Information Literacy Lesson Plan: Module One

[Requires approximately 1 ½ to 2 hours]

ACRL Standard 1: An information literate student determines the nature and extent of information needed.

Module 1 addresses finding and evaluating information for a research paper by

- introducing information literacy to students
- addressing the common anxiety of a research project
- exploring ways to select and develop a topic
- discussing the relevance and accuracy of information
- explaining the organizational system of the library
- modeling effective time management

Background Knowledge/Prerequisites

- For Module Facilitators: familiarity with the print and electronic collections and services available via the DeVry University Library (library.devry.edu), including *EBSCOhost, Britannica Online,* and the chat-based reference service (aka, "Ask A Librarian,")

- For Students: none

Materials Needed:

- Computer with Word, PowerPoint, Internet connectivity, and projection unit

- Whiteboard or flipcharts and markers

- Appendixes A-H, as handouts and/or for projection

Student Deliverables:

1. Class participation
2. Encyclopedic knowledge assignment
3. Concept map assignment
4. Information cycle assignment
5. LC classification and call number exercise

Step 1: Introducing Information Literacy

[15 minutes]

Explain:

Information literacy is more than knowing how to operate the computer, search the web quickly, or even use the library well. Information literate people understand how to connect new information with what they already know to address new circumstance or solve new problems. They are not taken off course by irrelevant data. They know how to supplement what is already available to them, and how to ask questions in order to solve problems and learn more (Smith 2005) .

Discuss:

- How is being information literate important in your eventual career field?
- How do you feel about conducting research?

Explain:

To help overcome Library or Information Anxiety, remember:

- You don't have to be an expert to use the library
- There are no "stupid questions", only those that are not asked
- It will probably take longer than you think, so start your research early
- Frustrations and dead-ends are often part of the process, so don't get discouraged
- When you are stuck or stumped—ask for help (Manuel, 2006, pp. 37-40)

Step 2: Important First Steps
[5 minutes]

[Note to faculty]
Issues of topic selection, narrowing/expanding, and thesis development are covered more extensively in the ENGL sequence of core classes and are eschewed in this module in order to focus on issues more specific to information literacy.
As an example of a topic area for the activities and demonstrations, "weather" is suggested, but a different topic may be substituted.

Explain:

In addition to DeVry professors, the Academic Success Center (ASC) can help with thesis development and other aspects related to the research and writing of a research paper. DeVry librarians can also be a valuable source of information in helping students select a topic. They are well versed in the Library's collections, and can help steer students toward a good topic. DeVry librarians are available in person, via email, phone, or chat (see below).

Demonstrate:

Chatting live with a librarian can facilitate topic development and selection. Librarians can help make the most of students' time and energy. Go to the library website (*library.devry.edu*) and click on the "Ask-a-Librarian" link to introduce students to this service.
[NOTE: Make sure to check the hours of service first (listed on the site) to be sure a librarian is available]

Often in the research and writing process, there is considerable emphasis on the sources that are being used. Think not only about becoming a savvy information consumer, but also about becoming a superior information producer. Don't just repackage what has already been said and written; instead, realize that existing information can be combined with original thoughts, experiments, and/or analysis to produce new knowledge.

Step 3: Defining and Articulating the Need for Information

[20 minutes]

Explain:

After developing a topic and thesis, becoming familiar with the topic is an important step in the research process.

There are numerous sources students can use to gain a background on a subject. Good background sources are jargon free and provide foundational information that forms the basis for further research and understanding. Often, such sources do not make it into the final version of a paper or project. Instead, they are a starting point for further development.

Sources to consider include:

- Textbooks
- Britannica Online
- Credo Reference (eBook collection of 250 reference works)

Demonstrate:

Access *Britannica Online* via the library website (*library.devry.edu*). *Britannica Online* is the electronic version of the renowned encyclopedia.
Enter "weather" as a search term.

Features to point out include:

- Media: clips and stills related to a topic
- Article: History traces changes to the entry over the course of time
- Websites: a limited number of related links

Demonstrate:

Credo Reference (*library.devry.edu*) is a collection of 250 electronic specialized encyclopedias, dictionaries, biographical sources, quotation guides, and other reference sources.
Enter "weather" as a search term.

