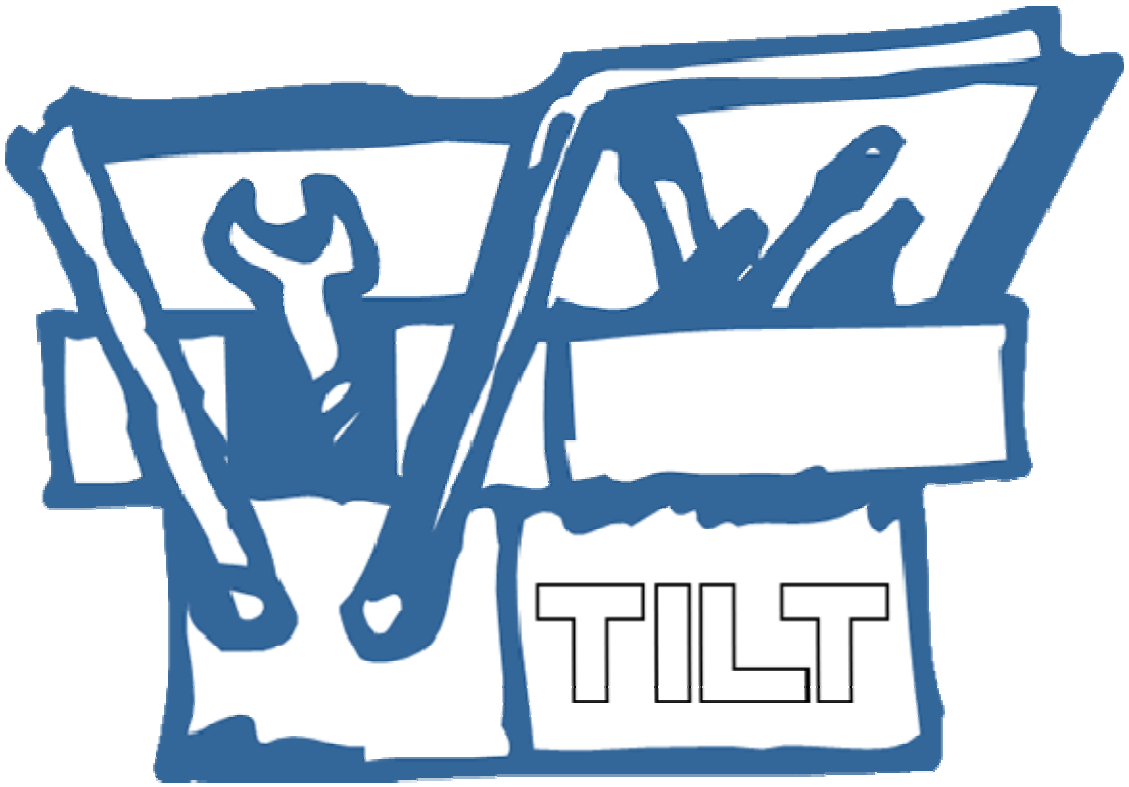


Tools for Information Literacy Tutorial

Index

Module 1  Selecting

Select: *to choose in preference because of special quality or value*

While in college you will need to research information for your papers and other assignments. Once you graduate you will most likely continue to research to make informed decisions in your job and your community. The skills you have and continue to develop will make the process of finding information for your assignments, your work and your life much easier.

The combined resources of your library and the Internet create an almost endless amount of information available to you. With all of these choices, where do you find the answers?

This module will focus on the different sources of information, where to find these sources, and how to choose the best ones for your research.

After completing this section of TILT, you should be able to:

- identify a variety of information sources
- recognize that appropriate sources of information will change depending on your needs
- identify characteristics of information on the Web
- identify characteristics of library resources
- recognize that library collections are located in buildings and on the Web
- recall what you would find in a periodical index
- list reasons to use a periodical index
- distinguish between popular and scholarly periodicals

Sources of Information

Information can come from virtually anywhere -- personal experiences, books, articles, expert opinions, encyclopedias, the Web -- and the type of information you need will change depending on the question you are trying to answer. Look at the following sources of information. Notice the similarities between them.

Keep in mind the following three questions:

1. Which sources can you find online?
2. Which sources guide you to other information on your topic?

3. Which sources would you use when writing a research paper.

Magazine

A magazine is a collection of articles and images about diverse topics of popular interest and current events. Usually these articles are written by journalists or scholars and are geared toward the average adult. Magazines may cover very "serious" material, but to find consistent scholarly information you should use journals.

Magazines, like journals and newspapers, are called "periodicals" because they are published at regular intervals throughout the year. Print magazines can be found in bookstores and libraries. Electronic magazines, called e-zines, can be found on the Web and sometimes in "digital library" collections.

Use a Magazine

- to find information or opinions about popular culture
- to find up-to-date information about current events
- to find general articles for people who are not necessarily specialists about the topic

Examples of Magazines

- *U.S. News and World Report*
- *Ebony*
- *New Yorker*

Sports Illustrated

Journal

A journal is a collection of articles usually written by scholars in an academic or professional field. An editorial board reviews articles to decide whether they should be accepted. Articles in journals can cover very specific topics or narrow fields of research. Since journals are published on a regular or periodic basis they are grouped in the category called "periodicals." Electronic journals, called e-journals, are published on the Web by scholarly organizations.

Use a Journal

- when doing scholarly research
- to find out what has been studied on your topic

- to find bibliographies that point to other relevant research

Examples of Journals

- *Journal of Communication*
- *The Historian*
- *Journal of the American Medical Association*
- *Lancet*

Periodical Index

A periodical index points to citations of articles in magazines, journals and newspapers. Many periodical indexes contain abstracts or brief summaries of the articles. Some contain the full text or entire content of whole articles as they originally appeared in the periodical. You may use online periodical indexes, purchased by your library, from any Internet-connected computer.

Use a Periodical Index

- when researching a topic in magazines, journals or newspapers
- when you know a subject but not a specific article

Examples of Periodical Indexes

- *Academic Search Premier* (a general periodical index)
- *PsycInfo* (a psychology periodical index)
- *ERIC* (an education periodical index)

Newspaper

A newspaper is a collection of articles about current events usually published daily. Since there is at least one in every city, it is a great source for local information. Newspapers, like journals and magazines, are called "periodicals" because they are published on a regular or periodic basis.

Many newspapers publish Web sites with today's news. The online copy of a newspaper can contain fewer articles than the print copy. Newspapers usually charge for access to online copies of older articles, but you can often find those articles at your library for free.

Use a Newspaper

- to find current information about international, national and local events
- to find editorials, commentaries, expert or popular opinions

Examples

- *Austin American-Statesman*

- *New York Times*
- *Le Monde*

Library Catalog

A library catalog is a searchable collection of records of every item in a library. The catalog will point you to the location of a particular source, or group of sources, that the library owns on your topic. Since every library collection is unique, every catalog is also unique.

Use the Catalog

- to find out what items the library owns on your topic
- to find where a specific item is located in the library

Examples of Library Catalogs in California

- Library Catalog (Concordia University)
- Antpac (University of California Irvine

Books

Books cover virtually any topic, fact or fiction. For research purposes, you will probably be looking for books that synthesize all the information on one topic to support a particular argument or thesis. Libraries organize and store their book collections on shelves called "stacks." Electronic books, called e-books, may be purchased online or may be available for free from your library.

