Extended Essay Research Guide

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Part I: Basic Steps in the Research Process

These steps are suggested guidelines for you to use as you work to complete your extended essay. Since research is not a lock-step process, you will likely work your way through these steps in an order that best suits your individual research style.

1. **Select up to 2 subject areas** that interest you. Consider selecting IB subject areas in which you have taken (or are taking) a course. Be aware that **TOK cannot be used as an extended essay subject area.**
2. Read the extended essay guidelines that pertain to the subject area(s) that you have chosen. Think about how you can develop a topic within the essay guidelines for a particular subject area. As you brainstorm possible topics, keep in mind the essay criteria for that subject area.
3. Make a list of a few broad topics that you would be interested in exploring. Think about the information that you learned (or are learning) in your IB courses. What topics have been of interest to you? What new perspective can you offer on a topic?
4. At this point, you may need to do some preliminary reading. Read encyclopedias (specific/general), and other types of reference resources to get an overview of broad topics within a selected subject area.

   Research Tip: Browsing the reference section of a library is an important activity. You can discover many print resources that are not easily located through a library's online catalog system. Use the Dewey Decimal handout on page 25 (Appendix F) to help you purposefully browse the reference section of a library. Learn how to search your library online catalog.
5. As you read, list key words to further help you search for information about a topic. **Consider keeping a separate notebook in which you'll record key words, notes, ideas and bibliographic references.**
6. As quickly as you can—say within 2 weeks of beginning the extended essay assignment—choose a subject area in which you intend to develop your essay. Now focus your preliminary reading in your chosen subject area and on your potential broad topic.

   Research Tip: It is important that you choose a topic that is both interesting and challenging because you will work on this project for an extended period of time. There is nothing worse than researching a topic in which you have no interest.
7. As you read information about your broad topic, you should **begin to focus** your ideas into one that is narrower. Remember, your research topic must be manageable within the 4000 word limit.
8. Be prepared to photocopy articles so you can highlight keywords, passages and important ideas as you read. This is important—it's never easy to "go back" and find a great article or passage after the fact. You should keep all of your documentation until you have completed your IB studies.

8\. When you think you have read sufficiently enough, **brainstorm questions** about your focused topic.

9\. **Write a statement of purpose** about the focused topic. Complete the exercise on page 13 for practice.

10\. As your read, continue **listing sources** that can answer your questions. Do not rely on one single type of resource. IB guidelines require the use of a variety or resources. Essays that rely

heavily on Internet sites typically do not receive high scores. Visit a variety of libraries—your school library, university and public libraries—to seek out the best resources on your topic.

11. Use your statement of purpose to draft a **formal research question.**

    Research Tip: A succinctly stated research question is essential to a well written extended essay. A specific research question will help you stay focused on your topic.

12. Before you begin to write, refocus/restate your **research question** if necessary.
13. **Write the body of your paper** from your notes. Avoid plagiarism by paraphrasing when appropriate.
14. Cite all information—both paraphrased and direct quotations—from both primary and secondary sources.
15. Write your **introduction** and **conclusion**. Work on a strong conclusion. Strive to make your conclusion more than just a rehash or summary of the essay.

PART II: CHOOSING A TOPIC FOR RESEARCH

What are you going to research?

Sometimes choosing a topic is the biggest hurdle in doing research. While IB candidates are encouraged to discuss their choice of topics and research questions with their supervisor and the IB librarian at your school, the candidate must "decide on the topic and the research question and develop his/her own ideas" (IB Extended Essay, p. 6). Knowing where to look for ideas can facilitate your choice of a topic as well as provide you with background information and a list of keywords.

Where can you get ideas?

Your subject area interests—the things you have been reading, and conversations you have had in class or with others are often good sources of ideas. Think about the subject areas of the hexagon—which area interests you the most?
Sources of background information like general encyclopedias, subject-specific encyclopedias or textbooks can be sources of ideas.
Browsing the reference shelves in the library is also a good way to get an idea of topics that have intrigued authors. Use the handout on page 25 that lists all of the Dewey Decimal Classes to help you browse only the areas that relate to your subject needs. Notice that the handout divides the 10 main Dewey Classes into the second division. This will help you locate subject specific resources within a main class. The Dewey classes and divisions apply to the general non-fiction collection and the reference collection. Be aware that college and university libraries typically use the Library of Congress Classification System, and it differs from Dewey significantly.

What are your information requirements?

As you begin to get organized for research, you will also want to consider the **type, quantity, and format** of information you will need. Answering the following questions may help you organize your extended essay research:

- How long will my essay have to be? (Around 3900 words—no more than 4000)
- How much information do you need?
- Is currency important?
- What types of publications do you want to read? (newspaper articles, books, journal articles, diaries, trade publications, etc.)
- What formats do you need? (both print and online should be used)
- Is point of view an issue? Do you need opinions?
- How much time do you have? Are their due dates throughout the process?

What are the keywords that describe your topic?

Once you have identified your subject area, and you've completed some background reading, think about questions that your research might help you answer. **State your topic as a question**. Think about the significant terms, concepts, and keywords that describe your topic. These terms will become the keys for searching online catalogs and databases, the Internet, and print

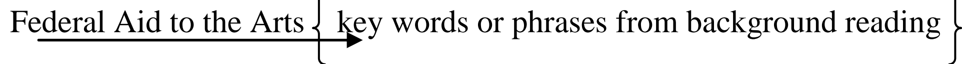
resources for information about your topic. See Appendix A (page 16) for additional tips on keywords and phrases

For Example:

How did New Deal programs influence the arts in America?

Keywords

New Deal
United States / America {synonymous terms}
Depression
Art
Federal Aid to the Arts {key words or phrases from background reading}



Work Space: Use this area to jot down key words, phrases and ideas as you begin to select your broad subject area.

PART III: FINDING BACKGROUND INFORMATION

A good way to begin your research is to **locate and read articles (or book chapters)** that will give you a **broad overview** of a topic. You can find background articles in a variety of reference materials—books, encyclopedias, journals and magazines. Also, these resources often provide **bibliographies—**lists of books and articles that will allow you to discover what else is available on a subject. These bibliographies can also provide additional resources for your research.