Features to point out include:

- Cross reference links within the source
    - A bibliography of sources for further outside reading is often provided in many of the encyclopedia articles.
    - These are excellent resources for students' bibliographies.
- In the left hand column, Credo will also supply links to other reference sources in the Credo collection.
- Credo will provide links to search a topic in the DeVry catalog, Britannica Online, NetLibrary, Safari Books, and EBSCOhost (all of which are available via the library website).
- One of the unique features of Credo is the "Concept Map." This feature provides a visual subject map of the topic and related entries and concepts.

- The "Zoom," "Rotate," and "Link Level" slider bars on the left allow the image to be manipulated [NOTE: a node must be clicked on for "Link Level" to function]. Nodes on the Map can also be clicked/dragged and moved. A right click on any of the nodes will allow that entry to be opened to be read, expanded, or hidden.

Facilitate:

The demonstration of Credo provided a good introduction to concept mapping. However, Credo may not be sufficient in identifying all the appropriate terms or concepts; thus, concept mapping will be introduced. The benefit of concept mapping will be fully realized in Module 2.

[Note to Faculty]:
Concept mapping is a technique that can be used for a number of things, including generating ideas, designing complex structures, and assessing comprehension. For first year students, it can help to analyze and focus topics and thereby save time further along in the research process.

Activity: Concept Mapping
(Neely, 2006; Burkhardt, J. M., MacDonald, M. C., & Rathemacher, A. J., 2003)
Create a concept map for "weather."
In developing a concept map, the first step is to determine the central word, concept, or research question around which to build the map and place in the center of the whiteboard.
From there, students can build and add associated words, concepts terms, items, and further questions.
There are many ways the concepts can be further organized:

- Identify different types of information with different colors and/or shapes.
- Draw squares around single ideas and circles around groups of ideas
- Use lines to connect these items to the main idea and to groups of related ideas; use arrows to interconnect ideas or to form subgroups of ideas
- Leave lots of white space for the concept map to grow and develop

Remember: this is a work in progress—students should not analyze their work.
A concept map can work from top to down, from general to specific, or be more free-form, using free association.

Once this is done, move on to the second phase:

- Think about the relationship of the "out-of-the circle" items to the center idea
- Erase and shorten/ replace words connected to some of the key ideas
- Relocate important items closer to each other for better organization

With a visual display of key concepts and terms, many students are better prepared to move on to search vocabulary components of Module 2.

There are also instructions also on making a concept map in Microsoft Word at
http://www.ehow.com/how_4927645_make-concept-map-microsoft-word.html

Facilitate:

For the Concept Map Assignment, have the students select a topic and create their own concept map.
Evaluation of these will be based on the relative breadth and depth of the map's content, logic of selections, and presentation.

Step 4: Identify a Variety of Types and Formats of Potential Sources for Information
[Approximately 45 minutes]

Explain:

Information is often time sensitive. From breaking news to up-to-the-moment financial data, it is important to get information as quickly as possible. The immediacy of that information is going to determine the format in which that information can be found, as well as how students and other researchers access that information.

Demonstrate:

View "The Information Cycle" PowerPoint for an exploration of how the lifecycle of information develops over time.

Explain:

Handout: Types of Information (Appendix A) and Information Sources (Appendix B)

The Information cycle yields essentially three types of information: primary, secondary, and tertiary. In producing information, primary sources are the first layer of production. Then, secondary sources build on what the primary sources first reported. Finally, tertiary sources summarize what the secondary sources interpret and conclude.

In consuming information, the reverse order is typically followed. Student-researchers will begin their search with tertiary sources, which build a foundation for their secondary research. In advanced classes, students may also explore primary sources. Most of the research DeVry University students conduct is with tertiary and secondary sources.

The *Information Cycle* PowerPoint shows that there is a time frame from the occurrence of an event to when it becomes available in different types of sources. With some information formats, there is an additional lag time from when the information is produced until when it becomes searchable in access tools, such as library databases. The library databases then pick up, index, abstract, and make that information available to users in their online services.

Over time, general public interest in an event diminishes too. Often times, the closer a report is to the occurrence of an event—particularly a breaking news story--the greater the chance is for an error in reporting it accurately and reliably.

Facilitate:

The Information Cycle Assignment (**Appendix C**) requires student to draw conclusions based on the material presented about the characteristics of a variety of information sources.

Scoring will be based on the correctness and completeness of the responses.

Discuss:

- How does the time frame of an event affect the types of information available to researchers and how they access that information?
- What are the relative advantages and disadvantages of primary, secondary, and tertiary sources for student researchers?