Use a Book

- when looking for comprehensive information on a topic
- to put your topic in context with other important issues
- to find historical information
- to find summaries of research to support an argument

Examples

- Bluestein, Howard B. *Tornado Alley: Monster Storms of the Great Plains,* 1999.
- Nash, Gary B. ed. *History on Trial: Culture Wars and the Teaching of the Past,* 1997.
- Silverstone, Roger, ed. *Why Study the Media,* 1990.

Encyclopedia

Encyclopedias are collections of short, factual entries often written by different contributors who are knowledgeable about the topic. There are two types of encyclopedias -- general and subject. General encyclopedias provide concise overviews on a wide variety of topics. Subject encyclopedias contain in-depth entries focusing on one field of study. The best place to find an encyclopedia is in a library. However, some encyclopedias can be found on the Web.

Use an Encyclopedia

- when looking for background information on a topic
- when trying to find key ideas, important dates or concepts

Examples

- *Encyclopedia Americana* (general encyclopedia)
- *Columbia Encyclopedia* (general encyclopedia)
- *African-American Encyclopedia* (subject encyclopedia)

World Wide Web (www)

The Web allows you to access most types of information on the Internet through a browser. One of the main features of the Web is the ability to quickly link to other related information. The Web contains information beyond plain text, including sounds, images and video.

Use the Web

- to find current news and information
- to link to information provided by the library over the Internet
- to find information about companies
- to find information from all levels of government
- to find both expert and popular opinions

Examples of Web Addresses

- lcweb.loc.gov (The Library of Congress)
- www.hotbot.com (HotBot, a search engine)
- library.cui.edu (The Concordia University Library)

Email

Email is a method of online communication with one or more people using special software on an Internet-connected computer. It is not a private form

of communication since messages can be easily copied and sent to others. It is difficult to convey emotion or intent in an email message, so you must clearly state what you mean to say. You should be aware that there are rules of etiquette or "netiquette" to follow when using email. For example, USING ALL CAPITAL LETTERS is frowned upon because it is considered to be "shouting" in an online environment.

Use Email

- to find an opinion by an expert in the field
- to access postings and messages on newsgroups and listservs
- to ask your reference librarian a question about research

Examples of Email Addresses

- person@cui.edu
- president@whitehouse.gov
- cookiemonster@earthlink.net

Now that you know the wide range of sources available to you, how do you select the best one for your research?

The best sources will depend on the type of information you are trying to find. The following chart illustrates how the information you need will affect your choice of the best sources for you to use.

If you need:	**You might try:**
Current information about university hackers being caught yesterday	Newspapers and the Web
Scholarly articles with research about theft of personal information over the Internet	Journals and books (and e-journals or e-books on the Web)
Popular articles about scams on the Internet	Magazines (and perhaps e-zines on the Web)

You can develop more robust and convincing arguments by not relying too heavily on one source of information. Choosing a variety of sources can be an excellent way to find support for your thesis as well as provide different points of view on your topic.

It is important to think about what you really need to find and then use a source that best meets those needs.

- If you need current information...
  newspapers and the Web might be your first place to look.
- If you want general articles...
  magazines and the Web can offer good opinions.
- When you do research...
  books, library catalogs, journals and periodical indexes are usually good choices.

Since TILT is designed primarily to help you with research skills, the next thing to think about is how and where to start your research.

The Library and the Web

Sometimes the hardest part about research is just getting started. Two places to begin looking for information are in library sources and on the Web.

THE LIBRARY

When you think about libraries the first things that come to mind are probably printed materials such as books and magazines. Libraries also provide access to resources like full-text magazine articles, periodical indexes, and online encyclopedias.

Libraries collect quality information in a wide variety of formats. Many electronic resources are accessible through a Web browser. Academic libraries purchase these sources for their "community" of students, faculty, and staff to use. These resources are different than most of the information that is freely available to you over the Web because they have been reviewed and recommended by the library.

THE WEB

Alternately, no one individual or group dictates what information is acceptable for the Web or how it should be presented. This lack of authority allows many people to publish their opinions, ideas and creative works. While this information may be interesting, some of it may not be useful for academic research.

For your research, you will probably save yourself time and find more quality information if you begin with library resources and then move to the Web if you need more information or other points of view.

Starting with the Library

The main purpose of a university library is to collect a large quantity of scholarly material from different time periods and on diverse topics to make your research easier.

Library resources go through a review process. Librarians select books, magazines, journals, databases and even Web sites. This selection process allows the library to collect sources considered reliable, historically relevant, and valuable.

Library resources are free or discounted for your use. Though the items libraries purchase are not cheap, one copy may be shared by many people.

Library resources are organized. Items in libraries are organized so you can easily find all the sources on a topic. For example, when you search for a book in the library catalog you will get a call number. The call number will direct you to a specific shelf in the library. The other books near the same call number should cover a similar topic.

Library resources are meant to be kept permanently. One of the primary functions of a library is to be an organized storehouse of in-depth information published throughout time. As well as finding very current information, you can also find books that are no longer published and older issues of magazines. Occasionally you can access these items through digital library collections on the Web.

Library resources come with personal assistance. Unlike the Web, which is primarily do-it-yourself, libraries have staff who are trained to assist you in sorting through all these information sources. They can help you learn to use new tools and can answer any questions you have. Some libraries even provide help through their Web sites.

Libraries have large collections of information on a variety of topics which have been carefully selected and organized. The key idea when using the library is that you are getting **QUALITY** over **QUANTITY**. Print or electronic library resources are the best sources to use when starting your research. You can efficiently find quality information from a variety of credible resources in the library.

Starting with the Web

Although many people first go to the Web for information, it is not always the best place for what you need. It's pretty darn difficult to make definitive statements about something as diverse as the Web. But here we go...

Most information on the Web does not go through a review process. Anyone can publish on the Web without passing the content through an

editor. Pages might be written by an expert on the topic, a journalist, a disgruntled consumer or a sixth grader.

Some information on the Web is not free.
Many Web pages are free to view (and actually many of the best ones are), but some commercial sites will charge a fee to access all or part of their information.

Information on the Web is not organized.
Some directory services, like Yahoo, collect links to sites and place them in subject lists. But there are too many Web pages for any single directory service or search engine to organize and index.

Most information on the Web is not comprehensive.
The millions of Web pages out there make up an eclectic hodgepodge of information and opinion. Rarely will you be able to use a search engine on the Web to collect information about your topic from different time periods and different types of sources.

Most information on the Web is not permanent.
Some well-maintained sites are updated with very current information, but other sites may become quickly dated or disappear altogether without much notice.

Groups on the Web

With a computer and a phone connection, *anyone* can publish on the Web.

Individuals - People from nearly every country publish pages on the Web, representing a wide variety of views and languages.

Universities - Universities put entire classes online as well as provide space for their *faculty* and *students* to produce Web pages. Much of the information you need to enroll and register for classes can be found on the Web.

Government Agencies - In order to make information available to more people, federal, state and local governments are publishing many documents on the Web. The Internal Revenue Service (IRS) puts copies of tax forms on the Web.

Companies - Many companies publish financial documents and press releases on their sites. The Web is also a major marketing tool for many companies to provide information about their products. Nike produces a popular site full of sports information.

Organizations - Organizations have agendas and opinions that they want you to know about. The American Lung Association educates about the dangers of smoking on its Web page.

Libraries - That's right, libraries are major producers and purchasers of *quality* information on the Web. The Library of Congress puts copies of important historical photographs and documents on their site called "The American Memory Project."

