

Scientific Literature

Bergen Community College
Sidney Silverman Library

Edith Sirianni – Librarian

The Scientist or Researcher, the “PRIMARY SOURCE”

- Performs experiment(s) or observations
- Writes a detailed scientific paper describing methods, listing observations or data, giving conclusions.
- Presents the paper at meeting. (Conference proceedings are published.)
- Submits paper to scientific publisher – peer reviewed / refereed by other scientists.
- Article is published in a scientific journal for the scientific community.
- Article becomes part of the “scientific record.” (For use by other scientists and researchers.)

Another Scientist or researcher, a “SECONDARY SOURCE” ...

- Writes an article that summarizes research in a field done by other scientists. (This type of article sometimes includes information about research done by the writer himself or herself.)
- This type of articles can be called a “literature review” or a “review article,” “summary,” “commentary” or “overview” of the research topic. This type of article will not include all the details of the research.

A writer or journalist with a scientific background

(also a SECONDARY SOURCE)...

- Writes an article that summarizes the interesting aspects of research for the **general public**.
- This will be in a “**common source**” such as a newspaper or a general news magazine. It can be published in a general science magazine that can be understood by the general public.

**SCIENTIFIC
JOURNALS**

GENERAL INTEREST

Magazines and Newspapers

PRIMARY SOURCE

***“SCIENTIFIC”
SECONDARY
SOURCE***

***“COMMON”
SECONDARY
SOURCE***

Summary of the “library” part of your assignment:

- Find and read a secondary source.
- Make a photocopy of the secondary source.
(image)
- Identify the primary source by using information in the secondary source and online indexes.
- Locate either a print or electronic copy of the primary source.
- Make a copy of the primary source article.
(image)

HOW TO BEGIN ASSIGNMENT...

- *Start with the secondary source.*
 - Browse science magazines such as:
(You can also browse these titles online.)
 - Science News;*
 - Scientific American*
 - New Scientist;*
 - Browse newspapers such as:
 - New York Times*
(Tuesday - Science Times)
<http://www.nytimes.com/pages/science/index.htm>
 - Browse general interest periodicals. (inefficient)
- Online browsing is possible. Use “Journal Titles List” on left side of library homepage.



<http://www.bergen.edu/library>

OR...

Browse journals that publish BOTH primary and secondary sources (very efficient)

Nature

- Secondary Sources

“News and Views”

“Commentary”

“News Features”

“Research Highlights”

Science

- Secondary Sources

“News”

“Perspectives”

“Science’s Compass”

Why start with the secondary source?

- Most scientific research is not of interest to the general public.

- It is very possible that there are

NO SECONDARY SOURCES.

Next Step...Read the Secondary Source

- Look for the name(s) of the researcher(s).
- Determine what the article is about and jot down keywords.
- Make note of the date or title of the journal in which the primary source was published. (Not always mentioned.)

Next... Use Online Indexes to find the CITATION for the PRIMARY SOURCE

General:

Academic Search Premier

Proquest Research Library

Science-oriented:

Pubmed (Fast indexing for “Science” and “Nature”)
(Contains Indexing/Abstracts with link-out to full text.)

Highwire Press (Stanford University Publications.
Includes “Proceedings of the National Academy
of Science” - “full image” except the current 6 months.)

Science Direct (Many European Sources –all in
English)

FIND A PRIMARY SOURCE: (cont.)

The “point” is to find the citation!

- Do a search that includes the *last name of the researcher* and one or two *keywords* from the subject of the research (or the title of the journal.)
- EXAMPLE:

Keating and zebrafish and heart

<http://www.bergen.edu/library>



To find the *image* of the journal article...

- Use **Journal Titles List** on the left side of the BCC Library home page.
- If BCC owns the “paper copy” of the journal, **PHOTOCOPY** article.
- If you have online access to the **IMAGE (PDF)** , print the article.

