructor how to choose type font and size with your word processing program.

- Use an easy-to-read font for the main text. *Serif* type has tails at the tops and bottoms of the letters. The more elaborate serif types have fancier tails and can be hard to read.
- Use a 10- or 12-point type size.
- Make title and headings easy to read.



1. Use a font *without* serifs (*sans serif* types).
2. Use larger type—use 16- or 18-point.
3. Use **bold** face.

Remember: Avoid hard-to-read fonts.

Varying your type font and size appropriately makes your work easy to read. Your readers will not get lost on the page. This will also help them understand your organization better.

Spacing Your Work

Again, ask your instructor how to do this with your word processing program.

- Use a one-inch margin around each page: top, bottom, left, and right.
- Use the *tab key* to indent the first line of each paragraph. A tab key is used to move the cursor to a *tab stop*.

  - **Remember:** Avoid placing headings or hyphenated words at the bottom of a page.
- Avoid beginning a paragraph at the bottom of a page.
- Avoid single words at the bottom or top of a page.

Reviewing Effective Design

The following is a sample from a student's *I-search* or self-directed research paper. (Cited references are in parentheses.)

Lauren Fletcher
Mr. Reynolds
English I
May 10, 2005

The title is 18-point sans serif type.

Diagnosis: Diabetes

The heading is 14-point sans serif.

What I Knew

Mom thought I was having a growth spurt. I was always hungry. I was thirsty all the time. I couldn't stop going to the bathroom, and I was having trouble seeing well. I wasn't sure what was happening. Finally, Mom and I decided I should see my doctor.

The doctor examined me and took some of my blood. Then, he told me what was wrong. I had diabetes. I could hardly believe my ears. Diabetes was a real disease. It wasn't a cold or a stomach bug. It was serious, and it could be fatal. It would also be with me the rest of my life.

The main text is 12-point serif type.

I knew my daily routine would have to change. My Aunt Edna is a diabetic. She has to eat her meals regularly. There are some foods she cannot eat. She also must give herself daily insulin shots. I knew I would have to do some of these things.

What I Wanted to Know

I found out I really knew very little about diabetes. I wanted to know exactly what caused the disease. More than that, however, I needed to know how it would affect my activities. Could I still play softball and soccer? Would I have to stop eating sweets completely? Would I have to give myself shots every day? I made a list of everything I wanted and needed to know. From that list, I formed my research question: *How will diabetes change my life?*

Italicize for emphasis.

How I Searched

I began with a Google search. I typed in "what is diabetes." The list was very long, so I began with the first article at address http://www.girlpower.gov/girlarea/11nov/diabetes.htm. This was an excellent site that answered most of my questions. I found it helpful because it was written especially for teenaged diabetics. I was also able to access other excellent links for teens from this site.

Web links should be checked.

What I Learned

I learned that diabetes keeps the body from using food correctly. Normally, the small intestine takes out sugar and puts it into the blood. The sugar is used as fuel. This gives cells energy to do their jobs. To get into the cells, sugar needs insulin. Insulin is produced in the pancreas. The pancreas is a gland just beneath the stomach. Without insulin, the cells cannot burn sugar ("National Diabetes Month").

In-text citations.

This is the problem for diabetics. Their pancreas does not produce enough insulin to burn sugar. Sometimes, the insulin simply doesn't work right. For some reason, the cells that make insulin have been destroyed. Doctors aren't completely sure how this happened. They believe it happened when the person was sick with a virus. Insulin-producing cells and virus cells look alike. These researchers believe the immune system attacked both types of cells at the same time ("National Diabetes Month").

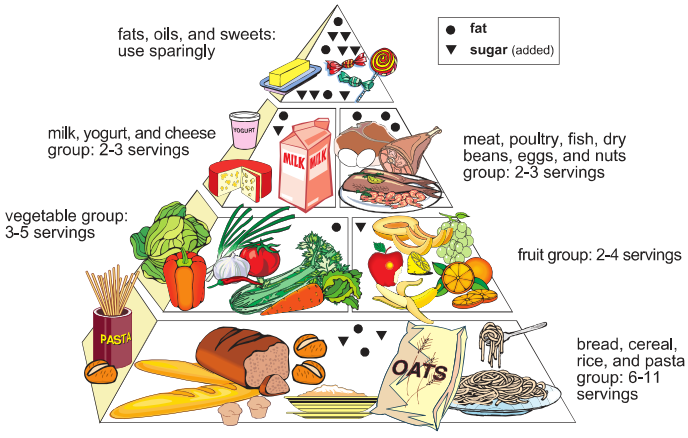
I also learned there are two types of diabetes. I have Type I diabetes. This often runs in families. Usually, type I diabetes develops before age 30. These people don't produce insulin because cells have been destroyed. There is also Type II diabetes. This usually develops after the age of 40. These people produce some insulin, but their bodies can't use it correctly ("What is Diabetes?").