The Web can be a good research source for:

- sampling public opinion of people on the Internet
- gathering a wide range of ideas
- locating information on topics not found in mainstream publications
- learning more about companies and organizations
- reading information from the government
- finding quick facts
- catching up with current news

The key idea when using the Web is that you get **QUANTITY** over **QUALITY**. The Web is a good tool for finding information, but it is usually not the best place to begin academic research.

The Library on the Web

Although we've been making some distinctions between the Web and the library, the two aren't entirely different things. It's important to understand that there is a middle-ground -- the idea of the "library on the Web." That is to say, many libraries have Web sites which organize information and provide access to collections of quality resources.

One great thing about using the library on the Web is that the information has been evaluated and organized. Much of this information is from the government, companies, universities and foreign countries. Sometimes the library has digitized part of their own collections for people around the world to use. Keep in mind that although there is an increasing amount of information in this "digital library" you will still not find electronic full text versions of all the resources you would find in the physical library.

Another aspect of this library is how easy it is for you to access. Library Web sites often have information about library hours, policies and contact information if you need assistance. If you are a student at a university, you can use the library online 24 hours a day, seven days a week from any Internet-connected computer. In some cases you can even find the full text of articles from magazines and journals all through the library's Web page.

One of the best resources available from the library over the Web is the periodical index.

Periodical Indexes (a.k.a. Library Databases)

Periodical indexes allow you to search for citations to articles in popular magazines and scholarly journals. Sometimes these indexes have the complete or "full text" of articles as well. Indexes cover all sorts of subjects. If you start with a general index you will find articles about new trends, opinions, and information for the non-specialist. You may be familiar with the general index called *Readers' Guide to Periodical Literature*. Periodical indexes are one of the best sources to use when writing a research paper.

Where do you find these indexes? Good question. Libraries purchase some periodical indexes and allow their community to use them over the Web. To figure out what indexes are available and the subjects they cover look at your library's Web page. You could also ask a librarian at your school. (Don't worry, you aren't bothering them.)

Periodical indexes are one of the best places to find information because:

- you can access many of them through the Web
- they index information which has gone through an editorial review process
- they cover a variety of subjects
- they are structured for finding information more precisely
- they offer citations to the popular magazines and scholarly journals that have articles on your topic

In Module Two you will learn more about choosing and searching periodical indexes. Mastering these skills will make research easier.

Popular or Scholarly

Magazines and journals are called periodicals because they are issued on a regular or "periodic" basis. Periodicals are usually separated into two major groups: popular and scholarly. If you are able to recognize the differences between a popular and scholarly source, you can focus your research to retrieve only the type of information you need.

If your professor says you need to find **scholarly** or **peer reviewed** information for your paper, you should choose a journal rather than a popular magazine. Journals are geared toward experts and researchers in the academic or professional community. An editorial board of respected scholars reviews all articles submitted to a journal. They decide if the article provides a noteworthy contribution to the field and should be published.

Magazines -- such as *Harpers, Scientific American* and *The New Republic* -- are also good sources of information for your paper. They are geared towards readers who, although not experts, are knowledgeable about the issues presented. Articles in these sources are generally more in-depth but still fairly easy to understand.

Popular magazines like *People, Sports Illustrated* and *Rolling Stone* are probably not the best sources to use to find articles for research.

Here are two sample citations:

Magazine Article:

McClure, Stuart and Joel Scambray. "Internet privacy shows troubling prospects; constant erosion leads to lots of exposed data." *Infoworld* 22:25 (June 19, 2000) p54.

Journal Article:

Hertzel, Dorothy. "Don't talk to strangers : An analysis of government and industry efforts to protect a child's privacy online." *Federal Communications Law Journal* 52:2 (March 2000) p429-451.

Let's Get Ready to Research

Researching involves following clues toward the resolution of a case. Research will help you make connections between information and ideas, as well as broaden your perspectives on the world. When your research is complete you should have enough quality information to make writing your paper easier.

Remember that it takes time to locate good information. If you are struggling to start your research, get help. The people who work at the Reference Desk in your library are experienced in selecting and evaluating reliable resources. Take advantage of their experience and ask them for assistance.

Module 2  Searching

Search: *to look for or examine in an effort to discover something*

Searching is a process of discovery that may expand your knowledge and broaden your views. It is one of the most creative aspects of research. Once you master some techniques, you might find you enjoy it.

Sometimes you may find more information than you want. Knowing how to focus your search can reduce what you find to a more manageable amount. On the other hand, your search might uncover no information at all. If so, you have to be persistent - possibly trying different approaches to find what you need.

Selecting the best source to search, choosing the most appropriate words, and combining them successfully are skills you will develop in this module of TILT.

After completing this section of TILT, you should be able to:

- identify appropriate strategies for selecting search terms
- identify types of information available in library databases
- select appropriate library databases
- list methods to search using keywords and subject headings
- combine search terms effectively
- describe information available from a search engine
- select appropriate strategies for searching the Web

Brainstorm

1) a sudden bright idea; 2) a harebrained idea.

Before you begin your research, write out a few detailed sentences about your topic. Underline the main words in these sentences. From the description that you wrote, create a list of related **keywords** and **phrases**.

Once you have an initial list, think of other terms that also describe your topic. Write down any ideas you have, even the ones that seem harebrained; sometimes they end up being the most helpful.

Come up with **synonyms** - other words or phrases that have the same meaning - for your terms. Don't forget to list alternative spellings,

abbreviations, and acronyms for words on your list. You should also identify words that have broader or narrower meanings than your original terms.

For example, consider using
broader and narrower terms for "undergraduate"

Broader term = university student
Original term = undergraduate
Narrower term = freshman

Brainstorming helps you choose good search terms before you begin. For example, look at the list of keywords and phrases we thought of for this paper topic:

Concerns about email security demand better programming, authenticated email addresses, and more caution from users.

Key Words:

email
e-mail
security
programming
caution
authentication

Key Phrases:

Internet security
electronic mail systems
software utilities

Now it's your turn. On the next page, we'll give you a sample topic so you can practice brainstorming for good keywords and phrases. For each of the three steps, type all the terms you can think of in a text box and click on "Process It!"'

When you show the computer your list, it will show you ours. Let's see your "Thought Process" in action.

Key Ideas in Searching

Use both singular and plural nouns. It is best to avoid using long phrases. If you can't think of concepts and ideas, you can always refer to a subject encyclopedia to get those creative juices flowing.

Remember that alternate spellings, capitalization, abbreviations and even punctuation can be important. Also consider broader and narrower terms that convey the ideas in your topic. For example, we could have considered "email" or "chat" if we wanted to get more specific than Internet.

Sometimes it is helpful to search on words that aren't listed within the text of the thesis statement. That is pretty normal since your topic is often written in only a sentence or two before you begin your research. Think of alternate words that authors might have used in an article on your topic.

> **Advanced search tip:** some databases allow you to search for all words that have the same root -- such as isolate, isolated, isolation -- using special symbols called wildcards.

For any topic you choose, the **Thought Process** will help you focus your research and select appropriate search terms.

Once you have determined the keywords and phrases for your topic, where are you going to search? Library databases may be the best place to find what you need.

Database: *an organized collection of information, usually pertaining to a particular subject.*

Think of databases as huge electronic filing systems. They must be highly organized for people to easily find the information they need.