Explain:

Beyond the Internet, the most popular form of information that students use in their papers often comes from periodicals. These are publications that come out at regular periods of time, or periodically- daily, weekly, monthly, quarterly, etc. -hence the name!

There are several different types of periodicals. Students are probably already familiar with some of these, such as popular magazines, gossip tabloids, and newspapers. Some may be less familiar, such as journals of commentary and opinion or professional, trade, and industry publications. Scholarly and research journals may be completely new. The peer review process is one of the most important distinguishing features of scholarly or academic publications.

Handout: Types of Periodicals (Appendix D)

Demonstrate:

View the Peer Review PowerPoint.

Discuss:

Why are scholarly or academic journals viewed as better than other types of periodical publications?

Explain:

There are close to a half-million print and eBooks available in the Library. In addition, there are hundreds of thousands of periodical articles that can be accessed via the Library website, using the individual periodical databases. Module 2 will explain in more depth how to search, identify, and retrieve books and articles, while Module 1 explores how library databases, catalogs, and books are organized.

Library databases, such as those found in EBSCOhost, are used to organize periodical articles and other types of information, while the online catalog lists the library's collection of print and eBooks. In the latter case, any eBook located via the catalog can be expanded to the full-text version. Library databases, such as those found in EBSCOhost, are organized around subject areas, such as business, computer science, and nursing; or format, such as newspapers. These databases can be searched individually or simultaneously.

Library databases are made up of thousands of individual records, each tied to a particular article, book, or other item. Individual database records are organized by author, title, subject, date, keyword, etc. for ease of searching.

Library databases typically include three levels of information:

- *Citation*—A citation typically provides the following information: author, title, publication name, date, volume, issue number, and pages of the article, as well as if it contains illustrations or other graphics.
- *Abstract*—An abstract is a summary of the article.
- *Full text/image*—Depending on the database provider's agreement with the article publisher, the database may contain the full text of the article. In some cases, it may also include the full image of the article—just as it appears in the print or online publication itself.

Books and other materials (e.g., DVDs, CDs, etc.) in the DeVry University Library are arranged according to the Library of Congress (LC) classification system, which is geared towards academic libraries, as compared to the Dewey Decimal System, which is geared more to public libraries. Each book or item has a unique letter and number combination assigned to it, referred to as its "call number."

The basic LC schedule is listed in **Appendix E.**

In the LC system, Business and Management is classified under the Social Sciences (letter "H"); engineering is classified under "T" for "Technology." Often, there is overlap of subjects. Some subjects may be classified under more than one letter. For example, a book on media design might appear in the "N"s ("Fine Arts"), or the "T"s ("Technology").

Facilitate:

The LC Classification Assignment (**Appendix F**) examines the students' knowledge of the LC Classification System.

Explain:

The library catalog (also known as the "Online Catalog"), which will be discussed in greater detail in Module 2, includes the call number for every item in the DeVry University Library collection. Using the call number, the item can be located on the shelf. The LC system arranges items in alphanumeric order. That means they are filed alphabetically and in numeric order, *including decimals.*

For example:

HA	HA	HA	HA	HA
650	650	650	653	653
.C98	.G87	.G9	.G344	.G35

Facilitate:

The Call Number Activity (**Appendix F)** checks students' comprehension of the alphanumeric order of call numbers.

Step 5: Beyond the Books & Periodicals in Your Library

[15 minutes]

Demonstrate:

The **"Request an Item"** function on the DeVry Catalog (**Appendix G)** is an *intra-library* loan service through which material from one campus library in the DeVry system can be requested by a student, staff member, or professor from another campus library. Items are shipped via UPS to the library of the person making the request. By using 'Request an Item', students are not limited to the resources at their local DeVry Library.

Some DeVry campus libraries also provide an *inter-library* loan service, though which materials can be borrowed from other libraries across the nation—students should check with their local library to see if this service is available to them.
Local public, community college and state university libraries are also a great resource of information. Public libraries, by law, can be visited by all residents of that state and are another great resource for students in the area. The same is true for residents living within the boundaries of their local community college and for residents of the state in which their university library is located.

Discuss:

What are the local public, community college and state university libraries to which DeVry students at your Metro might also be able to use?

Explain:

Another important consideration in the research process is determining the desired *format* of the information. Doing so will help students focus their research strategy and manage their expectations for the types of material they expect to locate.

Discuss:

How might each of the following resources address the topic of weather?