Research Tip: Once you've settled on a subject area for your extended essay, it's a good idea to keep copies of all the articles that you read. First of all, having a copy—whether its printed from a periodical database or the Internet or photocopied from a print resource—will allow you to highlight as your read and give you a place to make notations in the margins. Whenever you make a copy of an article or chapter in a book, make sure you have page numbers and all reference documentation that you'll need for a works cited page. You never want to go back and reconstruct a reference citation after the fact. It is too difficult and time consuming and often like trying to find a needle in a haystack!

Sources for Locating Background Information

General Encyclopedias: Since they are designed to cover all branches of knowledge, general encyclopedias are likely to have **some information on every topic**. They are often good sources to consult first, since they introduce the main concepts about a subject and suggest other sources that may be helpful. **A few free general encyclopedias are available online** at the Librarian's Index to the Internet at http://lii.org/pub/topic/reference. Finding information in general encyclopedias requires only that you do a **subject heading** search. Be aware that general encyclopedias can only be used to gather background information—they are not to be used cited sources in your extended essay.

Specialized / Subject Specific Encyclopedias: Specialized or subject-specific encyclopedias provide more **detailed articles written by experts in a field**. There are hundreds of specialized encyclopedias. Bibliographies in these sources tend to be more comprehensive than bibliographies in general encyclopedias. To locate encyclopedias on specific subjects, do a subject search in the online catalog for your subject followed by the word "encyclopedias." . You should **consult the index** of any specialized encyclopedia—it will cover topics and list keywords in more detail than any table of contents**. If the encyclopedia is part of a set, often the index for the whole set can be found in the very last volume.** Be aware that specialized encyclopedias are often located in a library's reference collection and are not available for checkout. You should be prepared to photocopy articles. The Librarian's Index to the Internet (http://lii.org/pub/topic/reference) also has a sizable listing of specialized online encyclopedias.

Almanacs and Handbooks: **Almanacs** are filled with **up-to-date answers** to all kinds of questions. Whether you are looking for basic statistics on state funding of welfare programs or recent winners of the Stanley Cup, you are likely to find the information in an almanac. Even from a retrospective or historical standpoint, almanacs can be valuable resources. They provide figures, charts, tables, and statistics. **Handbooks** supply **comprehensive**, **concise factual information on a particular topic.** Generally handbooks will contain charts, formulas, tables,

statistical data, and historical background. Because they are updated frequently, handbooks include information about new developments and references to other resources. Be aware that any "fact" book containing current data is already out-of-date by the time it is published. Almanacs in particular are based on the previous year's statistics.

Articles from Periodical Databases: Sometimes articles in newspapers or general interest magazines (Newsweek, Time, National Geographic, etc.) can provide a quick overview on a subject. These articles are typically meant for the everyday reader and do not contain references to other resources. However, you can use your library's full-text periodical database to find these articles and peer reviewed articles written by professionals in a particular field. Journal articles—those written by specialists in a subject area—do often contain bibliographical references to other sources. **To give your own research credibility, it is best to cite articles written for peer-reviewed journals.**

Biographical Sources: Your research may require that you learn something about a person without having to read a full-length biography. Most libraries own several biographical reference works that provide relatively brief articles about thousands of people. You can always expect to find something about the most famous people, but it may be possible to find something about fairly obscure people as well. Searching "biographical dictionaries" in an online catalog should help you locate a list of those resources. Typically, these resources are arranged in alphabetical order; however you may need to consult the index for a full listing of persons contained in a set of biographical dictionaries.

Other Resources via the Online Catalog: You can also find background information through a **keyword search** in most online catalogs. Search for your broad topic with keywords like **Latin American history, or history Latin America. (Note that online searching does not require the use of capital letters.)**

Research Tip: Pay attention to the copyright of print resources. Consider the date of publication in relation to your chosen topic. If you are writing about a topic from an historical viewpoint, a copyright from the 60s or 70s may be appropriate. All libraries have books in their collections that need to be "weeded" out, but many are still on the shelves. Just because a book is in the collection doesn't mean it's the best resource to use. Oh the other hand, an older copyright date does not necessarily mean outdated information. You will need to evaluate resources as you research. **You will also find that many, many, many of the best resources are only available in print, so don't ignore books! Not everything is available on the Internet! Remember—copyrighted material is not freely distributed via the "public" Internet.**

How to Use These Resources Most Effectively

- As you read about a subject, take note of **distinctive and unique words** used to describe the topic. These will be the keywords that you can use to search for additional information in other sources.
- To save yourself time and trouble, **write down the author, title, and publication information** for every source you consult. You will need this information when you write your bibliography or if you need to find the publication again.

- Locate the publications listed in the **bibliography** at the end of articles. These ready-made reading lists are sources that a published author used, and you may also find these same sources helpful for your research.

PART IV: REFINING YOUR TOPIC

Once you have read some background information, you can **refine your broad research topic** into a narrow, focused topic. The sooner you can develop a broad subject into a focused topic, the sooner you can shape your research into a finished paper. On the other hand, if you start out **too focused or detailed**, you may have a hard time finding enough sources to write an acceptable paper.

Research Tip: A topic is probably too broad if you can state it in four or five words. You can narrow a subject or topic by adding words that will eventually help you make a claim in your thesis statement or help you ask a question if you are developing a research question. Consider using words like *conflict, description (describe), contribution (contribute),* or *development (develop).* If you narrow a topic by using nouns derived from verbs, you will be one step closer to a claim that could be challenging enough to keep you and your evaluator interested.

Narrowing a Subject to a Manageable Topic: A topic that covers **too much material** is a common problem for students. Depending on your interests, a general topic can be focused in many ways. For example, if you want to write a paper on government funding for the arts, consider the following questions:

- What do you already know about this subject?
- Is there a specific **time period** that you want to cover?
- Is there a **geographic region or country** on which you would like to focus?
- Is there a **particular aspect** of this topic that interests you? For example, public policy implications, historical influence, sociological aspects, psychological angles, specific groups or individuals involved in the topic, etc.

Consider creating a table (or grid) to use as a template for narrowing your subject into a manageable topic.