There are many kinds of databases. The most common type you will encounter in the library is an online periodical index, which points you to articles published in magazines, journals, and newspapers.

Each year millions of articles are published in periodicals, some of which are indexed in periodical indexes. Your library will probably own many -- but may not own all -- of the periodicals included in those indexes.

When you search a periodical index you will always get a citation, which includes the article author, article title, magazine or journal title, and date. Sometimes you will also find **abstracts** or the **full text** of articles.

Which Database?

Choosing an appropriate database, or periodical index, is an essential part of research. How are you going to choose among those available from your library?

Library databases organize particular types of **materials**. Some index citations for government documents, conference proceedings, book reviews, or magazine and journal articles. Others, like your library catalog, focus on a particular collection. Knowing what type of information you are looking for will make your selection easier.

Most library databases specialize in a particular **subject**. There are databases for education, business, anthropology, engineering, and architecture - virtually every academic discipline! Other databases are more general or multi-disciplinary, indexing popular and scholarly periodicals from a wide variety of topics.

For articles about:	**Use a:**	**Such as:**
Privacy on the Internet	Multi-disciplinary database	Academic Search Premier
Digital signatures	Business index	Business Source Elite
Digital Millenium Copyright Act	Legal index	LexisNexis Academic

Databases available to you are usually listed on your library's Web page. You may also want to ask a reference librarian; they can usually recommend the best ones for your topic.

Fields:

Fields are the basic building blocks of a database. A set of fields makes up a **record**. Since each database organizes different types of information - documents, journal and magazine articles, statistics - fields will vary depending on the database you use. In most databases you can search specific fields when you are looking for precise information.

The following will highlight some of the most common fields in a database record:

Accession Number: This number tracks the order the item was entered into the database.

Authors: You can search by author if you know it.

Institution: This is the publisher or group that published the information.

Title: You can search on an exact or partial title.

Country of Publication: Where the item was first published.

Subject Headings: These are the categories that this article fits into.

Abstract: This is a short summary of the article.

ISBN: This is the International Standard Book Number used to order books.

Language: The book is written in this language.

For a magazine or journal, you will find the Accession Number, Authors, Institution, Title, Subject Headings, and Abstract. In addition you will find:

Source: Lists the publication in which the article appears, including volume, issue, and pages.

ISSN: This is the International Standard Serial Number assigned to the publication.

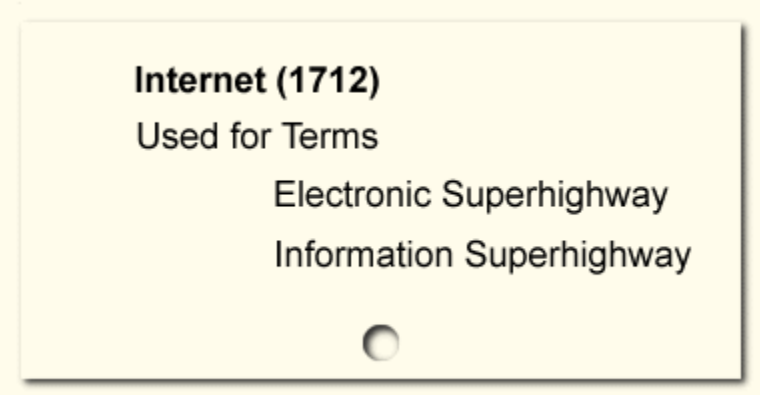
Subject Searching

Most periodical indexes organize their records using a list of approved subject headings. This allows you to find all the articles about your topic under one term.

How do you find the approved subject headings?

1. Use a subject guide.

   Some indexes provide a list of subject headings. This list is called a subject guide or a thesaurus. If you search for a word that is not in the index, it may suggest an approved subject heading you could use.



In this example, there are 1,712 articles about the Internet in this database. If you looked for articles using the words **Information Superhighway**, this database would direct you to use the subject heading **Internet**.

2. Guess.

   By selecting good keywords you may get lucky an find out your words are the same terms the indexers chose as a subject heading.

3. Look at the subject headings for one good article.

   Find one good article for your topic and look at the subject headings listed. Entering another search using the best subject heading should help you find relevant information.

Key Word Searching

Another way to find subject headings is to do a keyword search. A keyword search allows you to locate articles that include your keywords within the title, abstract, or subject heading areas.

Notice the other subject headings that you could enter as keywords to help you find additional articles.

Use keyword searching to:

- start your research
- identify the subject headings used for your topic
- find specific information (a fact, date or name)
- find every occurrence of the words you enter in that database

Searching using a single keyword may be easy; but most of your topics are probably more complex than a single word can describe. The following pages will give you some tips for combining more than one idea effectively.

Combining Ideas:

Because databases are highly structured, you can use special techniques to search them more effectively. When you want to find more than one word or idea, you need to enter your search in a way that the database will understand.

Consider this tip: Think of the nouns related to your topic. These will usually be better keywords to search than adjectives, prepositions, or pronouns. For

example, rather than searching for "effects of Internet use on children" you should try combining the main ideas, such as: "Internet and children and effects."

Connector words such as **AND** and **OR** are important to use when you combine ideas. The following pages will show you how to successfully search using these two terms.

Using AND

When you want to find articles containing two or more ideas, you should connect the words in your search with AND. Using AND between keywords means that **both** terms must appear somewhere in the record. AND is used to **narrow** a search.

students **AND** Internet
Entering this search in a periodical index would find articles that contained the terms students and Internet. If an article only had one of these terms, it would not be retrieved by this search. AND is best used for linking different ideas.

students **AND** Internet **AND** assignments
You can use **AND** many times in a single search.

Using OR

You can also use OR to combine keywords in a search. Using OR means that an article will be retrieved if it contains either keyword. OR is best used to search for **synonyms** of a concept. Because any one of these words could show up in your articles, OR **broadens** your search.

Internet **OR** Web
Using this search in a periodical index would find all of the citations that mention either Internet or Web.

Internet **OR** Web **OR** online **OR** digital **OR** wired
You can use **OR** many times in a single search.

You can make very complex searches by combining the use of AND and OR in a technique called nesting. Did you know that the terms AND and OR are called Boolean operators?

What Next?

So you have the citations, but where are the articles?

For those articles not in full text, you need to search the library catalog to see if your library owns a copy of that magazine or journal.

For example, if you were looking for this article:

"Gossip on the web: Truth, lies and cyberspace."
The Economist 351.8116 (April 24, 1999): 84.

You would search the library catalog for the title of the periodical (Economist), *not* the title of the article ("Gossip on the web: truth, lies and cyberspace").

Sometimes, you need information beyond what you find in printed publications. The Internet may be a good place to look. So let's talk about using your search skills to get relevant information from the Internet.

Untangling the Web

Millions of Web pages are available to you, but how do you find the best ones for your research?

Many libraries review and organize Web pages. Starting with your library's home page will help you quickly locate quality sites. To find other information on the Web you will need to use a search engine.

When you use a search engine you are looking for terms that appear on pages in the search engine's database, rather than searching the Web in real time. Even the largest search engines only contain about 1/6 of the Web in their database, so if you only use your favorite search engine you will be missing out on over 85% of the available resources.

Which Search Engine?

Every search engine is different, from the way you search it to what it contains. How can you choose a good search engine? Ask yourself:

1. What type of information is in this search engine?
2. How is this search engine organized?

Most search engines collect all sorts of Web pages on a wide variety of topics in their vast databases. All large and general search engines, such as *Altavista* and *Google*, allow you to search by keyword. Some, like *Yahoo* and *Excite*, also organize sites into subject categories. These subject categories are great if you are looking for a site that has information on a general topic.