Managing my diabetes will take a lot of work. I will need to take daily insulin injections. The amount will

probably change as I grow older. However, the most important thing I must do is eat well. I should observe the following rules carefully.

- I must also pay especially close attention to the food pyramid.
- I should eat less fat.
- I should eat more healthy carbohydrates.
- I must be extra careful about when I eat sugary foods. I must also watch the amount I eat. I *can* have an occasional sweet. However, this will be a rare treat.
- I should eat less salt ("Eating Right").

A bulleted list is used.



The Food Guide Pyramid from 1992-2005

A graphic adds visual appeal.

If I do this, I should be able to continue playing sports. In fact, keeping active will be good for me.

Look at the above **document** *carefully. Use it as a* **guide** *as you complete the practice on the following page.*

Using the Internet

From your phone, you can contact any other phone in the world.

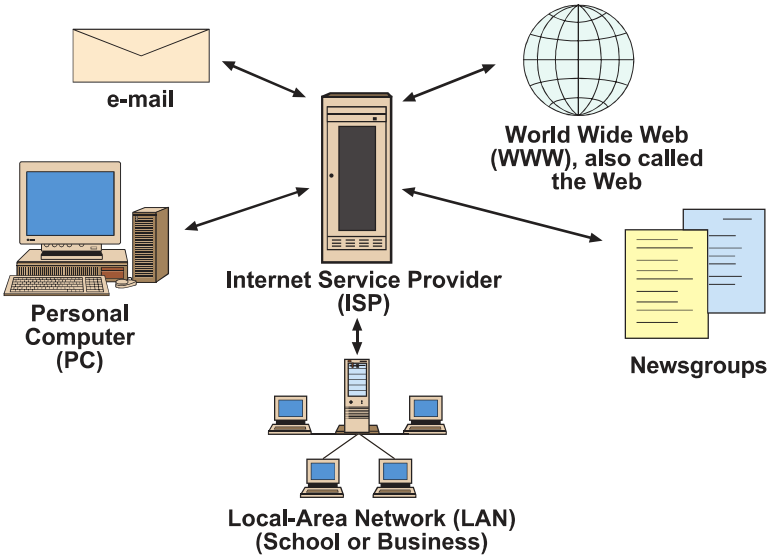
The **Internet** (also know as *The Net*) is a collection of computer networks. A good way to think of this is to think of your telephone system. From your phone, you can contact any other phone in the world. The *Internet* permits you to use computers in a similar way. The Internet allows computer users to view, retrieve, or share information with other users around the world.

The Internet allows computer users to share information with other users around the world.

The Internet opens many doors to new educational opportunities. Users can communicate with peers and mentors around the world. They can interview authors or witnesses to actual events. Internet users can get up-to-date current events and contemporary literary works before they are printed. The Internet also provides the opportunity to publish and share personal work with people on the other side of the world.

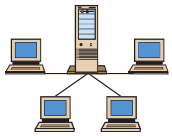
Let's take a few minutes to look at how the Internet works.

The Internet has its own special organization. Just like a machine, each part of the Internet has its own job to do. The following diagram shows how these parts work together.



Use the following terms and descriptions as a reference for this section.

Local-Area Network (LAN)—a system that allows a business to share **files**. Many schools also use a LAN. This lets all the computers in one company share *files*. This also allows users to send **electronic mail (e-mail)** throughout an office.

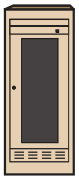


Local-Area Network (LAN) (School or Business)

Newsgroup—a system on the Web that lets you leave messages and receive replies to your messages. You can read other users' messages, too. You can also reply to them. A newsgroup is similar to a bulletin board. People who share interests enjoy newsgroups. You can exchange ideas about sports, books, or hobbies.

Server—a machine on a network that many users **access**. A server is used to store information. Information can also be retrieved from the server. A web server houses Internet sites. It also shares **web pages** and files.