- Video clip
- A photograph
- A statistical dataset
- An article from a scholarly journal
- A federal publication found on a .gov website
- A newspaper article
- An audio clip from a news or history audio archive site

What are the advantages and/or disadvantages to using certain resources?

Step 6 Managing time, resources, etc
[Approximately 15 minutes]

Explain:

One of the biggest challenges for students is time management. Some professors suggest that next to writing the paper, time management- setting a timeline and sticking to it -is the hardest part of the research process. It is easy to underestimate the time involved, procrastinate, finish everything in a rush, and turn in a product that is not as good as it could have- or should have- been.

Here are some key things to consider:

- How long will it take you to find books and articles?
- How much time will it take to obtain them?
- How much time will be required to read and digest the material?
- How much time will be needed to synthesize the material and formulate the main ideas of your paper?
- How much time will it take to write your report? Draft1-Draft 2- rough final- then the final report. The writing process can be rather time consuming and must be factored into the process (WSU Library Instruction, 2010, January 7. The research process).

Often it helps to work backwards from the final due date and create a calendar of target dates for each component of the final paper. The time allotted for each task is somewhat arbitrary and depends on the

individual's schedule, the topic, availability of resources, etc. Still, students should be able to develop a calendar for their own research purposes.

See sample calendars in **Appendix H.**

There are also various online assignment calendars that can be found on the Internet, which can help lay out a plan for helping with time management. Students are welcome to try these out on their own.

Explain:

Although research is often taught as a linear process (Do "A" and then move on to "B"), research is actually a *recursive* process which often requires going back and repeating steps multiple time in order to finally get it right.

If the word "research" is broken down into its component parts, a clearer understanding of the process can be gained: "search" means to seek, and "re-" means to repeat or do again. Good research involves seeking information on an ongoing basis, not just one time.

Neely (2006) suggests that as students go about their research there are certain things they should consider:

- Ask yourself: Do I understand all the information?
- Continue to discuss the research with friends and colleagues- verbalizing ideas often lends itself to new insights and perspectives
- Gather more sources than required in case you later deicide some of them are not relevant
- Develop and revise your outline as acquire more information
- Continue to review your initial research question to determine if additional research and information are needed- discard irrelevant or useless findings or results
- Look at material under each heading in our outline and synthesize major points and concepts

Conclude:

Module One attempts to make a research project approachable to students by deconstructing the types and accessibility of information, to assist students in finding, evaluating, and integrating outside information into their own material.

<u>Resources Used:</u>

Association of College and Research Libraries (2000). *Information literacy competency standards for higher education*. Retrieved from American Library Association website: http://www.ala.org/ala/grps/divs/acrl/standards/informationliteracycompetency.cfm

Burkhardt, J. M., MacDonald, M. C., & Rathemacher, A. J. (2003). *Teaching information literacy: 35 practical, standards-based exercises for college students*. Chicago: American Library Association.

Cycle of information: Putting it all together (n.d.). Retrieved from North of Boston Library Exchange website: http://www.noblenet.org/merrimack/ infocycle.pdf

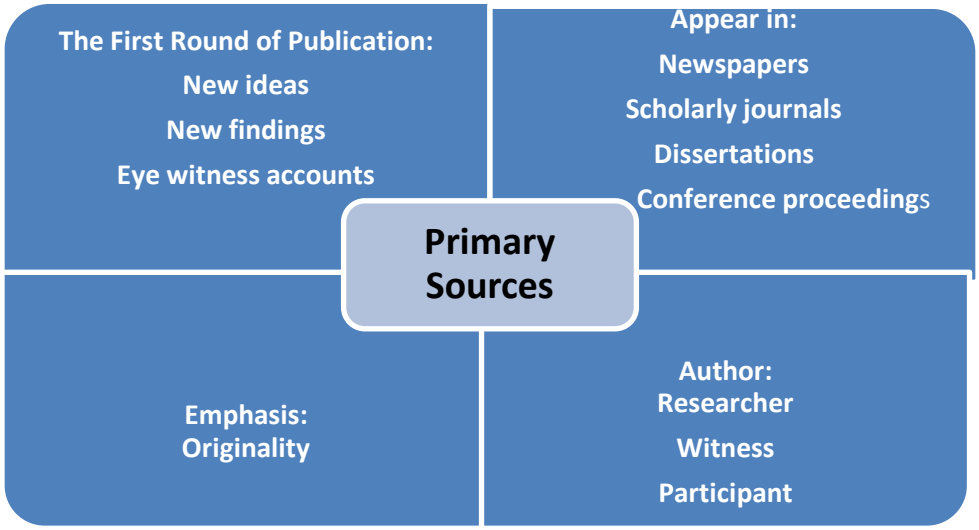
Gradowski, G., Snavely, L., & Dempsey, P. (1998). *Designs for active learning.* K. M. Roddy, (Ed.). Chicago: Association of College and Research Libraries.