Specialized search engines are sometimes organized around type of material, like newspaper articles or stock market quotes; they may search pages on a particular subject, such as medical or travel information. They are good sources for finding the best sites for your research because they may provide site reviews or only include those Web pages that have verified information.

Search Strategies

You will probably want to select a few search engines and learn the tricks for searching those effectively. The following techniques will be helpful when finding information on the Web.

1. **Choose good keywords and phrases.**
   Brainstorming before you start searching will generate a good list of keywords and phrases. Try to imagine what words the author of the web page would use. Unless the word is usually capitalized, stick with lower-case letters.
2. **Be specific.**
   You can create more targeted searches if you use phrases. Most search engines require that you put quotes around a phrase.
3. **Try different searches.**
   Search engines use sophisticated equations to calculate the number of times your search terms appear on a page and show you the best first. If the first 30 sites are not relevant, try a different search. If you are not satisfied after a few searches, try a different search engine.
4. **Use advanced search techniques.**
   Many search engines have advanced search capabilities such as limiting by language or type of information. Read the help screens to see which special features are available.
5. **Browse a subject list**.
   Choose a search engine that organizes pages by subject. Start with a general category and choose increasingly more specific sub-categories.

The Future of Searching

In the future it will be even more difficult to distinguish between library databases and search engines. Even now, there is some crossover as library

databases index Web-based journals and search engines include select library resources. While it is not yet possible to search both the library and the Web simultaneously, you can use metasearch engines such as Dogpile or Metacrawler to search many different search engines at the same time. These are helpful if you want to see a larger sample of information available on the Web or you are looking for a unique fact.

Soon you may not even need to search for information. Intelligent agents will do much of the work. They will filter all available information and retrieve only the data that you need. The information they find will become increasingly tailored to your interests as they evolve to match what is important to you.

For now though, without intelligent filtering software, we must wade through all available information to find those articles and Web sites that will be useful for our research. To do this successfully, we must be able to identify appropriate databases and search engines, understand how they are organized and search them effectively.

You're Search is Over…

Successful searching includes brainstorming for keywords and phrases, choosing appropriate databases or search engines, and combining terms effectively. Though information constantly changes on the Web, understanding these steps will give you the skills to effectively find sources for your research. Keep in mind that search engines and library databases regularly update their appearance and add new features. Look for the help pages; they will highlight the best way to search.

Once you finish searching, you need to decide if the information is appropriate for your research. The sources you use must be documented properly. In Module 3 we will discuss how to locate, evaluate, and cite sources of information.

Module 3  Evaluating

Evaluate: *to determine significance or worth*
by careful appraisal and study

Finding sources appropriate for academic research requires time and a critical eye. Learning to apply criteria by which you can evaluate both print and electronic information should make it easier for you to choose good sources.

The type of research will determine how closely you examine your sources. You would probably be less critical of information gathered for personal interest than for a paper. Academic research requires accurate and documented sources.

This module will focus on locating, evaluating, and citing print and electronic sources. After completing this section of TILT, you should be able to:

- locate items in the library using call numbers
- determine if the library has an article using a citation
- recognize the different parts of a URL
- evaluate sources using the criteria discussed
- list ways to avoid plagiarism
- describe when to cite a source
- recognize the different parts of a citation

Locate It in Print

Imagine you were starting a library and you had a few thousand books, magazines and other materials. How would you organize all those sources so people could easily find things? What if your collection grew to a few million items? Could your collection logically adapt and expand?

Basically, libraries organize their collections by **subject**. These subjects are represented by call number systems called classification systems. There are two major classification systems that your library might use: the Dewey Decimal System with call numbers that begin with numbers, and the Library of Congress (LC) Classification System with call numbers that begin with letters.

Finding Books

Books in the library have call numbers, which are like addresses for their location on the shelf.

Let's say you were looking for the book ***Online Seductions: Falling in Love with Strangers on the Internet***. By searching for the title "online seductions" in the library catalog, you would find the call number.

The CUI Library uses the Library of Congress system, the call number would be HQ 801 G95 1998. What does this number represent?

HQ	The first part of an LC call number starts with one to three letters. These are shelved alphabetically. HQ represents Sociology.
801	Once you find the materials that start with HQ, look at the number that follows. HQ 801 represents Man Woman relationships; Dating. This book would be shelved after HQ 800.
G95	This usually represents the authors name. The G is the first letter of the author's last name.
1998	The book was published in 1998.

In libraries many items on the same subject will have similar call numbers in the library catalog and on the shelf. It is important to write down the **entire** call number in order to locate the item.

Searching for Bill Gates

Whether you admire him as your favorite philanthropist or loathe him as a conniving capitalist, you've probably heard of Bill Gates. Maybe you've even wondered what he thinks and how he made all that money. So you decide to trek to the library to find some books about the man behind the legend ...

You realize there are many possible ways to search for books about Bill Gates in the library catalog. Not knowing a specific title, you choose to do a **title keyword** search. Click "**Search**" on the computer screen to do this search.

The first book that appeared in our title keyword search is:

> Predicting the Future: From Jules Verne to Bill Gates. Malone, John Williams. 1st Edition, New York, 1997.
> CB 48 M35 1997 Available

Since you're in the library, you decide to find another book about Bill Gates. On the LibCat, **select one** of the searches by using the pull down menu.

Then press "**Search**" to find the call number of that book. Each of the following three searches would lead you to at least one good book on the topic.

Bank, David. Breaking Windows: How Bill Gates fumbled the future of Microsoft. New York 2001.
HD 9696.63 U64 M5326 2001 Available

Finding Articles

This same process works for finding periodicals in the library catalog and on the shelf. Let's say you had this citation for an article:

Smith, Anne Kates. "Scanning for scams, or invading privacy?" *US News and World Report.* April 10 2000: 45.

By searching the library catalog for the periodical title *US News and World Report*, you could see if the library owns that magazine. At CUI, periodicals are shelved alphabetically by title on the main level of the library. You can find the periodical on the shelf and, using the page numbers, locate the article within it.

Locating it on the Web

Just as every item in the library has its own call number, every image, file, page or program on the Web has its own individual location. To find these online sources, you need the Web address called a Uniform Resource Locator or URL. The URL identifies the computer, directory and file where an item is located and the type of protocol needed to read that item. Capitalization, punctuation and spacing must be exact for a URL to work.

Dot What?

Most URLs include the name and type of organization sponsoring the page. The type of organization is identified by a three-letter code called a "top level domain name." Here are some of the most common domains you will find.

.edu	educational institution Even though a page comes from an educational institution, it does not mean the institution endorses the views expressed there. Students or faculty members may publish personal pages in their account on the school's computer.
.com	commercial entity

	Many companies advertise and sell products, as well as publish annual reports and other company information for their customers, stockholders and potential investors on the Web. Much of the quality information you can purchase such as online newspapers or journals have .com names.
.gov	federal government Government agencies use the Web to publish legislation, census information, weather data, tax forms and many other documents.
.org	non-profit organization Non-profit organizations use the Web to promote their causes. These are good sources to use when comparing different sides of an issue.
.net	network provider This group is an odd mix of companies, associations and Internet Service Providers. Information on these sites can look similar to sites from .com, .org, or even personal pages.