Internet Service Provider (ISP)—a company that provides Internet *access* or Internet accounts to individuals, businesses, and other groups. Examples include *Earthlink* and *AOL*.



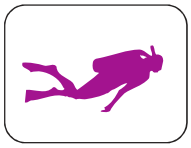
Internet Service Provider (ISP)

As you can see, the Internet has its own language. Review the list of terms and phrases below. You will use them as you explore the Internet.

Browser—a **software** program used to explore the **World Wide Web (WWW)**. Examples of **browsers** include *Firefox* and *Internet Explorer*.

File Transfer Protocol (FTP)—a system for moving files across parts of the Internet. Certain university and military sites are FTP sites.

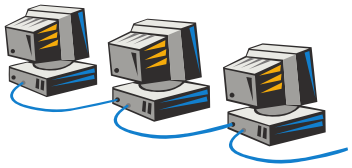
Hypertext—a system that **links** to different pages on the Internet. You often see one word, image, or phrase colored or underlined. By clicking on this link, you can **open** another page. This is called a *hot word*. Pictures can also be used. These are called *hot symbols*.



SCUBA

HyperText Markup Language (HTML)—codes used to create hypertext. These codes tell your browser how messages and *graphics* (pictures) should look on a *web page*.

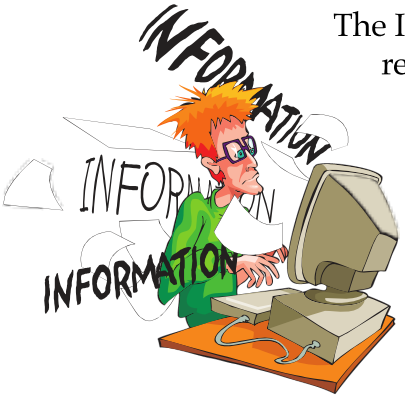
HyperText Transport Protocol (HTTP)—the beginning of a web address. You see it written as: http://



Network—two or more computers that are connected. This includes the **hardware** and software of the computers. The *hardware* is the physical part of a computer such as the **monitor**, mouse, or **hard drive**. *Software* consists of **computer programs** such as word processing or graphic programs. A *network* allows the computers to be connected and to share information and programs.

Universal Resource Locator (URL)—letters that make up an **Internet address** to access a specific site. A URL looks like this: http://www.yahoo.com *or* http://www.earthlink.net

Completing Research



You will find more information than you need on the Internet.

The Internet has changed how we conduct research. Once students had trouble finding enough information. Your trouble will be finding more than you need. Finding where to start can be overwhelming.

Some of you will be lucky. You will have the address of a particular site. Perhaps you found this in a magazine. Perhaps a friend shared it with you. To begin your search, simply key in the address. Often, this site will provide other useful links.

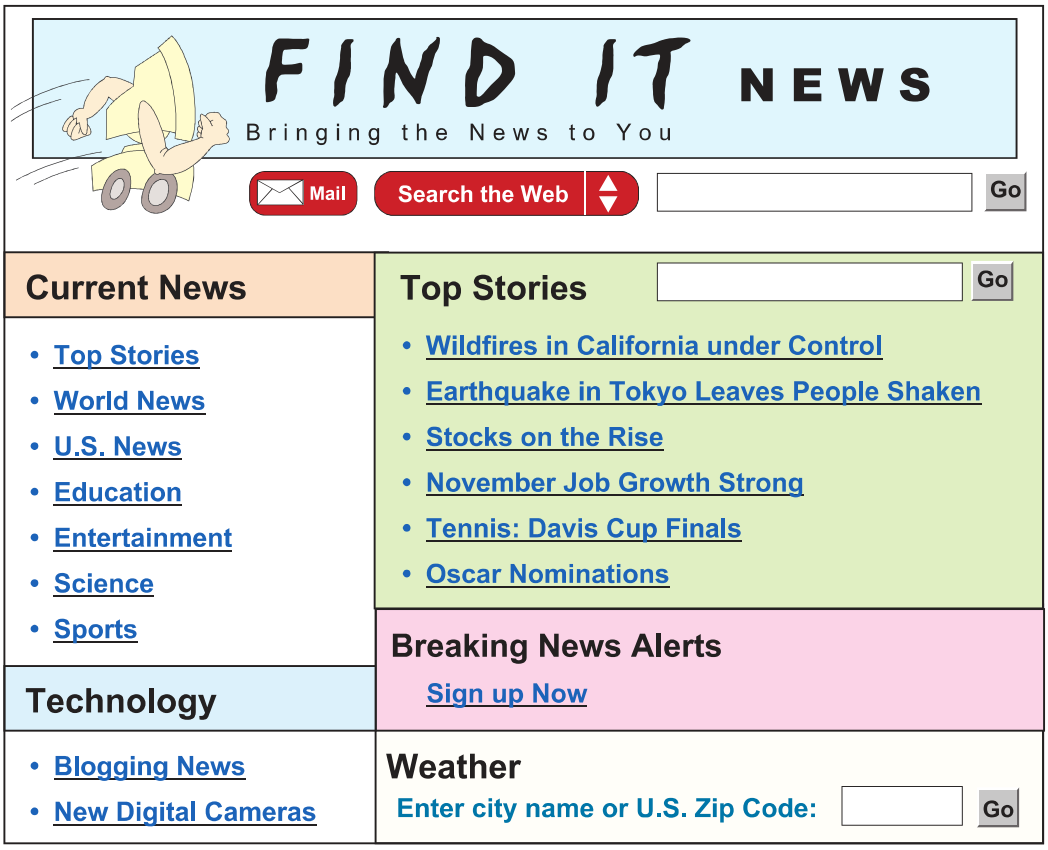
However, you will not always begin with an address. Without an address, you can begin your search in one of two ways.