General Subject	Government funding of the arts
Time Span	1930s
Place	USA
Event or Aspects	New Deal, painting, art, artists
Narrowed Topic	Federal funding of artists through New Deal programs and the Works Progress Administration contributed to the country's sense of well being during the Great Depression.

Topics that are too narrow: Think of parallel and broader associations for your subject if you need a broader topic that will be easier to research. Sometimes a topic may be too new and sources to your research questions may not yet exist.
For example, if you want to do a paper on the effect of deforestation on Colombia's long-term ability to feed its citizens, consider the following questions:

- Could you examine other countries or regions in addition to Colombia?
- Could you think more broadly about this topic? Give thought to wider topics like agriculture and sustainable development.
- Who are the key players in this topic? The government? Citizens? International organizations?
- What other issues are involved in this topic? For example, how can natural resources be allocated most economically to sustain the populace of Colombia?

Specific Topic	What is the effect of deforestation on Columbia’s long-term ability to feed its citizens?
Alternative Focus	Agriculture, sustainable development
Alternative Place	South America
Alternative Person or Group	United Nations and its subgroups
Alternative Event or Aspect	Birth Control
Broadened Topic	How can the United Nations encourage South American countries to employ sustainable development practices?

Research Tip: You have likely narrowed your topic too severely if you cannot easily find resources.

Work Space: Practice narrowing your topic in the space below. Make several attempts—no one narrows a topic on the very first try.

PART VI: FROM NARROWED TOPIC TO QUESTIONS

Once you determine a topic that you believe to be both interesting and relevant, you'll be ready to begin the process of searching out specific sources and collecting information. However, you want to avoid simply reporting information, and the best way to do this is to ask questions, to find a purpose for your research. While it is true that you may learn much from seeking out and reporting information, you will nonetheless only be reporting information. IB considers this kind of writing unsuitable for the extended essay. Rather, candidates are expected to examine a problem or issue in depth, adding both analysis and evaluation. If you cannot generate questions worth asking about your topic, then you will be unable to offer any significant answers that might change how you or your readers think about your topic. "Questions are critical because the starting point of good research is always what *you do not know or understand but feel you must"* (Booth, 1995, p. 39). Having a good set of questions will keep you from getting off track as you search for information.

1. Ask the standard factual questions involving *who, what, when, and where*. Answers to these questions will provide you and your reader with the necessary background information needed to understand your topic. First off, you should just write out your questions and not worry about answering them. Just ask the questions.

2. Ask interpretive or analytical questions about your topic. These questions will be generated from your information gathering—reading widely on a topic of interest. These are questions that result from your own analysis, critical thinking and wonder. For example, you might consider asking questions that:

- Divide the topic into component parts and evaluate the relationships among them.
  - What are the different time periods of the cold war and how do they relate to one another?
- Identify your topic as a component of a larger system.
  - What role does the cold war play in world history? What role does it have in US history? Who told about the events surrounding the cold war era? Who listened? How does the nationality of the event teller affect the history?
- Determine solutions for problems.
  - What role does politics play in solving the world wide AIDS epidemic?
- Compare or contrast elements in your topic with one of a similar nature.
  - In what ways do the dramatic arts represent the people of a given country and how does that representation vary worldwide?

Your factual questions—who, what, when, where—are important, but to begin putting together a research question or statement, you'll need to focus on questions that ask *how* or *why*. In other words, you should be looking for a problem. Don't confuse having a topic with having a problem to solve. If you lack a focus—and certainly questions can help you develop your focus—then you will keep gathering more and more information and not know when to stop. **Writing and asking questions that relate to your topic will take you beyond information reporting**. To help you through the questioning process, try the exercise on the next page.

Practice Exercise: Writing Purposeful Questions

Step 1. Name your topic. Early in your research, describe your work in one sentence. Use adjectives to describe your nouns.

I am learning about (or reading about, or studying) ______________________________.

Example: I am studying public funding for the arts.

Step 2. Suggest a question. Try to describe your research by developing a question that specifies something about your topic.

I am studying _________ because (in order to) I want to find out (who, what, when, where, whether, why, or how) ________________________________.

Example: I am studying public funding for the arts because I want to know if all socio-economic classes have equal access to the arts.

Direct Question: Are the arts equally accessible to all socio-economic classes?

Step 3. Add a rationale. Take your questioning one step further by adding a second question aimed at determining your rationale.

I am studying _______________ because I want to find out ______________________ in order to understand (how, why, or whether) ______________________.

Example: I am studying public funding for the arts because I want to find out how accessible the arts are to the working poor so I can determine whether our tax dollars support cultural enrichment for all citizens regardless of their socio-economic status. (**Note the rephrasing of the purpose stems.)**

Direct Question: To what extent are state and federal tax dollars used to support cultural enrichment for all citizens regardless of their socio-economic status?

Step 4. Repeat the process. Now, repeat steps 1-3 as often as it takes for you to write enough detail to believe in what you are researching, know what you want to find out, and understand your reason for undertaking your research. Oh—and in between your attempts to work through these steps—have someone read your answers. This will force you to stay on track and keep working.

****When you can adequately state the "because I want to find out" portion of your topic, you have determined your reason/purpose for studying and writing about it.****

Be aware that this is a critical yet difficult step in the research process. You cannot write a full statement of purpose/rationale until you have gathered and read some solid information on your topic. Once you have done so, you'll almost be ready to write your research question.

Work Space: Practice writing your questions here and in your research notebook. Keep trying. Writing a strong, focused research question is an integral part of your extended essay research.

PART VI: WRITING A RESEARCH QUESTION

A good research question is the central element of a well-written paper. It's a strong question that you can support with **evidence** or "grounds." You are likely to offer **warrants**, those general principles that explain why you think your evidence is relevant to your research question (and perhaps why your readers should believe you and change their way of thinking), and **qualifications** that will make your question and supporting evidence more detailed and precise. This is an opportunity for you to make connections between published research on your topic and what you think. While this may seem difficult at times, it is something that you will do very, very often throughout your college career.

A research question is not simplistic. Your research question must be contestable in some way or you cannot proceed until it is. Your research question must lead your readers to think (because they've never before thought about your claim) or rethink (because they have long thought about your claim in a different way). Your research question is the product of your own critical thinking after you have done some preliminary research.

