



Information Fluency – Research in the 21st Century

ASK – Formulate relevant and meaningful questions

ACQUIRE – Data and Information

ANALYZE – Authenticate and verify information, determine fact from opinion

APPLY – Synthesize the information and apply to problem

ASSESS – Reflect critically on the process

Asking a Good Question

A good question should be challenging. It should be meaningful to you, important and interesting. A good question is normally not simple to answer, indeed there may be no “right” answer, or cannot be answered by a simple “yes” or “no.”

An **Abstract, Conceptual** question requires a logical argument. Example: What is a hero? What makes a better pet, a cat or a dog? Should literature ever be censored?

A **Concrete** question is answered by analysis of evidence. Example: Why did the dinosaurs become extinct? Can DNA evidence be trusted in trials?

A **Problem-Solving** question is answered by offering a solution. Example: How can we improve traffic flow around our school? What platform is the best for student blogging?

A **Design Challenge** question requires the creation, and execution of a plan. Example: How can we produce a video to address bullying? How can we create a website reflecting the new Learning Commons?

Research Methodology – Acquiring Data and Information

Different questions require different research approaches. An important first step is determining what kind of information you need. These may include:

- ✓ Primary sources
 - Diaries and journals
 - Autobiographies and memoirs
 - Historical documents
 - Government records and documents
 - Movies, music, images
 - Physical objects
 - Archival material
 - Manuscripts
 - Surveys, polls, statistics
- ✓ Secondary Sources
 - Books
 - Magazines & Journal articles
 - Newspapers
 - Movies, music, images
 - Encyclopedias (general and subject specific)
 - Almanacs
 - Dictionaries
 - Handbooks
 - Directories
 - Chronologies

In fact, Easybib.com lists 59 types of research sources:

Advertisement Bible» Blog / Podcast Book» Brochure Cartoon / Comic Chapter / Anthology»
Collection Article Conference Proceedings» Congressional Publication» Court Case Dictionary
Entry» Digital File Digital Image Dissertation» Dissertation (abstract)» E-mail Editorial
Encyclopedia Article»
Executive Order Federal Bill» Federal Report Federal Rule Federal Statute Federal Testimony
Film / Online Video» Government Publication» Interview Journal Article» Lecture / Speech
Letter Live Performance Magazine Article» Mailing List Manuscript Map / Chart» Microform
Miscellaneous Multivolume Work»
Music / Audio» Newsgroup Newsletter Newspaper Article» Online Database Painting / Artwork
Pamphlet Patent Photograph Preface / Foreword» Press Release Raw Data Report Reprinted
Work Review Scholarly Project Software» Television / Radio Thesis» Website»

Any of these sources could provide information for your research project.

Analyze the Information

Use the following method to determine the quality of the information you are using. Traditionally, we look for the following:

Accuracy

- Author indicated?
- Qualifications indicated?
- Can you contact him/her?

Authority

- Is the publishing institution indicated?
- Purpose of publishing institution indicated?
- Are the webmaster and publisher the same?

Objectivity

- Are the goals/objectives of the page met?
- Is the information comprehensive or complete?
- Are there opinions expressed by the author?

Currency

- Is the page dated?
- Has the page been updated?
- Are the links up-to-date?

Coverage

- Do the links compliment the page?
- Is there a balance of text & images?
- Is the information presented cited correctly?

With practice, you will become very quick at this method of analyzing information. You will soon develop critical skills that will serve you well when you have any need for information.

Synthesize your Information and Solve Your Problem

Taking Notes

Note taking is an important skill that you will use throughout your life. You will find yourself in many situations where you need to record important information in an organized and easily accessible way. The three skills you need are:

- *Understanding and Selecting* the important ideas you need to record
- *Paraphrasing* and summarizing ideas
- *Organizing* the ideas

1. *Understanding & selecting the important ideas*

- It helps to have some knowledge of your subject before you begin so that you know what you're looking for. An easy way to accomplish this is to go to a general encyclopedia. Like *World Book*, and read the article on your subject.
- Now that you have some knowledge of the subject, make a list of sub-topics that will guide your research.
- Now choose the sub-topic area that most interests you. You will always produce better work if the topic is meaningful to you.

2. *Paraphrasing and Summarizing*

- To paraphrase means to express someone else's ideas in your own words.
- To summarize means to choose only the most essential points.
- Ask yourself, "What details are the most relevant to my topic?"
- When paraphrasing you must do two things: provide a reference and ensure the words and phrases are entirely in your own words.
- Do not copy passages word-for-word. Write the author's basic point only. Do not bother to use full sentences.
- Do note the page number of the original passage.

3. *Organize the ideas*

- Record bibliographic details before you begin taking notes.
- There are many strategies you can use to take notes, but the most important feature is to keep focused on one area at a time as you build your research accordingly.
- Group and connect ideas so that when you get to the organization and writing stages, your information will be easy to write into a well organized essay.

Organizing your notes

There are many "formats" to choose from when taking notes. Any program that allows you to organize your information while you are recording it will save you time later as the organization will already be done. Programs such as *Inspiration*, or websites such as *Bubbl-us* allow you to create "webs" of information which can be manipulated and understood easily. The sequence of understanding and the relationship between ideas is easily demonstrated using these graphic formats.