First: You may begin each Internet session with a **homepage**. This could be a good place to start your search. Look for your browser's tool bar—it may have a built-in search engine, such as *Google* or *Yahoo*.

Look at the sample fictitious *homepage* on the following page. You can access links to many topics. For example, you can find information about a future career. You can also find information about current events. There is even a section that links you to Web channels. Here, you can further research a number of topics from automobiles to travel.

From your provider's homepage, you can move through thousands of links.

Sample Homepage



Then: Choose a **search engine**.

The Internet gives you access to an ever-growing amount of information. You will want to be able to search this huge bank of data and select relevant information.

There is really no one complete Internet reference available. Numerous *search engines* are available to locate specific information. Different search engines provide different results based on their method of searching. Some search for titles of web pages, others for keywords. It is helpful to try one or more different search engines to compare results and find other

relevant locations. Some of the most common search engines are used to browse a *broad topic*, search a *narrow topic*, or search for the *greatest number* of Internet sites. See the list of common search engines below.

Search Engines

To browse a broad topic

Yahoo	Lycos	Google
www.yahoo.com/	www.lycos.com/	www.google.com/

To search for a narrow topic

AltaVista	Excite	Go (Infoseek)
www.altavista.com/	www.excite.com/	www.go.com/

To search the greatest number of Internet sites (meta-search engines)

Metacrawler	Ask	All the Web (Fast Search)
www.metacrawler.com/	www.ask.com/	www.alltheweb.com/

Next: Conduct a word search.

There are many search engines available on the Internet. None of them give you access to everything on the Net. However, each will allow you to carry out a word search.

Look at the graphic on the previous page. Note where "Search the Web" is written at the top right of the page. It is written in front of a blank text box. The blank text box shows where to begin typing a *keyword* or phrase to begin your search. Type in a keyword or phrase and click "Go." A keyword or phrase is related to your subject. Look over the following tips for completing your word search.

Your wording is very important to a good search.

- Type in one word. The search engine will look for all sites with that word in their descriptions.
- Type in more than one word. The search engine will look for all sites that contain any of those words.

- Type a phrase in quotation marks. The search engine will look for all sites containing that exact phrase.
- Use **Boolean words** (words such as *and*, *or*, and *not*) to narrow your search.

    1. To locate multiple words, use **AND**.
    Example: To find information on Florida panthers, type in "Florida AND panthers."

    2. To locate items with more than one name or spelling, use **OR**.
    Example: To find information on e-mail, type in "email OR e-mail."

    3. To eliminate unwanted references, use **NOT**.
    Example: To find information on panthers (the animal, not the sports teams), type "panthers NOT hockey."

    4. To narrow your search, use **combinations** of these words.
    Example: Type "Florida AND panthers NOT hockey."

Using Boolean Logic

Computerized search mechanisms are based on Boolean logic. Boolean logic is named after George Boole (1815-1864). Boole was a 19th-century English mathematician who devised a new system for analyzing variables.