Steps for writing a strong research question:

1. Look at your statement of purpose. If you have a detailed statement of purpose you should have the beginnings of an acceptable research question.
2. Examine the kinds of information you have gathered—pay attention to your notes or highlighted passages in articles and reference materials. Do you have enough evidence to support your purpose?
3. Question the amount of evidence that you have. Do you need more?
4. Decide which question you have the evidence to support. Be sure you can make a strong argument, a strong case for your claim.
5. Write your research question. Consider the following approaches:
    - Define a problem and state your opinion about it
    - Discuss the current state of an issue or problem and suggest/predict how it can be resolved
    - Offer a possible solution to a problem
    - Offer a new perspective on an issue or problem
    - Theorize or propose how a situation should be changed or viewed differently
    - Compare or contrast
    - Offer your ideas how something has been influenced to be the way that it is/was

Work Space: Practice writing your research question here and in your research notebook.

Example: I am studying public funding for the arts because I want to find out how accessible the arts are to those people who are members of the "working poor" in order to understand whether our tax dollars support cultural enrichment for all citizens regardless of their socio-economic status.

Example: I am studying the political underpinnings of certain African countries that have the highest prevalence of AIDS/HIV in order to determine whether politics plays a role in prevention and treatment of the disease.

Possible research questions might be:

Appendices

A. Listing Key Words

Making a list of the words that are important to your topic will help you find the information necessary for developing your purpose, research question(s), thesis and supporting evidence. They and called keywords because they “unlock” the passages that will lead you to useful information.

Where will I use keywords? You’ll use them when you search in online databases, when using search engines to search the web, and when you use the indexes of print resources.

Where do I find keywords? As you read, you should highlight, underline, or jot down important words and phrases that are specifically related to your subject area. General keywords will ultimately be narrowed to more specific words, terms and phrases that relate directly to your topic. Your purpose and thesis statements, and even your research questions should all contain keywords that essential to your topic.

When should I begin to list keywords? As soon as you start reading you should start a list of keywords and phrases. You might try setting up 3 columns, one for key phrases, a second for keywords, and a third for synonyms (words that mean the essentially the same as your keyword) or related terms. For example, consider the topic we worked on when we developed purpose statements (p. 8).

I am studying public funding for the arts because I want to find out how accessible the arts are to those people who are members of the “working poor in order to understand whether our tax dollars support cultural enrichment for all citizens regardless of their socio-economic status.

Key Phrases	Keywords	Synonyms/Related Words
public funding for arts		state/federal funding for arts
	arts	cultural arts, fine arts
working poor		working class, minimum wage earners
tax dollars		income tax, state taxes, federal taxes
	citizens	Americans
cultural enrichment		cultural opportunities

<u>Research Tip:</u> It is important to have an organized “place” to keep an ongoing keyword list. This is yet another reason to keep a research notebook.

B. Selecting Resources: Information Timeline

Depending on your topic, **different types of resources** (the web, newspapers, magazines, journals, books, etc.) may be more appropriate than others. You need to be aware of what kind of information is in each type of resource and who the intended audience is. Use the timeline below to learn more:

Information Timeline					
Present	**Day**	**Week**	**Months**	**Years**	
Web	Newspapers	Popular Magazines	Scholarly Journals	Reference Sources	Books

The Web

Time Frame:	Immediately - several years after the event
Audience:	General public - scholars, researchers, and students
Authorship:	General public - scholars, researchers, and students
Content:	General overview through detailed analysis
Length:	One screen with few links; Many screens with several links

Why consult a World Wide Web page?

- Immediate coverage of an event can provide up-to-the-minute analysis
- Access to information that is not available in print format because of currency
- Sometimes more detailed coverage if event/topic is current
- Possible additional resources from linked web pages
- Statistics
- Graphs

Research Tip: Be sure you know how to appropriately evaluate web resources. Although information errors and misinformation existed long before the web came into existence, it is much easier to stumble upon false information in an online environment. Check the guidelines for evaluating websites in Part E (p. 22)

Newspapers

Time Frame:	One day - one week after the event
Audience:	General Public
Authorship:	Reporters
Content:	Summary or overview of the event;basic factual information coveringwho, what, where, when, and how
Length:	Brief

Why consult a newspaper?

- Statistical information
- Local news coverage
- Immediate news coverage
- Photographs
- Editorials

Newspapers, like journals and magazines, are a type of periodical. **Periodical databases** allow you to find articles from newspapers. A search of a periodical database results in **citations** to full-text newspaper articles. Check out the periodical databases listed on our media homepage.

Popular Magazines

Time Frame:	1 week - 1 month after the event
Audience:	General Public
Authorship:	Journalists
Content:	General Overview; summary of the event covering who, what, where, when, how and starting to analyze why
Length:	1-5 pages

EXAMPLES:
Time; *Newsweek*; *National Geographic*

Why consult a popular magazine?

- Statistical information
- General overview of a current event; more detailed analysis than a newspaper
- Public opinion
- Photographs

Periodicals (also called **serials**) are publications printed in intervals and that continue to be printed for an indefinite period of time. **Journals**, **magazines**, and **newspapers** are types of periodicals.

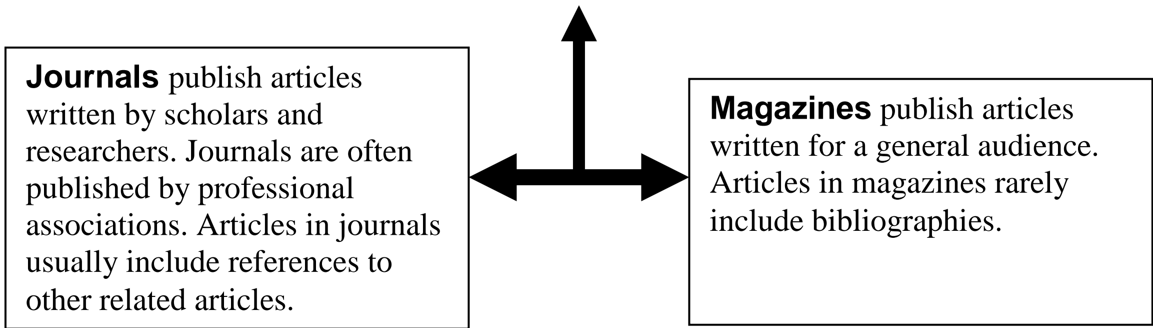
Scholarly Journals

Time Frame:	Several months - years after the event
Audience:	Scholars, researchers, and students
Authorship:	Scholars and researchers
Content:	Research; theories; study, experimental results, and analysis
Length:	Many pages (usually over 5 pages)

EXAMPLES:
Journal of Child Development; Journal of the American Medical Association; American Quarterly, etc.