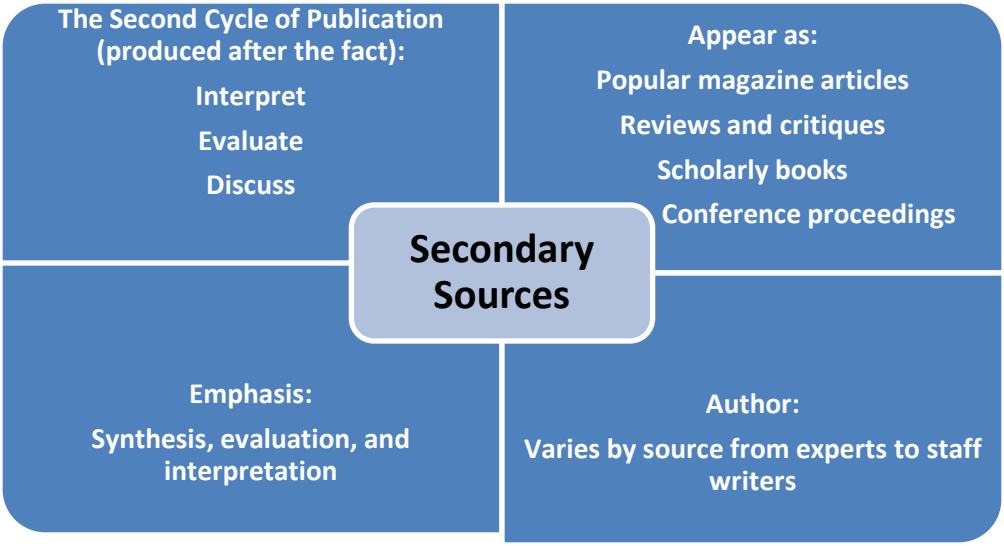
Manuel, K. (2006). *Information literacy course handbook for distance and in-class learners*. Active Learning Handbook Series: No. 1. Pittsburgh, PA: Library Instruction Publications.

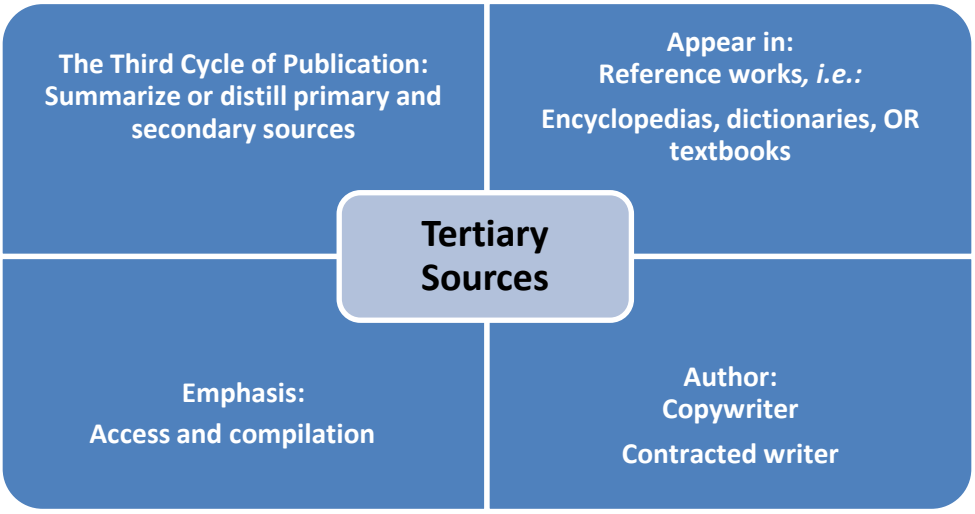
Neely, T. Y. (2006). *Information literacy assessment: Standards-based tools and assignments*. Chicago: American Library Association.

Smith, J. B. (2005). *Teaching & testing information literacy skills*. Worthington, OH: Linworth Books.

