

Library Laboratory for PC 132
Thermodynamics and Waves

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Outline

- Scientific literacy and information literacy
- Research on Information seeking of undergraduates
- Search Strategy
- Finding Information - Databases
- Using Library Resources

Scientific Literacy vs. Information Literacy

- What is scientific literacy?
- Who will define it?
- Who will measure it?
- What is information literacy?
- How do we use information literacy tools?

The Two Cultures and a Second Look by C.P. Snow (Cambridge University Press, 1959)

"A good many times I have been present at gatherings of people who, by the standards of the traditional culture, are thought highly educated and who have with considerable gusto been expressing their incredulity at the illiteracy of scientists. Once or twice I have been provoked and have asked the company how many of them could describe the Second Law of Thermodynamics. The response was cold: it was also negative. Yet I was asking something which is about the scientific equivalent of: *Have you read a work of Shakespeare's?*" pg. 14-15

"Yet I have regretted that I used as my test question about scientific literacy, *What do you know of the Second Law of Thermodynamics?* It is, in fact, a good question. Many physical scientist would agree that it is perhaps the most pointed question. This law is one of the greatest depth and generality: it has its own sombre beauty: like all scientific laws, it evokes reference....Nevertheless I wish I had chosen a different example....branch of science at present goes by the name of molecular biology." pg.71-73

Entropy

- 2nd Law states that there increasing entropy in an isolated system over time
- Information Entropy
 - Developed by Claude Shannon in 1948
 - Quantifies the information that can be carried in message

Information Literacy

- The [American Library Association's](#) (ALA) Presidential Committee on Information Literacy, Final Report states that, "To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (1989).

Miscellaneous Categorization: Information and Books

- How do you organize a grocery store?
- How do you organize your groceries when you bring them home?
- How do you organize your photographs?
- How do you organize a book store?
- How do you organize a library?



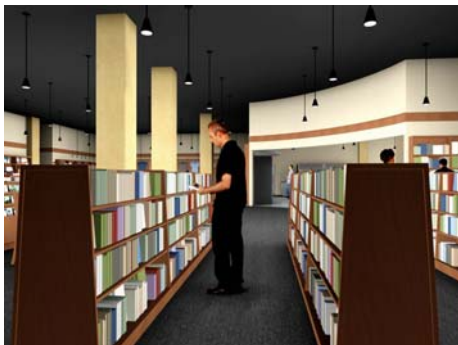
Periodic Table of the Elements

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
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* Lanthanide Series
* Actinide Series



You failed your Latin exam!
But Sweetie, it's important to learn Latin!
All your friends' names have Latin roots...



Read call numbers line by line:

LB
2395
.C65
1991

Read the first line in alphabetical order:
A, B, BF, CD...L, LA, LB, LC, M, ML...

Read the second line as a whole number:
1, 2, 3, 45, 100, 101, 1000, 2000, 2430..
(Some call numbers include a decimal number after the whole number on the second line. Any number after a decimal point is read as a decimal number)

The third line is a combination of a letter and numbers:
Read the letter alphabetically.
Read the number as a decimal: C65= 65 C724 = .724
(Some call numbers have more than one combination letter-number line.)

The last line is the publication date, read in chronological order: 1987, 1989, 1998, 2000

LAURIER Library

Library of Congress Schedule

Subclass Q	Science (General)
Subclass QA	Mathematics
Subclass QB	Astronomy
Subclass QC	Physics
Subclass QD	Chemistry
Subclass QE	Geology
Subclass QH	Natural history - Biology
Subclass QK	Botany
Subclass QL	Zoology
Subclass QM	Human anatomy
Subclass QP	Physiology
Subclass QR	Microbiology

LAURIER Library

Library Floor Plans (Directions to the Library)

1st 2nd (Main) 3rd 4th 5th 6th 7th Building Directory Campus Maps

The floor plan shows a multi-level layout. Key areas include:

- Quiet Study Area** (PS)
- Group Study** (QL)
- Reference** (R)
- Library** (L)
- Accessibility** (A)
- Group Study** (G)

 The plan is oriented with North (N) at the top and West (W) on the left.

LAURIER Library Browsing Science

A black and white photograph showing a person sitting at a table in a library reading area. The person is looking at a book. The background shows rows of bookshelves filled with books.