Sometimes there are too many choices or you get the wrong results. Some search engines allow you to narrow your search by using Boolean logic. Boolean logic consists of three logical operators: AND, OR, and NOT.

AND requires all terms to appear in a record.

OR retrieves records with either term.

NOT excludes terms.

Evaluating Internet Materials

How Good Is the Information on Any Given Web Site?

Web pages can be written by anyone from students to Nobel Prize winners. You need to evaluate every *document* you wish to use in your research. See the chart on the following page.

How to Evaluate Internet Material

Criterion	Critical Questions to Ask	What to Beware of on Internet Sites
Authority	Who posted this information? Who wrote the information? What does the author know about this subject? Is the author associated with a known organization?	There is no author listed. There is no e-mail contact. There is no reference to a known organization.
Purpose	For what reason has this information been posted? Is there bias or prejudice in how the topic is treated? Is the page simply designed to be a joke?	The site is selling a product or service. Extreme opinions are expressed with no other viewpoints offered.
Currency	When was the document posted? When was it last updated? How often is other information on the site updated?	The document is several years old. The site has never been updated. Everything else on the site is dated.
Format	Does the information appear as text, graphics, audio, or video? Can my Web browser handle this type of information? (browser software has certain limitations)	You need text information and this site only offers graphics or audio (or vice-versa). The screen prompts you to download a new "plug-in" module for your browser.
Site	Is the document part of a personal Web page—personal page of an individual has a tilde (~) in the address? Is it a commercial (.com), educational (.edu), government (.gov), organization (.org), military (.mil), network services provider (.net), or other site? Is the document from United Kingdom (.uk), Germany (.de), Australia (.au), Japan (.jp), Canada (.ca), France (.fr), Russia (.ru), South Africa (.za), or other country?	If you are on .com sites frequently, be aware the sites have products or services to sell.
Relevance	Is the treatment of my topic appropriate? Does this document answer my information needs?	You've found your search terms in the document, but the terms are used in a different context.

Source: Tallahassee Community College

The ability to think critically about items from the *World Wide Web* is important. Thinking critically will help you to make smarter selections from among the millions of Internet documents. Your papers will benefit from more accurate research.

Let's practice finding information.

Communication through E-Mail

Many of you are avid e-mail users. If so, you know that e-mail is a wonderful way to communicate with current friends and family. It also allows you to make new friends all over the world. E-mail, like your search engine, can be a valuable educational resource. It can allow you to share ideas. You may find someone else researching your topic. Through e-mail, you can share information. You might also make contact with experts in your field of study. Often, the contacts you make online can direct you to other links.

E-mail is a wonderful way to communicate with current friends and family.

Creating and Sending E-Mail

E-mail procedures will vary. Each e-mail program has its own rules. Each e-mail server has its own rules as well. Your teacher will explain these rules to you as you work. Read the steps below. Look at the diagram on the following page. These instructions show you *one* way to send and receive e-mail.

1. Access the Internet using your browser. Click the small **envelope icon**. You could also click on **mail** under **window** on the main **menu**. **Step 1** on the diagram shows you this step.

2. Check your messages. Click on the **Inbox** *icon*. A list of your messages will appear on the right side. **Step 2** on the diagram shows you this step.

3. Read the entire message. Click on the **message**. The text of the message will appear in the lower *window*. **Step 3** on the diagram shows you this step.

4. Reply to a message. Click the **Re: Mail** icon. This automatically sends your reply to the person who sent the original message. You can send the same message to a list of people. Click the **Re: All** icon to do this. **Step 4** on the diagram shows you this step.