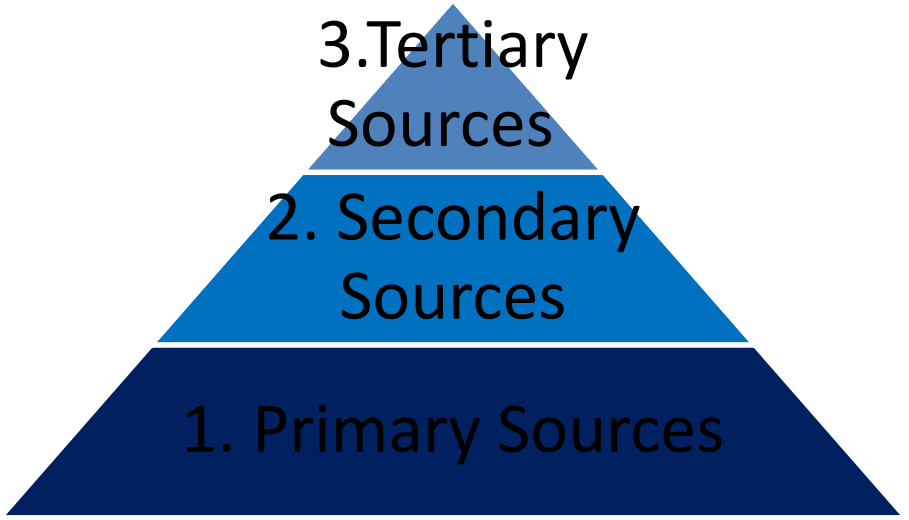
Appendix A: Types of Periodicals



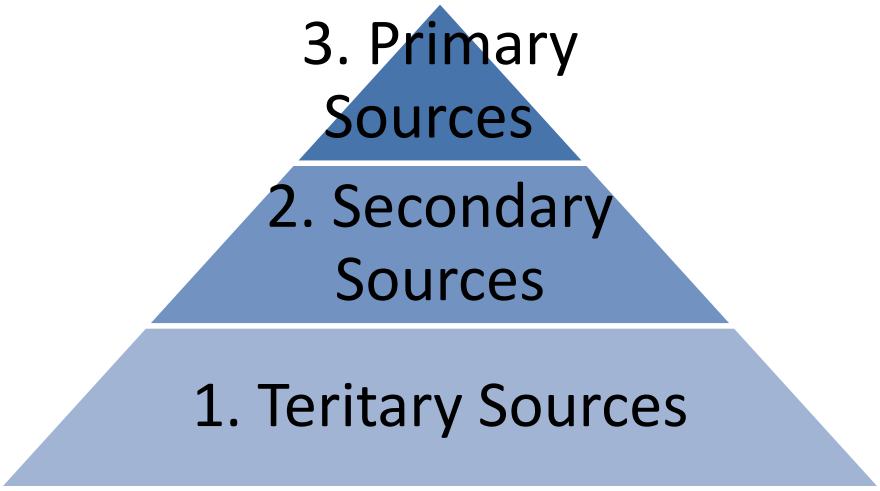




Producing Information:



Consuming Information:



Appendix B: Primary, Secondary, and Teritary Sources

Time frame	Media	Access to information	Availability in access tool	Audience	Accuracy and Reliability
		Primary Sources			
Within the hour	Radio/TV/Internet, news, Blogs, wikis, social media	Search engines, recorded broadcasts	Within the hour	General public	Poor to good
Day/Days+	Newspapers	Online indices Web directories	Within 1 day to 1 week	General public	Good
Week/Weeks+	Popular magazines	Online indexes	Within 1-4 weeks	General public and knowledgeable lay people	Good to very good

Secondary Sources					
Months+	Journals	Online indexes and bibliographies	Within 1-4 weeks to within 1 year	Scholars, students, specialists	Good to high
1-3 Years	Books	Online book sellers, online catalogs	Simultaneous with release of book or addition of book to Library's collection	General public to scholars	Very good to high
Tertiary Sources					
Two or more years	Reference works	Online books sellers, online catalogs	Simultaneous with release of book or addition of book to Library's collection	General public to scholars	Very good to high

Cycle of information: Putting it all together. (n.d.); WSU Library Instruction, Basic timeline for information. (2010, January 7).

Appendix C: Information Cycle Assignment

Please complete the following table based on what you've learned about research sources, thus far.