Why consult a scholarly journal?

- More in depth examination of a subject
- Articles written by professional in the discipline
- Peer- reviewed prior to publication
- Additional resources from footnotes and bibliography
- Statistics
- Graphs



Research Tip: Try the beta version of **Google Scholar** (http://scholar.google.com). From one place, you can search across many disciplines and sources: peer-reviewed papers, theses, books, abstracts and articles, from academic publishers, professional societies, preprint repositories, universities and other scholarly organizations. Google Scholar helps you identify the most relevant research across the world of scholarly research. Google Scholar orders your search results by relevance, so the most useful references should appear at the top of the page. This relevance ranking takes into account the full text of each article as well as the article's author, the publication in which the article appeared and how often it has been cited in scholarly literature. Google Scholar also automatically analyzes and extracts citations and presents them as separate results, even if the documents to which they refer are not online. This means your search results

may include citations of older works and seminal articles that appear only in books or other offline publications.

REFERENCE RESOURCES

Time Frame:	Several months - years after the event
Audience:	General Public- specialists
Authorship:	Scholars and specialists
Content:	General Overview
Length:	Varies among sources

EXAMPLES:
Dictionary of Art; *Encyclopedia of the American West*; *American Decades*; *Encyclopedia of the Confederacy; Encyclopedia of Latin American Culture*

Why consult a reference resource?

- Detailed background information, overview
- Compilation of articles on particular/specialized subject
- Wide coverage contained within one or more volumes
- Multiple viewpoints often portrayed - especially in a compilation of articles
- Authored by experts in particular disciplines
- Statistics
- Additional resources - bibliographies

Books

Time Frame:	At least 1 year - several years after the event
Audience:	General public - scholars, researchers, and students
Authorship:	Scholars and researchers
Content:	Detailed analysis; sometimes a compilation of articles from several scholars
Length:	Numerous pages - often over 100 pages

Why consult a book?

- Detailed analysis of a subject
- Multiple viewpoints often portrayed - especially in a compilation of articles
- Additional resources found in footnotes and bibliography

C. Finding Book Reviews

When you need to know about the critical reception of a book, there are several sources to consult. There are several journals—*Library Journal*, *Choice*, *Booklist*, and *Publishers' Weekly*—that serve as tools for individuals involved in the purchasing of books (like librarians for libraries). While the reviews may still be useful, they are often very short and may not

contain as much critical evaluation as other sources. Also, some of the periodical databases include citations to book reviews from journals in specific disciplines, like *The Journal of American History*. These are excellent reviews to consult because experts in the fields most often write them. *The New York Times Book Review* and the *TLS* (Times Literary Supplement) are standards in the field and are indexed by the majority of the online periodical databases.

Research Tip: If you cannot find reviews in a periodical database, try an advanced Google search on the title of a book and the phrase term "book review."

D. Finding Web Pages

Web pages mean the "**free web,**" web sites anyone can access, not the web-based research databases that are purchased by school districts or university and public libraries. Fee based Internet resources typically require a user password for access. If your school does not subscribe to any online databases, check your public library. To access the paid online services of your public library you will need a library card—then you should be able to access their databases from your home or at school as long as you can sign in with your patron ID number.

The web is a very interesting medium for research:

1. Anyone can publish information or misinformation.
2. There is no complete list of web sites.
3. There are no official organizers, catalogers, or evaluators.
4. Sites constantly change; new sites are constantly created; sites often disappear.
5. Finally, there are no standards for web search tools.

When you use the web for research, don't assume:

"You can find it faster."

"The information is more current."

"The information is just as reliable."

Searching is not evaluating. Given the nature of web information, it's vital to evaluate the web pages you dig up. See **Appendix E: Evaluating Web Pages** for things to consider when evaluating a web page. Continue reading this section to learn how to get the best results from search engines that you probably use already use.

Directories

Internet Public Library (http://www.ipl.org/) | **Librarian's Index to the Internet** (http://lii.org/ | **Open Directory** (http://www.dmoz.org/) | **Yahoo!** (http://www.yahoo.com/)
Best used for: browsing subjects; finding quality web sites.

Search Tips:

- When using a directory's keyword search option, note the subject categories your search retrieves.
- Yahoo puts the least emphasis on including quality web sites, so don't forget to evaluate the sites you find there.

Directories organize web sites by categories (i.e. subjects). People who work on directories decide in which category a web site should be listed. Since directories are built and maintained by people, directories include far fewer web sites than search engines. However, directories are the best place to begin browsing a subject, and most directories focus on including quality web sites.

Search Engines

Google | Yahoo | AskJeeves |AltaVista

Best used for: finding specific sites or specific information.

Search Tips:

- Use more than one search engine (see how little they overlap!)
- Explore each search engine's various search options (such as Google's image search or advanced search)
- Don't assume the first hit is the best one
- If you don't find what you are looking for in the first 25 hits, modify your keywords and search again.

Search engines use software (called spiders, webcrawlers, or bots) to automatically collect the words on millions of web pages. These words are fed into a searchable database. So when you search a search engine, you are **not** searching the Web -- you are searching a database of words from web pages, collected by that search engine's spider in the recent (or not-so-recent) past. Relevancy software determines in what order hits are listed. Many search engines also provide a search directory.

Search engines allow you to search for **keywords**, not for context. For example, a search for "sole" will turn up pages about fish, shoes, and "sole" as a synonym of the adjective *single*. It's up to you to provide the search with context. Think of related keywords that would narrow the search results. A search for "recipe for sole" will not turn up web sites about Nikes and Timberlands.