5. Type your message in the new **window** that appears. **Step 5** on the diagram shows you this step.

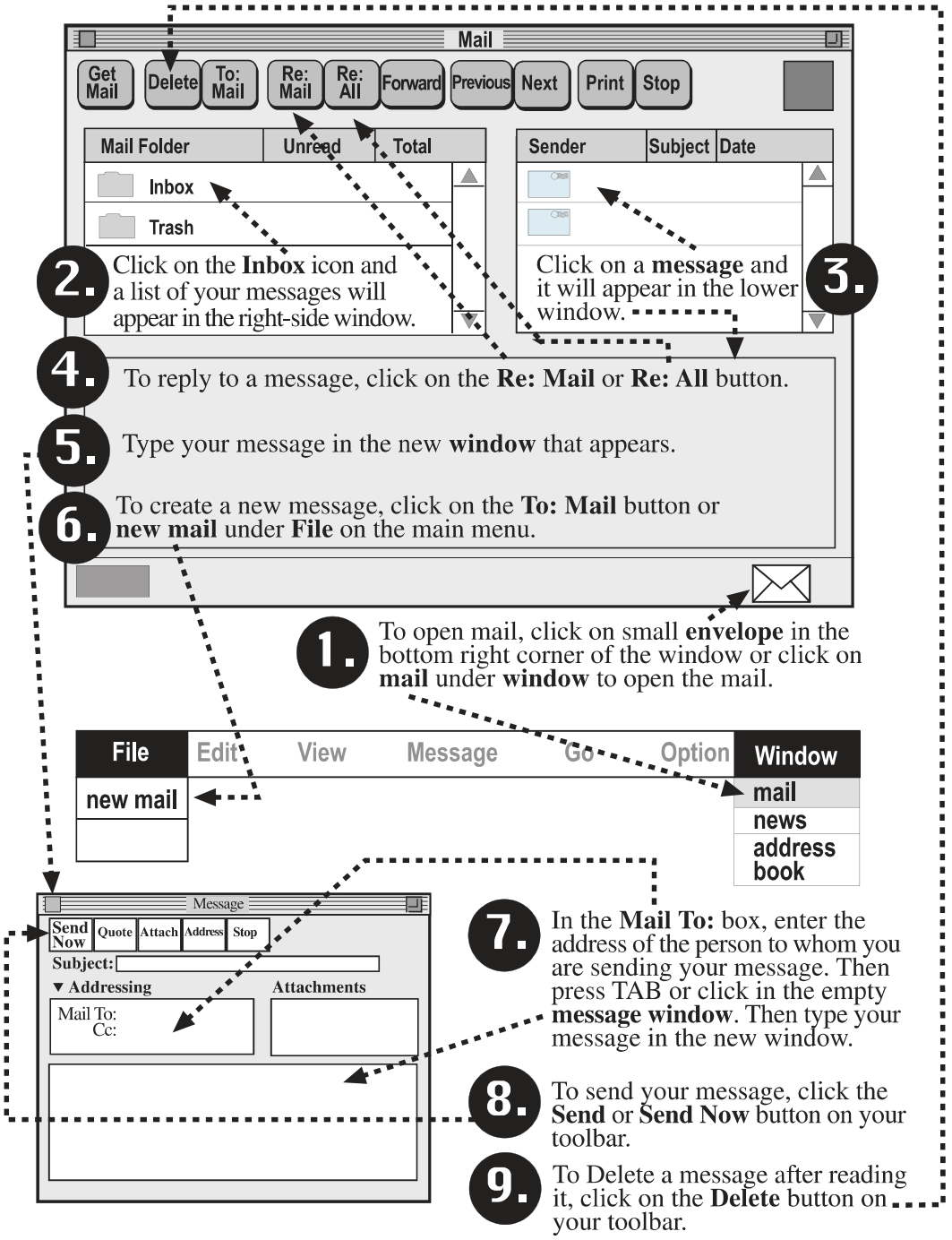
6. Create a new message. Click on the **To: Mail** button or **new mail** under *File* on your toolbar. A new message window will appear. See **Step 6** on the diagram.

7. In the **Mail To:** box, do the following. First, enter the address to which you want to send the message. Then, press TAB or click in the empty message window. Type your message in the new window. See **Step 7** on the diagram.

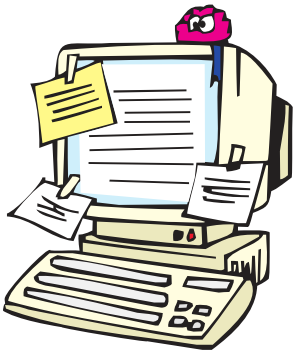
8. Send your message. Click the **Send** or **Send Now** button on your toolbar. See **Step 8** on the diagram.

9. Delete a message. Click on the **Delete** button on your toolbar. See **Step 9** on the diagram.

Example of E-Mail Procedures



Publishing Your Writing



One of the ways to share a piece of writing is on the Internet.