Recently the division between these top-level domains became blurred. Sometimes non-profit organizations and educational institutions are now found under .com or .net. This makes it more difficult to determine the organization that is **publishing** the page.

The number of top-level domain names will soon be increasing. New domain names include .museum, .info, and .biz. The origin of some international sites can be determined by country codes found in the URL.

Let's analyze a web address.

www.	**moneymakersR_US.com**
www stands for World Wide Web. This is the name of the "host" computer where the web page is stored. Not all URLs begin with www.	This part contains the name, or abbreviated name, of the company or organization sponsoring the information.

Evaluating Information

Evaluating information can be a complicated process. Since there is plenty of information available that is inaccurate, fraudulent or biased, it is important to determine if the sources you find are factual and verifiable.

Items in the library are usually easier to evaluate because they have already been reviewed twice by the time you see them. First, an editor verifies that the information is accurate and then a librarian determines whether the item

is appropriate for the collection. Freely-available Web sources usually do not pass through this review process, so you will need to look at these items more closely.

How will you judge what is good information and what is not? Look at the following information for guidance.

Author

Does the author have the expertise to write on this topic?

Determine the expertise of authors by investigating their educational background, work experience, and other writings. To find this information, you might have to look in several places.

- Use a reference source at your library, such as *Who's Who*, to find reliable biographical information.
- Use the library catalog or a periodical index to see if the author has written any other books or articles on the topic.
- If you are using a Web source, locate information about the author by looking in the header or footer. Or, look in the dust jacket or preface to find biographical data in a book.
- Use a search engine to find an online résumé or page about the author's credentials.

Date

Is the information in this source up-to-date?

The accuracy of your source may be affected by the date it was published. Some ideas once believed to be true were later disproved by new discoveries. Fields such as medicine or law might require more time-sensitive information than fields like philosophy or history.

The currency of a Web page can be important. Information that changes frequently such as stock quotes and news events should be found on pages that are updated regularly. Some sites may not be updated, such as personal pages or government reports, either because they contain information that doesn't change or due to poor site maintenance.

To locate a date and determine whether the information is current:

- Find the last updated date in the header or footer. Print items often have a publication date on the title page or on the back side of the title page.
- If the author uses facts or statistics from another source, make sure they are properly cited with the date. You may want to confirm this information in the original source.
- Check the library catalog or a periodical index to see if there is more recent information.

Publisher

Does the publisher affect the information in the source?

Publishers may have their own agendas when they choose to publish books and magazines. For example, they may hire authors whose writing reflects the values of their publishing company. On the Web, larger organizations usually sponsor pages by providing space on their computers. These organizations may have policies about the types of information that can be published on their servers, but often do not monitor what individuals write.

Your task is to identify the publisher of the source, and determine whether the publisher's policies or bias influence the information. To help you decide, consider the following:

- When using a print magazine or journal, see if that periodical has a mission statement on the masthead or inside cover.
- When using a Web source, look for a logo or link back to the home page.
- Do advertisements take up a significant portion of the source? Many Web designers rent space on their pages and have little control over the advertisements that appear. Others may advertise their own products on their pages.
- If you are having a difficult time identifying the publisher of a Web page, remove the file name from the URL to determine the sponsoring organization's Web site.

Reviews

What do reviewers say about this source?

Since you can't be knowledgeable about every subject, you may need to rely on the opinions of analysts and experts. These people have read many articles and books in their field and often have practical experience. Though

you may not agree with their conclusions, using their experience will help you evaluate your sources.

To find reviews and criticism:

- Ask your instructors for their opinions about your choice of sources.
- Ask your librarian to help you identify the best periodical index or reference sources to find book reviews.
- To find reviews for Web sources, try using sites that rate pages - like *Librarians' Index to the Internet* and the *Scout Report* - for some indication of their quality.

Content

Is this source appropriate for your research?

You and your instructor are the best people to determine if a source is appropriate for your research. Remember that all sources you use should contain well-supported arguments and valid research. Since it is easy to falsify information on the Web, you should look closely at the sources you select online.

- Check how statistics and facts were collected and to whom they are attributed. All should be referenced with a source.
- Determine whether the source is an opinion piece.
- Judge whether the source is popular or scholarly. Make sure you are using the appropriate type of source for your assignment.
- Bibliographies highlight the sources that influenced the author's work. Use the bibliography at the end of your source to find other related works.
- Consider all the information you have gathered about the author, publisher, and date and determine whether the source is appropriate for your information needs.

Plagiarism: The act of presenting another's work or ideas as your own.

One of the main ideas of research is to study what others have published and form your own opinions. When you quote people -- or even when you summarize or paraphrase information found in books, articles or Web pages -- you must acknowledge the original author.

If you use someone else's words or ideas without crediting them, you are committing a type of theft called plagiarism. Plagiarism can be as obvious as

turning in another person's paper or project as your own, or as sly as simply paraphrasing sections of various works. It is also incorrect to copy text from Web pages or other sources and paste it into your paper without identifying the original author.

How can you avoid plagiarism?

- Take clear, accurate notes about where you found specific ideas
- Write down the complete citation information for each item you use
- Use quotation marks when directly stating another person's words
- Always credit original authors for their information and ideas

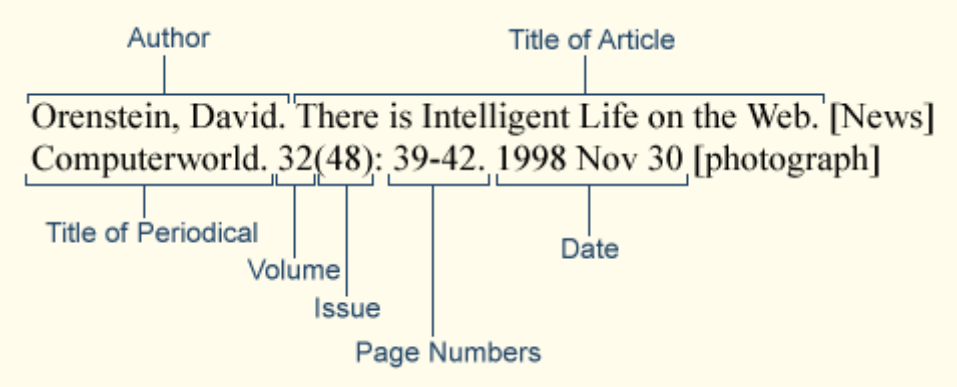
Citing: Noting the source of a quote, paraphrase, or idea as an authority or proof.

Citing is the process of giving credit to the sources you used to write your paper. Citations can be located in the text or at the end of the work in a bibliography. It can be difficult to figure out what needs to be credited.

Use this rule: If you knew a piece of information before you started doing research, generally you do not need to credit it. You also do not need to cite well-known facts, such as dates, which can be found in many encyclopedias. All other information such as quotations, statistics, and ideas should always be cited in your papers.

Parts of a Citation

As you create your list of cited sources, it is helpful to know what type of information you need to write down. Here is a citation from a periodical index with each of its important parts labeled.



Formats for citing are consistent so that other researchers may quickly identify the sources you used and easily locate them. To find the guidelines

for a particular format you will need to look in a style manual. Your instructor will probably recommend a particular style manual such as *APA, MLA* or *Chicago Manual of Style*.

Look at the examples of citations in APA format.