LAURIER Library Browsing Science

- Science Q1 .S35
- Nature Q1 .N2
- American Scientist Q1 .A54
- Scientific American – only online
- New Scientist: <http://www.newscientist.com/home.ns>
- Discover: <http://discovermagazine.com/>
- Science News Q1 .S76
- Popular Science: <http://www.popsi.com/popsi/>
- The discovery channel: <http://www.discovery.ca/discoveryca/index.html>

LAURIER Library Map Online Communities

A hand-drawn map titled 'Map Online Communities'. The map is divided into several regions, each representing a different online community or platform:

- THE ICY NORTH (WFOO, WINDOWS LIFE)**
- MYSPACE**
- NOOB SEA**
- GULF OF YOUTUBE**
- SEA OF CULTURE**
- OCEAN OF SUBCULTURE**
- SEA OF METES**
- THE BLOGIPOLIGO**
- ICP ISLES**

 The map includes various icons and text labels, suggesting a complex network of online interactions.

LAURIER Library RSS Feed – Google Reader

A screenshot of a Google Reader RSS feed. The feed is titled 'RSS Feed – Google Reader' and shows a list of articles from various sources. The articles include:

- SciTechNet: Science and Technology Social Networking Services (1)**
- HealthExperts Scientific Online Community Launched**
- Springer Psychology Titles (5)**
- Springer Statistics Titles (7)**

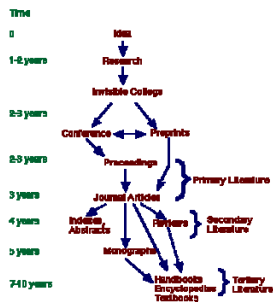
 The interface includes a search bar, a list of items, and a sidebar with 'Top Recommendations' and 'Tips and tricks'.

Information Seeking Observations

- When asking for information, we seek the easiest route possible
- We form habits
- Satisfying
- We are good at assessing resources of credibility when we have experience

1. Define the topic: know what you are looking for
2. Select information resources
3. Decide on words or phrases to describe individual concepts
4. Execute the search
5. Evaluate your results
6. Refine your search as necessary

Structure of Scientific Information



Adapted from the University of Waterloo
http://www.lib.uwaterloo.ca/usered/grad/researchskills/flow_of_info.html

Citation Styles in Science

- American Chemical Society (ACS)
- American Institute of Physics (AIP)
- American Mathematical Society (AMS)
- CSE/CBE Council of Science Editors formerly Council of Biology Editors – Citation-Sequence and Citation-Year

Library Workshops in Library Instruction Room L314

- Books, books, books! Jan. 23 @ 10:30 am, Feb. 12 @ 10:00 am, Mar. 12 @ 2:30 pm
- Journal Literature Search – Jan. 23 @ 11:30 am, Feb. 12 @ 11:00 am, March 12 @ 1:30 pm
- RefWorks – Jan. 22 @ 1:00 pm, Feb. 12 @ 1:00 pm, Mar. 12 @ 11:30 am.

Ask for Help

LAURIER Library

Ask us

Library Contacts

- Staff (librarians)
- Staff (by department)
- Library Liaisons by Discipline/Subject
- Technical Assistance

Other Contacts

- Librarian's Email
- Directory
- Library Office Phone
- Directory @ OpenView (login required)
- Phone, Mail and Email
- Reference

Library fax: 519-884-3309

Ask us now!

- in person**
At the Information Desk
- by phone**
519-884-8719 (during those hours)
- by email**
We'll get back to you within 8 business hours.
- Ask us now!**
Chat whenever we are online (2009-2010). We are now **online**.

laurierlibrarian@utoronto.com
Ask us now!
Yahoo! Instant Messenger

Not at your own computer? Access your IM account through the web-based **AIM**.

Key Phone Numbers

University Librarian	3389
Accessibility Services	3477
Archives/Special Coll.	3496
Collection	3414
Distance Education	3477
Financial Accounts	3660
Information Liaison	3416
Reference/Information	3222
Reserves	3844

Last Reviewed September 2007. Send Comments or Questions to the Library
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(519) 884-3309 (local toll-free service)
519-884-8719 x3399 (toll-free) | Directions to the Library

Ontario, Canada
75% Patronage: 1/4 of Budget | 1/4 of Staff