Once you have finished a piece of writing, share it. One of the ways to do this is on the Internet. This makes your work available as a resource to others. There are many places to publish your work on the Net. These include the following:

- online magazines
- writing contests
- student publishing sites.

Begin this search with your teacher. Perhaps your school district has a site that publishes student work. Some schools have such sites. Find out the rules for submission, if one exists.

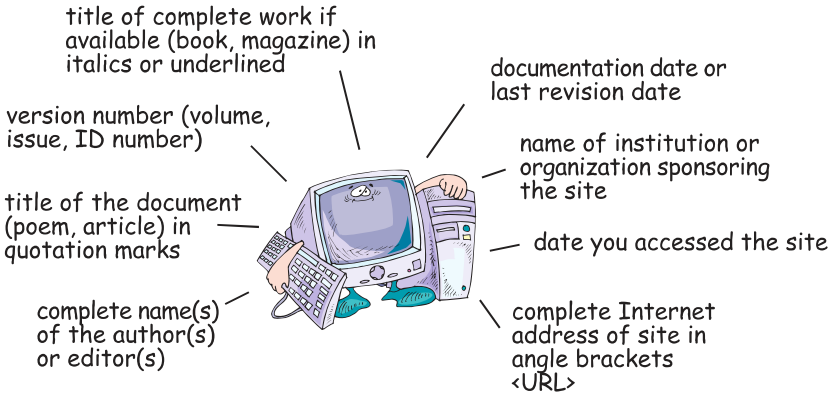
Teachers frequently receive information about student contests. Several textbook publishers also sponsor student sites. Your teacher can help you find these.

Beware: Many of these sites contain "contests" or "awards" that require you to buy a product. Always check out offers and "dos and don'ts" with your teacher. For example, your teacher may tell you *never* to use your last name or other identifying information on the Internet.

Citing Electronic References

You must *always* give credit for information you researched. Not doing so is a very serious offense. Internet and **electronic references** or sources are no different from other reference materials. You *cite* or refer to each source so you or your reader can also find it again. When doing your research on the World Wide Web, you should try to obtain as many items from the following list as are relevant and available:

- complete name(s) of the author(s) or editor(s)
- title of the document (poem, article) in quotation marks
- title of complete work (book, magazine), if available, in italics or underlined
- version number (volume, issue, ID number)
- documentation date or last revision date
- name of institution or organization sponsoring the site
- date you accessed the site
- complete Internet address of site in angle brackets <URL>.



Rarely will you find *all* of the above information. However, you should obtain all that is given for the article. Your Web browser can be set to print this information on pages you print.

Properly citing electronic sources can be difficult. This is because they are constantly changing. It is suggested that you use an updated format from the *Modern Language Association* (MLA) found in the *MLA Handbook for Writers of Research Papers*. **MLA style** is a written set of procedures used for writing papers and citing resources. However, the *MLA Handbook* is only one guide to citing references. Your teacher may suggest another guide.

Examples of MLA References in an Online Entry

Although no single entry will have all of the suggested information mentioned on the previous page, all works cited must contain the following basics:

> Author's or editor's name (listed with last name, first name, middle initial). Document title. Date of Internet publication. Date of access <Internet address>.

Review the following examples of citing online sources. Information may be in a different order with different styles. Different styles may also require the second line of the entry to be indented. Check the style your teacher requires.

Article:

Bayan-Gagelonia, Ruby. "The Florida Manatee." *EcoFlorida: Your Guide to Exploring Natural Florida.* Fall 2000. 9 Sept. 2002 <http://www.ecofloridamag.com/archived/manatees.htm>.

Book:

Aston, Diane E., and Dowd, Eileen M. *Fragile Legacy: Endangered, Threatened & Rare Animals of South Dakota.* South Dakota Department of Game, Fish & Parks, Report No. 91-04. 8 Dec. 1997. 10 Sept. 2002 <http://www.npwrc.usgs.gov/resource/distr/others/sdrare/sdrare.htm>.

Web site:

Endangered Species Information. U.S. Fish & Wildlife Service. 18 July 2002. 12 Aug. 2002 <http://endangered.fws.gov/wildlife.html#Species>.

E-Mail Message:

E-mail messages need author's name (if you can't determine the author's name, use the author's e-mail address), subject line (in quotation marks), message description, e-mail recipient, and date sent.

Evans, Brock. "Joining the Endangered Species Coalition." E-mail to Brandi Ash. 5 Aug. 2006.