Research Tip: Here’s an important note about advanced searching. Most search engines feature advanced search features. These usually allow you to:

- Search by file type (this enables you to find images, sound, video, etc.)
- Use Boolean logic with multiple search boxes.
- Limit by date, language, domain (.gov, .com, .org and others)
- Search within specific websites or see who links to specific pages.

The differences between search engines become more important when we view their advanced search capacity. Google (www.google.com) is excellent for images (it allows you to limit by black and white or color as well as file size) while Altavista (www.altavista.com) is still better for music. AlltheWeb (www.alltheweb.com) does both. For a comprehensive look at search engines in general, check out Search Engine Watch at http://searchenginewatch.com/. This is an excellent online evaluation and reference tool for the latest information about search engines.

E. Evaluating Web Sites

Web pages in this section refers to the **free web**—web sites anyone can access—not web-based research tools like subscription databases resources that you (or your school or your public library) pay for and that must have a password to access. Here are the aspects you should consider when evaluating web sites.

Authority:

Who wrote the page?
Look for the author's name near the top or the bottom of the page. If you can't find a name, look for a copyright credit (©) or link to an organization.
What are the author's credentials?
Look for biographical information or the author's affiliations (university department, organization, corporate title, etc.).
Can you verify the author's credentials?
Could the credentials be made up?
Anyone who has visited a chat room knows that people don't always identify themselves accurately.
Did the author include contact information?
Look for an email link, address, or phone number for the author. A responsible author should give you the means to contact him/her.
Whose web site is this?
What organization is sponsoring the web page?
Look at the **domain** (.com, .edu, .org, etc.).
Look for an "**about this site**" link.
Also look for a **tilde** (~) in the URL, which usually identifies a personal directory on a web site. Be careful of a web page that has a tilde in its URL.
Internet service provider sites (AOL, Mindspring, MSN, etc.) and online community sites (GeoCities, Tripod, Angelfire, etc.) feature personal pages. Be careful of web pages from those sites, too.

Audience and Purpose:

What is the purpose of the page?
Why did the author create it?
The purpose could be advertising, advocacy, news, entertainment, opinion, fandom, scholarship, satire, etc.
Some pages have more than one purpose. For example, http://www.dowjones.com/ provides free business information but also encourages you to subscribe to the Wall Street Journal.
Who is the target audience?
academic researchers? kids? buyers of competitors' products? trekkers? political extremists? Look at reading level of the page: is it easy to read or challenging? Does it assume previous knowledge of the subject?

Currency:

Is there a date at the top or bottom of the page?
But note: a recent date doesn't necessarily mean the information is current. The **content** might be years out of date even if the given date is recent. (The last update of the page might have consisted of someone changing an email address or fixing a typo.)
Is the information up-to-date?
This takes a little more time to determine. **Compare** the information on the web page to information available through other sources like databases or print resources. Broken links are one measure of an out-of-date page.
In general, information for science, technology, and business ages quickly. Information in the humanities and social sciences ages less quickly. However, old information can still be perfectly valid.

Objectivity vs. Bias:

Is the author being objective or biased?
Biased information is not necessarily bad, but you must take the bias into account when interpreting or using the information given.
Look at the facts the author provides, and the facts the author ***doesn't*** provide.
Are the facts accurately and completely cited?
Is the author fair, balanced, and moderate in his or her views, or is the author overly emotional or extreme?
Based on the author's authority, try to identify any conflict of interest.
Determine if the advertising is clearly separated from the objective information on the page.

Support for Evidence:

Does the author support the information he or she uses?
Look for links or citations to sources. Some academic web pages include bibliographies.
Is the support respectable?
Does the page cite well-known sources or authorities?
Does the page cite a variety of sources?
Do other pages on the same topic cite some of the same sources?
The web page in question should have a mix of internal links (links to web pages on the same site or by the same author) and external links (links to other sources or experts).
If a web page makes it hard for you to check the support, be suspicious.
Is the web the right place to do your research?
Some kinds of information are not available on the free web. Also, some kinds of information are easier to find using library resources. Examples:

- **literary criticism** (begin with a **literature database** like the EBSCO Literary Reference Center or GALE Literature Resource Center.)
- **scientific/social analysis** (an online periodical database like EBSCO will provide you with current, peer-reviewed articles; use online databases specifically designed for your area of interest—check public library and/or state funded databases)
- **print resources** (some of the very best resources are only available in print format. Books are not going away any time soon. Make sure you take the time to use print resources)

Dewey Decimal System

000 Generalities
010 Bibliography
020 Library & information sciences
030 General encyclopedic works
040 Special topics
050 General serials & their indexes
060 General organizations & museums
070 New media, journalism, publishing
080 General collections
090 Manuscripts & rare books

100 Philosophy & psychology
110 Metaphysics
120 Epistemology, causation, humankind
130 Paranormal phenomena
140 Specific philosophical schools
150 Psychology
160 Logic
170 Ethics (moral philosophy)
180 Ancient, medieval, oriental philosophy
190 Modern western philosophy

200 Religion
210 Natural theology
220 Bible
230 Christian theology
240 Christian moral & devotional theology
250 Christian orders & local churches
260 Christian social theology
270 Christian church history
280 Christian denominations & sects
290 Other & comparative religions

300 Social Science
310 General statistics
320 Political science
330 Economics
340 Law
350 Public administration
360 Social problems & services
370 Education
380 Commerce, communications, transport
390 Customs, etiquette, folklore

400 Language
410 Linguistics
420 English & Anglo-Saxon languages
430 Germanic languages (German)
440 Romance languages (French)

450 Italian, Romanian, Rhaeto-Romanic
460 Spanish & Portuguese languages
470 Italic languages (Latin)

500 Natural science & mathematics
510 Mathematics
520 Astronomy & allied sciences
530 Physics
540 Chemistry & allied sciences
550 Earth sciences
560 Paleontology & Paleozoology
570 Life sciences
580 Botanical sciences
590 Zoological sciences

600 Technology (applied sciences)
610 Medical sciences (Medicine, Psychiatry)
620 Engineering
630 Agriculture
640 Home economics & family living
650 Management
660 Chemical engineering
670 Manufacturing
680 Manufacture for specific use
690 Buildings