> Book:
> Jennings, C. (2000). *The hundredth window: Protecting your privacy and security in the age of the Internet*. New York: Free Press.
>
> Article:
> Higgins, M. (1999). High tech, low privacy. *ABA Journal*, *85*, 52-58.
>
> Web page:
> *Computer and Internet Security*. (2000, April 26). Washington, DC: Library of Congress. Retrieved March 24, 2001, from the World Wide Web: http://lcweb.loc.gov/global/internet/security.html.

Choosing Sources

Choosing sources that contain valid information and are appropriate for your research will take time and a critical eye.

It is valuable to verify information when possible. This may include finding the background of an author, locating the original source of a fact, or determining the point of view of a publisher or sponsor. Another important method for evaluating print and online sources is to find out what others think. You might look for reviews of the work or ask your professor or librarian for their opinions.

Once you locate and evaluate your sources, you will need to incorporate them into your paper. Knowing how to properly cite information will not only help you avoid committing plagiarism, it will also help you write a better paper.

After completing this section of TILT, you should be able to:

- Recall general library policies
- Identify key areas of the library
- Recall how to find items in the Library Catalog
- Recall how to find articles in Academic Search Premier
- Determine if the library has a particular magazine or journal
- Describe how RefWorks can be used to make citations and reference lists conform to appropriate styles

Exploring the CUI Library

This is an introduction to the services and resources available at Concordia University Irvine. The Concordia University Library was established to serve the needs of the faculty, staff, and students of Concordia University. It is a public facility and guests are welcomed and encouraged to make use of the facilities. As a courtesy to all of our patrons, we ask that everyone keep conversations low and socializing to a minimum. No tobacco (in any form) is permitted within the library. Food and drink are permitted in the library, but please be conscientious and clean up after yourself. In addition, we ask that you turn off all cell phones or switch them to silent mode upon entering the library. Information on additional policies including circulation and overdues can be found on the library website.

Since 1989, the CU Library has been located in the Library Arts building on the west side of the campus, near the main parking lot. It houses over 90,000 items. It is particularly strong in theology and reformation studies. The library is also home to the Robert C. Baden Memorial Children's Collection and the Dale Hartmann Curriculum Room.

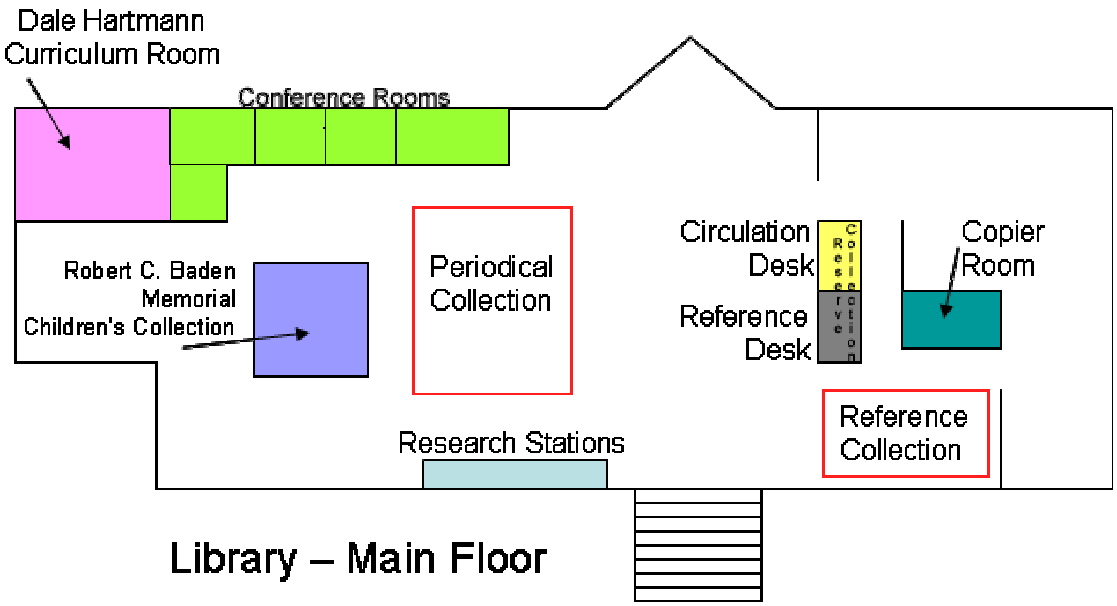
It is a terrific place to study, read, watch a video, listen to music, and get help with your assignments and research needs. The building is normally open from 2:00pm to 10:00pm Sunday, 8:00am to 10:00pm Monday through Thursday, and 8:00am to 5:00pm Friday. Please check the library website for special hours.

A full time library employee is available during all open hours to assist students with databases, equipment, or reference questions. Please

remember to bring your CUI ID if you plan to use the services of the library. It is **REQUIRED** for most services including picking up your password for Blackboard, WebCT and the library databases. **NOTE**, it MUST be a current CUI ID card. No other form of identification can be used!

Main Floor

The CUI Library has two levels, the main floor and the lower floor. Any location listed in ***italics*** can be found on the floorplan.



The **main floor** is home to the Circulation Desk, the Reference Desk, the Reserve Collection, the Reference Collection, the Copier Room, six research stations, two lounges, the Periodical Collection, the Robert C. Baden Memorial Children's Collection, the Dale Hartmann Curriculum Room, and five conference rooms.

The long desk to the left of the entrance combines the ***Circulation Desk***, the ***Reference Desk***, and the ***Reserve Collection***. A CUI ID card is required to check out any material from the Library. This includes books, video tapes, audio tapes, CDs, and equipment. The Reserve Collection contains items the faculty deem particularly important for students in their particular classes to examine. Because so many students will need to access them, they have special loan periods: library use only, 3 hour, overnight, and seven days. No item can be given a longer loan period without **written** permission from the professor.

The ***Reference Collection*** is located just past the Circulation Desk. Books in this collection can **NOT** be checked out. Adjacent to the Reference

Collection is the ***Copier Room***. A photocopier/printer, photocopier, and laminating machine are all located in this room. Copies or prints cost 10 cents a piece. Each machine takes nickels, dimes, quarters, dollars, fives, tens, and twenties. They also have the ability to take money from the CUI ID card. A add value station is available at the end of the Circulation Desk.

Six ***Research Stations*** are located at the top of the stairs. These machines give access to the library's catalog, subscription databases, as well as the Internet. They do not have word processing programs or email clients. The campus computer labs (currently located in the Student Success Center, Chi Rho, and Chi Sigma) provide access to email and the Microsoft Office programs.

The library's ***Periodical Collection***, including current periodicals, bound periodicals, and periodicals on microfiche, are all located on this level. The **current** periodicals are located on the shelves closest to the Research Stations. The **bound**, or older periodicals, are located on the shelves in the middle of the main floor. The Periodical Collection is cataloged alphabetically by title. Periodicals in the **microfiche** collection can be accessed by asking at the Circulation Desk.