SOURCE	Stage of the Info Cycle	Intended Audience	Likelihood of Accurucy	Primary, Secondary, or Tertiary	How to Access
World Almanac					
Refereed Journal					
Chicago Tribune					
Breaking TV Fox News Interruption					
A "Tweet"					

MSNBC.com					
Conference Paper					
Time Magazine					
Documentary					
Diary					

Appendix D: Types of Periodicals

Note to faculty: Chart could be supplemented with sample periodicals

TYPES OF PERIODICALS

	Scholarly and research Journals	**Professional, trade, and industry**	**Journals of Commentary and Opinion**	**Newspapers**	**Popular magazines**	**Gossip Tabloids**
Examples	*American Economics Review,* *Journal Of Educational Research,* *Plasma Physics,* *Journal of Technical Writing&*	*Game Developer,* *Training,* *Technology Review* *American Libraries*	*Mother Jones* *National Review* *Utne Reader* *Atlantic* *New Republic*	*New York Times* *Washington Post* *Wall Street Journal* *Christian Science Monitor*	*Time,* *Newsweek,* *Sports Illustrated,* *Spin,* *National Geographic*	*Star,* *National Enquirer,* *Globe,* *World Weekly News*

	Communication					
Scope	Reports of original research; in-depth analysis of issues related to discipline; Academic level book review; Refereed/peer reviewed	Current trends, news and products in a field; company , organization, and biographical information; employment and career information; book and product reviews	Commentaries on social, economic, and political issues; Some in-depth analysis; political perspectives; may act as a voice for an organization or movement; speeches & interviews; Book reviews	Current information; hard news; local and regional information; classified ads; editorials; speeches; book reviews; primary source for information and events	Current events; hot topics; primary source for analysis of popular culture; short articles; Typically little depth; interviews	Current celebrity, public figures, and entertainment gossip
Language Style	Academic—can be very technical; uses the language of the discipline	Written for practitioners; may use extensive jargon	Written for educated layperson	General audience	General audience capable of 8th grade-level reading	Sensationalist; provocative written t a elementary level
Authors	Researchers, academics, professors, scholars	Practitioners or journalists with subject background	Varies from staff writers, academics, journalists, politicizations, leaders and representatives of "groups"	Journalists	Journalists and free-lance writers	Staff writers; paparazzi; "journalists"
Sources	Footnotes and bibliographies; often with extensive documentation	Occasional brief bibliographies; sources may be cited in text.	Occasionally cite sources in text or may have short bibliographies	Rarely cite sources in full. Attributions are to a person and her/his title	Rarely cite sources in full. Attributions are to a person and her/his title	Surveillance; gossip
Publisher	Universities, scholarly presses or academic/research organizations	Commercial publishers and trade associations	Commercial publishers or not-for profit groups	Commercial publishers and news organizations	Commercial publishers and news organizations	Commercial publishers
Graphics	Graphs, charts, formula depending on the discipline in black and white	Photos, charts, graphs, numerous illustrations, many with glossy ads	Varies widely from recycled paper to very glossy	Photos and ads of many types	Very glossy and full color, many ads	Very graphic; high visual content

Access Tools **Ask a Librarian for further details**	Academic Source Complete	Business Source Complete CINAHL	MasterFILE Premier Academic Source Complete	Newspaper Source Plus	MasterFILE Premier Academic Source Complete	none

(Gradowski et al., 1998; Engle, 2009)

Appendix E: Library of Congress Classification Schedule

General works	A
Philosophy, Psychology, Religion	B
Archaeology, Genealogy, Biography	C
History, General and World	D
History, Americas	E-F
Geography, Anthropology, Recreation	G
Social Sciences (includes business)	H
Political Science	J
Law	K
Education	L
Music	M
Fine Arts	N
Language and Literature	P
Sciences	Q
Medicine	R
Agriculture	S
Technology	T
Military Science	U
Naval science	V
Bibliography, Librarianship	Z

Appendix F: LC Classification

Here is a quick exercise to help you better understand how to find books in the DeVry Library.

Under what letter of the LC Classification System would you expect to find a book on the following subjects?