700 The arts
710 Civic & landscape art
720 Architecture
730 Sculpture
740 Drawings & decorative arts
750 Paintings & painters
760 Graphic arts (Printmaking & prints)
770 Photography
780 Music
790 Recreational & performing arts

800 Literature & rhetoric
810 American literature in English
820 English literature
830 Literature of Germanic language
840 Literatures of Romance language
850 Italian, Romanian, Rhaeto-Romanic Literatures
860 Spanish & Portuguese literatures
870 Italic literatures (Latin)
880 Hellenic literatures (Classical Greek)
890 Literatures of other languages

900 Geography & history
910 Geography & travel
920 Biography, genealogy, insignia
930 History of the ancient world
940 General history of Europe
950 General history of Asia (Far East)
960 General history of Africa
970 General history of North America
980 General history of South America
990 General history of other area

How to Write an Abstract

An abstract is a concise, stand-alone statement that conveys the essential information contained in an article, book, research paper, or document. Written in a direct non-repetitive style, the abstract should:

- identify the problem (research question or thesis) investigated.
- describe the scope or method of investigation.
- summarize the results.
- state the conclusion(s).

Writing the Abstract:

1. Highlight the sentences in the paper that detail the problem (objective) investigated.
2. Highlight the research question (or thesis).
3. Identify information (phrases, key words) that shows the scope and sequence of the investigation—identify but do not explain.
4. Condense the conclusion into a few concise sentences.

Words of Advice:

1. For the first draft, don't worry about length. Just try to cover all the important components that are required in the abstract. Use all the information that you highlighted and identified as you read through the essay (or article).
2. Take a word count before you begin to edit.
3. Begin editing by deleting words, phrases and sentences that are less important or provide more explanation than necessary.
4. Look for places where sentences can be combined to omit extra words or condense ideas.
5. Delete unnecessary background information.
6. Do not use jargon, abbreviations, direct quotes or citations.
7. Avoid writing in the first person (I). Rather than saying, "In this essay I discuss…", try a more formal approach by starting your abstract with as opening similar to:
    - "This essay discusses the effects of . . . . Specifically, this paper investigates (restate research question) . . ."
    - "This essay examines how . . . . It attempts to answer the question . . ."
8. Write to the required word count. If a 300 word abstract is required, get as close to the required number of words as possible.

How to Avoid Colloquial (Informal) Writing

While it may be acceptable in friendly e-mails and chat rooms, excessive colloquialism is a major pitfall that lowers the quality of formal written text. Here are some steps/tips that you can follow to help improve your overall writing:

Steps

1. **Understand what formal English is.** Realize that if you write the way you talk, you most likely will end up using informal English. You even may find yourself committing grammatical errors! Remember, too, that talking informally can make the listener feel more comfortable, but writing informally can make the readers think less of you. Know when to use informal English and when to use formal English, and discover which style comes more naturally to you.
2. **Understand basic English punctuation.** In fact, you should follow this rule in all of your writing (although it is particularly important in formal English). Punctuating your writing as you go along can reduce your risk of leaving out punctuation marks. In a formal letter, you use a colon, not a comma, as in "Dear John:"
3. **Realize that some punctuation is not acceptable in extremely formal English.** The dash, the parenthesis, and the exclamation mark are not universally acceptable. In the most formal English, you should use the exclamation mark only when a character screams, "Fire!" or "Help!" You should avoid the parenthesis and the dash at all times in this style unless you quote an author who used them first. You should avoid the parenthesis and the dash in discourse that you transcribe yourself. Try to replace your dashes with colons in formal writing.
4. **Avoid using common colloquial words and expressions**. Again, these are words that, while acceptable in speech, should not be used in formal writing. Colloquial words and phrases are called "colloquialisms." There are also solecisms, such as "ain’t," which are grammatical errors. Finally, there are non-words, combinations of letters and characters that do not form real words, such as "alot." If you are in doubt about a certain word, look it up in the dictionary. If the dictionary makes no comment about it, but it sounds informal to you, consult another dictionary. A dictionary will label an incorrect word such as "ain’t" as "nonstandard" and informal word as "informal," "colloquial," or "slang." Some dictionaries also include phrases. For example, when you look up "to put up with" ("to tolerate") in the dictionary, you will see that it is informal.
5. **"Omit needless words."** Some adverbs and phrases significantly reduce the formality of your writing while adding little to it. A good phrase to delete is "you know." This phrase implies that you know what the reader knows or is thinking while reading your paper; you do not have this power. Some adverbs, such as "well" starting a sentence, often are needless. Starting a sentence with "well" can be useful in everyday writing as a way to contrast the sentence with what came before. Many writers, however, use "well" too often.
6. **Avoid contractions**. Contractions dramatically reduce the formality of your composition. Depending on how formal you need to be, you may want to avoid all contractions or use fewer contractions in your writing than you would use in your speech. "Cannot" is preferable to "can’t" in formal contexts. Some contractions such as "o’clock" (for "of the clock") are so commonplace that they are condemned in only the most formal writing.