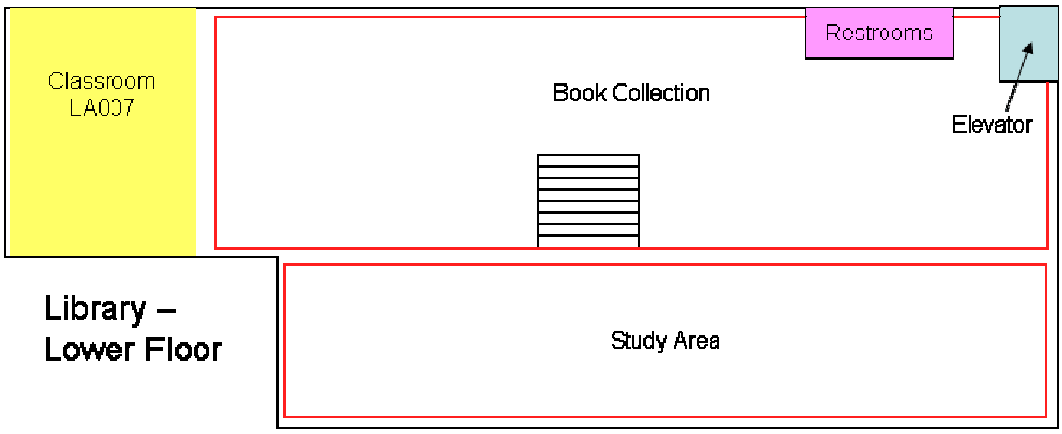
The ***Robert C. Baden Memorial Children's Collection*** is located in the middle of the Bound Periodicals. This collection is the only Dewey Decimal Collection at CUI. The collection of over 3,500 items includes all Caldecott and Newbery award winning titles.

The CUI Library has two Lounge areas with couches and armchairs located on the west end of the building. The north side of the building contains five ***Conference Rooms*** for group study. Conference Rooms are only available to patrons with a CUI ID card. Reservations and access are available at the Circulation Desk.

The ***Dale Hartmann Curriculum Room*** (LA 101) is home to the library's collection of elementary and secondary school curriculum sets. This collection covers most subject areas and grade levels.

Lower Floor

The CUI Library has two levels, the main floor and the lower floor. Any location listed in ***italics*** can be found on the floorplan.



The **lower floor** is home to one large format classroom, numerous study areas, and the book collection.

The ***Classroom***, located in LA 007, is used most of the hours the library is open. Just outside the Classroom are the stacks containing the ***Book Collection***. The books are organized according to the Library of Congress Classification and are listed in the library catalog. If you cannot find the book on the shelf, please ask at the Circulation Desk for assistance.

The ***Study Area*** consists mostly of individual or double study carrels and can be found along the south wall facing the baseball field.

Restrooms are located to the right of the stairs on the left side.

An ***elevator*** is available. Ask at the Circulation Desk for access.

Highlight on Resources

The CUI Library offers many resources both within the building and online. The next part of this introduction will highlight several of those resources. Additional information about these resources can be located on the library website at http://library.cui.edu.

The *Library Catalog*, *Academic Search Premier*, the *A-Z Journal Title List*, and *RefWorks* make researching, locating, and citing information easier. The time it takes to learn how to use these resources now, will pay off during your next assignment.

Each of the following screens has a top frame and a bottom frame, both of which have scroll bars along the right side. The top frame offers directions to find the requested information, while the bottom frame connects to the library's web site, the Concordia University Library gateway.

How to use the Library Catalog

To find the location of books, videos, print or microfiche magazines, and other materials in the CUI Library, search the library catalog, using the instructions in the box below.

Use the Library Catalog to search for books on the topic of how to research using the Internet.

1. Select **Library Catalog** from the library's web site. (NOTE, it may take a few seconds for the catalog to open.)
2. Enter the search string: **research and internet** in the text box below.
3. Click the **Subject** button. (The Library Catalog has many search methods besides the subject search. They include keyword (search everything), author, title, series, and periodical title.)
4. To find these books on the shelf write down the titles and the entire call numbers. The call numbers are the bold letters and number combinations.
5. For additional help on how to use the catalog, see the library Searching the library Catalog or a librarian.

How to use Academic Search Premier

The library provides access to electronic periodical indexes, usually called research databases, which allow you to find citations, abstracts of articles, and even the full text of articles published in magazines and journals. There are general, multi-disciplinary databases (like **Academic Search Premier** and **JSTOR**), as well as discipline specific databases (like **Wilson Education** and **PsycInfo**). **Remember, not all database have full text! If you need help finding something, please ask a librarian.**

Use Academic Search Premier to search for articles on the topic of how to research using the Internet.

1. Select **EBSCOhost Research Databases** from the library's web site. (NOTE, it is located under the CONNECT ME WITH section on the left side.)
2. Click **Academic Search Premier** from the list of databases available. (NOTE, the other databases from EBSCOhost can be searched the same way.)
3. Enter the search string: **researching and internet** in the text box below. (NOTE, databases usually require you to use AND or OR or NOT to combine terms.)
4. Click the **Search** button.

5. To read an abstract of an article, click on the title. To view the entire article, when available, click on the Full Text link beneath the article title.
6. For additional help on how to use this database, see the library Using EBSCOhost to Search Online Data Bases or a librarian.

How to use the A-Z Journal Title List

If you have the citation for an article but you can't find it in a particular database use the A-Z Journal Title List. This list reflects the journals and magazines available to you through the CUI Library. This list contains all print, microfiche, and electronic titles. For example, during your searching you found the following citation:

Writing travelers' tales on New Literacyscapes. By: Leander, Kevin M.. Reading Research Quarterly, Jul-Sep2003, Vol. 38 Issue 3, p392, 6p; (*AN 10447784*)

Search for a magazine location using the A - Z Journal Title List

1. Select **A-Z Journal Title List** from the library's web site. (NOTE, it is located under the CONNECT ME WITH section on the left side.)
2. The journal name is **Reading Research Quarterly** so click on the letter **R**.
3. Notice that there are 256 magazine titles that begin with the letter "R".
4. Scroll down on the page until you find **Reading Research Quartlery**.
5. Notice that the CUI Library has the title in both print and electronic formats.
6. The citation says the date of the article is **Jul-Sep2003**, so it is NOT available in electronic format. To view the article, you will have to find the print version in the Bound Periodicals. (NOTE, if it were available in electronic form, you would simply click the name of the database, then click the year, then the issue, and then find the article.)
7. For additional help on how to use this resource, see Using the A-Z Journal Title List or a librarian.

How to use RefWorks

RefWorks allows you to create your own personal database by importing references from online databases or entering information from books or

articles. These references can be used to write papers and automatically format the paper and the bibliography in seconds.

Using RefWorks to create a bibliography.

1. Select **RefWorks** from the library's web site. (NOTE, it is located under the CONNECT ME WITH section on the left side.)
2. In the **Group Code** box, enter **RWConcordiaU**. (NOTE, it is case sensitive.)
3. Click the **Go To Login** button.
4. If this is your first time to use RefWorks, click the **Sign up for an Individual Account** link. Fill out all of the fields. (NOTE, you may choose whatever user name and password you like.) If you have already set up your account, enter your "Login Name" and "Password" and thenclick the Login button.
5. To add a reference or to RefWorks, click the **Reference** drop down menu and then select Add New Reference.
6. Choose the appropriate citation style using the drop-down menu beside **View required fields for:**. (NOTE, the default is APA or the American Psychological Association guide.
7. Choose the type of reference (i.e. book, journal article, website) by clicking the drop down menu after Ref Type.
8. Enter the information, making sure to properly fill out all fields with a red asterisk.
9. To import records from one of the databases, click the **References** drop down menu and then select Import.
10. Click the **How to Import** link. Scroll down to the list of database vendors and select the appropriate link. Follow the directions.
11. For additional help on how to use this resource, see RefWorks Directions for Concordia or a librarian.