1. Anatomy_____
2. Baseball_____
3. Science Fiction Literature_____
4. The US Navy_____
5. "How to Study" Guides_____
6. C++ programming_____
7. Islam_____
8. Queen Elizabeth II_____
9. Marketing_____
10. Hip Hop_____

KEY: 1-R; 2-G; 3-P; 4-V; 5-L ; 6T-; 7-B ; 8-D ; 9-H ; 10- M

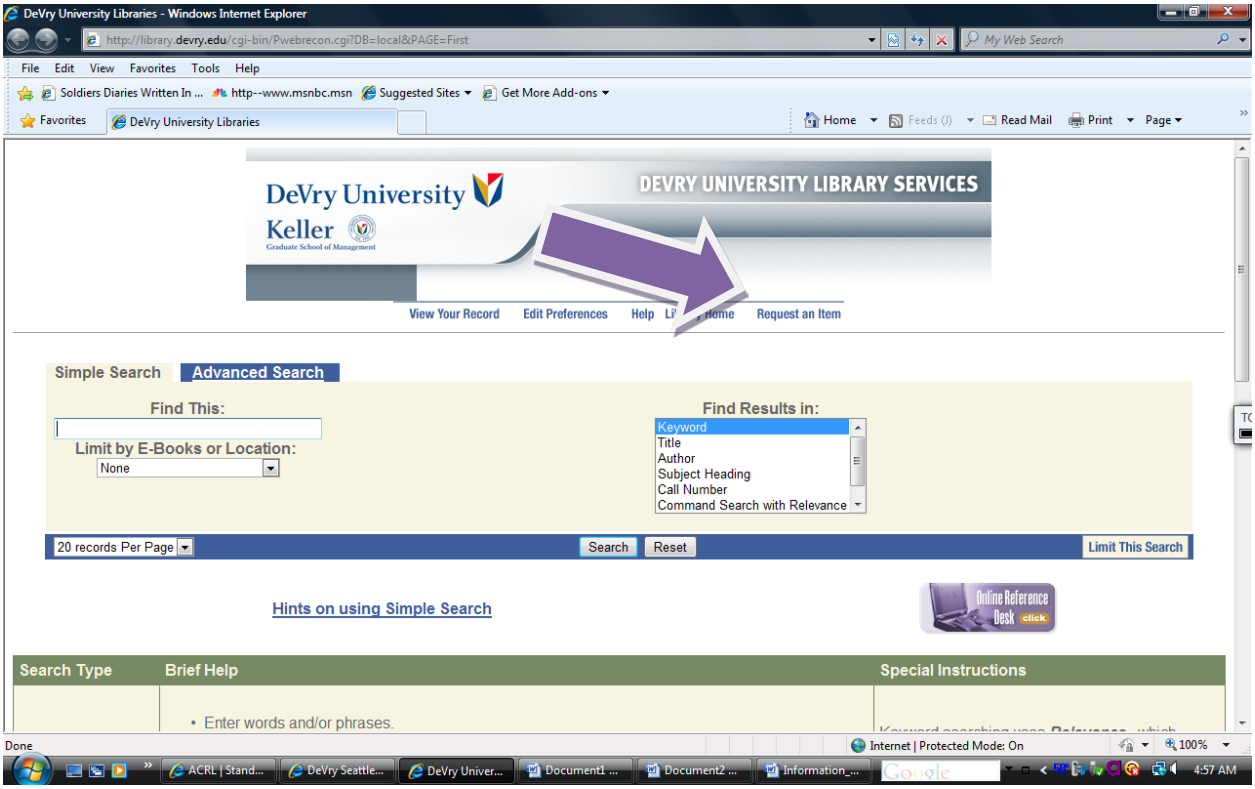
Call Number Exercise:

Write the numbers 1-5 in the parentheses to show the correct alphanumeric order of the following LC call numbers

BF	BF	BF	BF	BF
7055	7055	705	70	705.5
.V35	.A21	.B765	.A53	.B566
( )	**( )**	**( )**	**( )**	**( )**

KEY: 5, 4, 2, 1, 3

Appendix G: Request an Item Link



Appendix H: Sample Student Calendars

Each student should be able to work backwards and construct a calendar based on their specific research needs.

Here is an example:

Task	Start date	Due/completion date
Submit paper		August 1
Final proofreading	July 28	July 30
Write final draft	July 21	July 28
Rewrite and revise	July 6	July 20
Edit rough draft	June 29	July 5
Write rough draft	June 10	June28
Outline of paper	June 4	June 9
Library Research	June 2	July 21
Create Search Strategy	June 6	June 7
Choose topic and write thesis	June 1	June 5

Students may also want to develop a graph to chart their progress. Here is an example:

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
							Submit paper
							Final proofreading
						Write final draft	
					Rewrite and revise		
		Write rough draft					
	Outline paper						
Library Research							
	Create Search Strategy						
Choose topic and write thesis							