7. **Try to avoid the first and second person**. Formal writing often tries to be objective, and the pronouns "I" and "you" tend to imply subjectivity. Phrases such as "I think that" can be deleted from a sentence when it is obvious that this is the author's opinion. Using the pronoun "I" is almost always acceptable in personal writing, and the pronoun "you" is almost always acceptable in letters and how-to's. In the most formal writing, "we" replaces "I," and "one" replaces "you." "One" also may be useful when you have a statement that does not apply to all of your readers. Finally, "one" can be useful in a letter when you have a statement that applies not to the reader but to people in general.
8. **Do not hesitate to split an infinitive even in the most formal writing when it is warranted**. See How to Learn Perfect English As a Native English Speaker, tip one for a thorough explanation.
9. **Do not be afraid to separate the auxiliary (helping) verb and the main verb**. See How to Learn Perfect English As a Native English Speaker, tip two for a thorough explanation.
10. **Know when to end a sentence with a preposition (even in the most formal of English)**. See How to Learn Perfect English As a Native English Speaker, tip three for a thorough explanation.
11. **Always include the relative pronoun.** In speech and casual writing, you can say, "That was the boy I saw on the street" and make yourself clear. In formal writing, you should say, "He was the boy whom I saw on the street." In this style, you should be sure to always include "whom" even when it is not necessary to your meaning. Also consider this example: "There were five students who were complaining about the homework." If the relative pronoun is omitted, "complaining" becomes a kind of postpositive adjective, and the sentence is written completely in the neuter voice, with "were" as the only real verb.
12. **Do not start a sentence with a coordinating conjunction**. In the written language, do not use coordinating conjunctions such as "and" or "but" to start a sentence. In formal English, try to start sentence with "additionally," (or "moreover") "nevertheless," and "alternatively." In casual writing, you can start sentences with "also," but avoid this in formal English unless the word "also" is modifying a verb (usually in the imperative mood): "Also read Chapters Two and Three." Coordinating conjunctions are meant to join words and phrases, so a coordinating conjunction is left dangling without a role to play when a sentence begins with a coordinating conjunction. Simply attach the sentence that starts with a coordinating conjunction to the previous sentence; this produces a compound sentence. You also may use "additionally," "also," "either," "though," and "however" instead of starting with "and" and "but." You should tuck the words "also" and "however" in your sentence, not using them to start a sentence. "Though," coming at the very end of your sentence, can prove a painless alternative to starting your sentence with "but": "The passive voice can make your writing more formal. It can cause you problems, though."
13. **Develop short, choppy sentences into longer, more graceful sentences**. Formal writing generally uses longer sentences than casual writing. To make your writing more formal, try using more compound and complex sentences. Try to develop two simple sentences into one compound or complex sentence. Long sentences add variety to your writing. A long sentence can be particularly effective when it is paired with a short sentence; the contrast grabs the readers' attention. As the last sentence shows, you also can use a semicolon to join two simple sentences, provided that they are closely related to each other.

14. **Avoid clichés**. Clichés are sayings or expressions. Clichés make your writing informal and sometimes humorous. They often make your writing unoriginal, but sometimes, you can use them to make an original play-on-words. Here are some clichés to avoid in formal writing:
    - Hercules was *as strong as an ox*.
    - I have to give *an arm and a leg* to find a parking spot during the holiday season.
    - It was *as pretty as a picture*.
15. **Avoid stage directions**. Do not commence a letter by telling the recipient what you plan to do in the letter or begin an essay by telling the reader what the paper will discuss.
    - "I am writing to you to ask you to. . . ."
    - "This paper is going to talk about how. . . ."
16. **Avoid vague words**. Vague words can be described as words that are open to interpretation or that do not express your ideas as well as more precise words would. "A few" or "enough" can often be replaced by a word that is more precise.
17. Do not hesitate to split an infinitive when it is warranted. Grammarians, teachers, and writers used to try not to split "to" and the verb because the infinitive is one word in Latin (such as "ire" for "to go"). Now, however, grammar and writing authorities have realized that avoiding the split infinitive can make a sentence unclear. According to Oxford Dictionary compilers, the split infinitive can also make your writing stronger! "To boldly go" is stronger than "to go boldly" for the same reason that a big picture surrounded by two smaller pictures becomes particularly emphatic. "To boldly go" is also more formal, not less so, than "to go boldly" because the Romans were known to put their adverbs right next to their verbs. "Boldly to go" will work, but it sounds less natural, and putting the adverb in front of "to" does not always work. (http://www.askoxford.com/asktheexperts/faq/aboutgrammar/splitinfinitives).
18. Thus, a rule that is supposed to Latinize the English language has made it less like Latin, especially considering that "to" is not part of the infinitive anyway. Consider these two sentences: 1) "Her plan is not to use the active voice" and 2) "Her plan is to not use the active voice." The first sentence translates into "It is not her plan to use the active voice" while the second sentence translates into "She is trying not to use the active voice." The split infinitive is absolutely necessary in this sentence, proving that this rule is imaginary! Also consider "to more than double": "Calcium has been shown to more than double fat excretion." "More than to double" is ungrammatical; it is just not English! The Oxford experts recommend against the use of the split infinitive in formal writing. This is not because the split infinitive is informal but because your audience will generally have "higher" standards.
19. Do not be afraid to use a "split verb phrase." Some writers who do not split infinitives refuse to split verb phrases as well, but there is no such rule. If there were such a rule, we should all be saying, "I saw her not" instead of "I didn't see her." We should also say, "You are going?" instead of "Are you going?" but "You are going?" is a Nonstandard question. The evolution of the English language proves that this rule is imaginary. In fact, your sentences will be stronger if you decide to completely ignore this rule, especially when you use the passive voice.

20. Realize that you sometimes have to end a sentence with a preposition. Consider this line from *Robots*: "You can shine no matter what you are made of." It would be ungrammatical to write, "You can shine no matter of what you are made," and it should sound foreign to you! Also consider that like Latin, the English language is able to use intransitive verbs in the passive voice! Consider "Speak only when you are spoken to." "Spoken to" are treated as a single unit in English, and this sentence can be "corrected" only by rewriting it in the active voice: "Speak only when someone speaks to you." This sentence makes assumptions because you may be spoken to by one person or by a group. When your sentence uses a relative pronoun, try to place the preposition in front of the relative. For instance, "It was the ball by which I was hit" works better than "It was the ball that I was hit by." Your sentences will generally be stronger if you try to follow this rule. After all, few people are going to say that their favorite part of speech is the preposition, and the end of your sentence is the most important, the most emphatic part!
21. An intuitive grasp of English usage, while not infallible, is the most flexible. You will write or speak most naturally if you can focus on the ideas and their communication, instead of thinking about the rules.
22. Good communication, written or oral, is more than just good grammar and spelling. It is also organization, clarity, attention to the audience, and a host of other things. In fact, while the mechanics of communicating are good practice, they are secondary to the content and message. Put another way, if the meaning is sound, it's a simple matter to tidy up the mechanics.
23. Accept that the rules change over time. For instance, the word data was once strictly the plural of "datum", but has come to be used as a mass (or uncountable) noun, similar to "information" or "water".
24. Write first, fix second. Collect your ideas, then worry about the English.
25. The ability to spell is not necessarily an indicator of the ability to write, though the two skills are closely related. If spelling is not your strong point, use a dictionary or spell-checker before you publish a work or hand something in.