<http://www.bergen.edu/library>

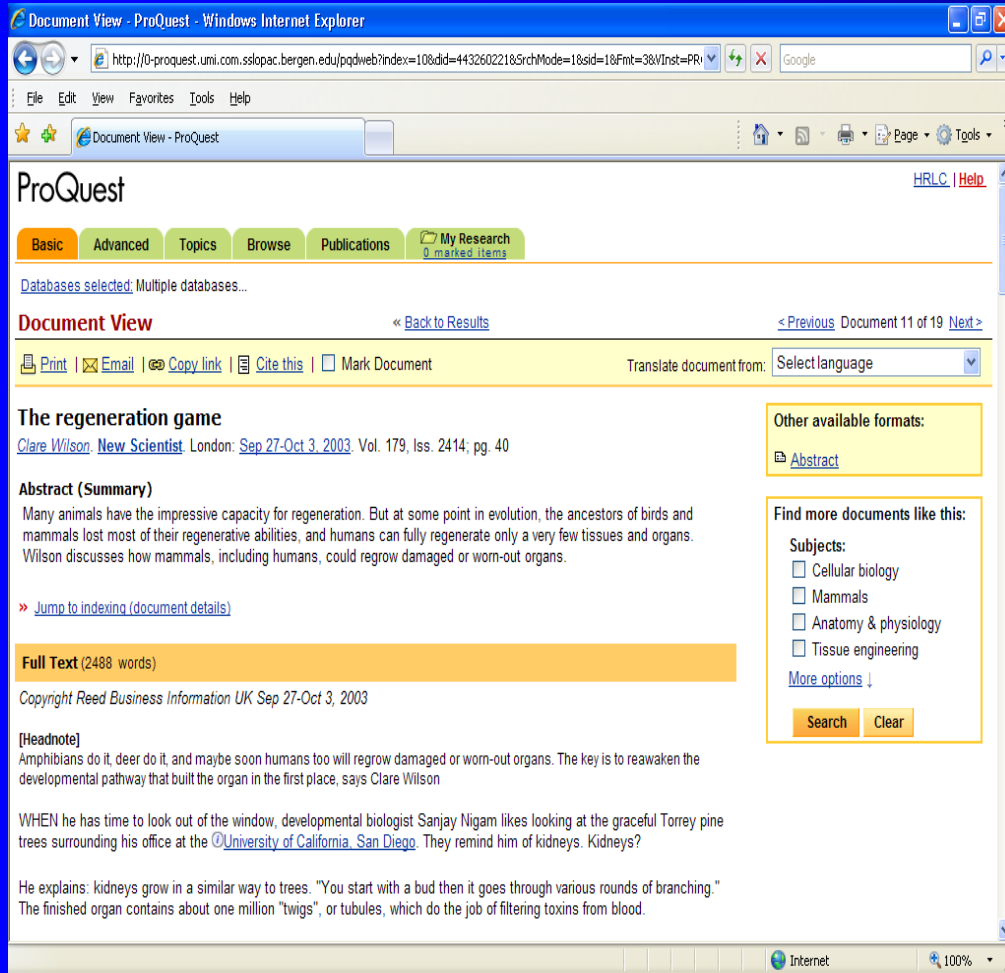


Try Google Scholar

- <http://www.google scholar.com>
- Better results if you use advanced Google Scholar search.
- Look for PDF in column on right side.

Example:

DNA and folding and lieberman-aiden



Note!

- *Periodical Indexes and databases sometimes contain*

“html or full text,”

but not the

“image or PDF”

Image at left does not look like a photocopy of the pages.

Is it a “Primary Source” ?

- Was the article written by the researcher (s) / scientist (s) who performed the experiment or did the observations?
 - (Sometimes there are clues such as the use of the “first person” words such as “I” or “we” or “our team.”)
- Does the article include *detailed* hypothesis, methods, materials used, observations, results, data and conclusions?
 - Sometimes methods and materials are available or a “continued online” link will be given.
- Is prior research on the topic well-documented in the bibliography/sources?
- Is there an abstract or summary included at the beginning of the article? (usually)
- Is it possible replicate the research / experiment based on the information in the article?

To obtain the article if BCC Library does not own or if the image is not available online...

- Fill out an online [Interlibrary Loan Form](#) to obtain a photocopy of the article from another library.
- Use this [JerseyCat](#) link to find another library that owns the journal.
- Ask the reference librarian for assistance.

<http://www.bergen.edu/library>



How to give credit ...

What is Plagiarism?

SYDNEY – The BCC Library Tutorial [Lesson 6 – Citing Sources - Contents](http://www.bergen.edu/library/tutorial/mod6/contents.html)
<http://www.bergen.edu/library/tutorial/mod6/contents.html>

Cite your sources using the CSE style.

<http://www.lib.unc.edu/instruct/citations/cse/CSworkscited.html>
(UNC University Libraries - CSE Citing Information)

Use the CITATION-SEQUENCE (C-S) format.

<http://www.bergen.edu/library>



Another way to do the assignment:

Some scientific journals have both primary and secondary sources

Nature

- Secondary Sources

- “News and Views”
- “Commentary”
- “News Features”
- “Research Highlights”

- Primary Sources

- “Articles”
- “Letters to Nature,”
- “Nature Online”

Science

- Secondary Sources

- “News”
- “Perspectives”
- “Science’s Compass”

- Primary Sources

- “Research”
- “Reports”,
- “Brevia”
- “Science Express”

A review of the steps....

- Find an interesting “secondary” source (article) and jot down name(s) of researcher(s) and keywords.
 - The name of the journal and a reference to the date of publication are sometimes included in the secondary source.
 - Look for secondary sources that are at least a few months old in order to insure that the primary source has been published in print format.
- Use periodical indexes to identify the citation. (WHEN and WHERE and on WHAT PAGE the primary source was published.)
- Find a copy of the PRIMARY SOURCE (article) by using the “Journal Titles List” <http://www.bergen.edu/pages/2334.asp>
- Try Google Scholar to find Citation or PDF.

Review of steps (continued)

- If the “PDF” or “IMAGE” is available online, print the article.
- If the “PDF” or “IMAGE” is not available online,
 - *request an interlibrary loan.*
Use the *online Interlibrary Loan Form*
<http://sslopac.bergen.edu/illj>
 - *Check with the librarian to find a local library that has the periodical that you need.*

TIME FRAME...

- Identifying a secondary and primary source should not take more than an hour or two.
 - ✓ Be flexible.
 - ✓ Select slightly older research if the primary source has not been published.
 - ✓ Discuss the project with your teacher.

Enjoy learning about Scientific Literature!

