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## I'M FINALLY ON-LINE, NOW WHAT?

Search Engines, Subject Directories, and Meta-Search Engines

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**A**re you like millions of folks who are connected to the Internet but have no idea how to locate valuable resources on-line? Hopefully, after reading this article you will be able to locate everything on-line your heart desires.

### What are Search Engines, Subject Directories, and Meta-Search Engines

Think of search engines, subject directories, and meta-search engines as a method of storing various web sites in various databases. These tools search the web and store the information. Many people assume that all of these search tools work the same, but this is not the case. Search engines, subject directories, and meta-search engines are set up and work differently. The difficult part about using Internet search tools is learning and understanding how each one of them works and which one will work best for your particular needs. Listed are some general characteristics of each search tool

### Search Engines

Search engines are programs that run on a particular web site. They create their listings dynamically and search large portions of the Internet based on information that their "spiders" or "robots" retrieve. Users who want their sites included in the search database also submit information. (Spiders or robots are automate search programs that go through the Web and search web pages for keywords). The informa-

tion that spiders or robots return is used to match web pages to keywords and phrases requested by users and provide more comprehensive results of available sites on the Web. Search engines also index words or terms in web documents. Search engines provide a large number of possibilities. Many search engines also allow you to retrieve data by browsing by topic and using the keyword search capabilities. Examples of search engines include

- Lycos [www.lycos.co](http://www.lycos.co)
- Excite Search [www.excite.co](http://www.excite.co)
- Infoseek [www.infoseek.co](http://www.infoseek.co)
- HotBot [www.hotbot.com](http://www.hotbot.com)
- Go to [www.goto.co](http://www.goto.co)
- AltaVista [www.altavista.co](http://www.altavista.co)
- Webcrawler [www.webcrawler.com](http://www.webcrawler.com)
- Education World [www.educatio-world.com/](http://www.educatio-world.com/)

### Subject Directories

Subject directories usually have smaller databases than search engines. Directories classify web documents or sites into a subject classification scheme; they are usually compiled by hand or in some type of logical order. Subject directories also begin with general topics and allow the user to narrow to a specific category. They usually provide limited search results of available pages on the Web. The information collected from a subject directory will generally contain more related information dealing with a particular subject matter. Information retrieved from subject directories will not be as

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comprehensive as the information located from a search engine. Many of these directories include browsing and searching capabilities. Examples of subject directories are

- Yahoo [www.yahoo.co](http://www.yahoo.co)
- Nerd World Subject Index [www.nerdworld.co](http://www.nerdworld.co)
- The Mining Company Subject Site Guides [www.miningco.com/](http://www.miningco.com/)
- Starting Point [www.stpt.com/](http://www.stpt.com/)
- Looksmart [www.looksmart.com/](http://www.looksmart.com/)
- Magellan [magellan.excite.com](http://magellan.excite.com)

## Meta-Search Engines

Meta-search engines don't create their own database of information. They search the databases of other search engines. The major advantage of using a meta-search engine is that it allows the user to search several search engines simultaneously. Examples of meta-search engines include

- Metacrawler [www.metacrawler.com/](http://www.metacrawler.com/)
- Inference [www.infind.com](http://www.infind.com)
- Savvysearch [www.savvysearch.com](http://www.savvysearch.com)
- Mamma [www.mamma.com](http://www.mamma.com)
- Dogpile [www.dogpile.com/](http://www.dogpile.com/)
- Search [www.search.com/](http://www.search.com/)
- C4 [www.c4.com/](http://www.c4.com/)
- Profusion [www.profusion.com/](http://www.profusion.com/)

## Searching Techniques & Strategies

Now that you have a better understanding of the similarities and differences of search engines, subject directories, and meta-search engines, it's time to learn some searching techniques and strategies. Several searching techniques and strategies are essential for narrowing search results and will assist you with locating valuable resources via the Internet. These techniques and strategies include wildcard, plus and minus signs, quotation marks and brackets, pipe symbol, Boolean operators, and nesting.

- Wildcard

A wildcard is a special character that can be added to a phrase while searching and the search engine or subject directory looks for all possible endings. The results will provide all possible documents in their database that have those letters

For example:

"autom\*"results: automatize, automobile, automatic or automotive

"educat\*"results: educator, educators, education or educationa

"profes\*"results: profess, professor, profession, professional or professionalism

- Plus and Minus Signs

The plus sign used before a keyword or phrase should retrieve results that include that specific keyword or phrase. The minus sign used before a keyword or phrase should retrieve results that exclude that specific keyword or phrase. Examples of each are listed below

For Example: (+ Technology + lesson plans)

Results: documents in the databases that have both of these words.

For Example: (+ Technology - Computers)

Results: a list of links that has the word "technology" in the document but will not include any document that has the word "computers."

For Example: (+ Technology + Computers - Internet)

Results: sites that have "technology" and "computers" but not "Internet"

*\*\*\*Make sure you read the tips for each search tool. Not all search engines support all symbols. AltaVista, Infoseek, and Excite use no spaces between the keywords and the plus and minus signs. HotBot, Lycos, Goto, and Webcrawler don't specify one way or the other.*

- Quotation Marks and Brackets

Quotation marks and brackets assist with narrowing the search results from the search tools. When quotation marks or brackets are used, the search engine will only retrieve documents that have those key terms appearing together.

For Example: "Technology and lesson plans" or [Technology and lessons plans]

Results: words will be treated as an exact phrase.



- Pipe Symbol (|)

The pipe (|) symbol, located on most keyboards on the right-hand side between the delete and a return key will assist with narrowing down results within a broad category.

For Example: Technology | Computers

Results: retrieve all documents in the broad category of "technology" dealing with "computers"

- Boolean Operators

Boolean operators are used the same way the plus and minus signs are used. The AND Boolean operator, is similar to the plus sign and the NOT Boolean operator is similar to the minus sign. The OR Boolean operator tells the search engine to retrieve one term or the other.

For Example: Technology AND lesson plans

Results: documents in the databases that have both of these words  
(similar to using the + symbol)

For Example: Technology NOT Computers

Results: a list of links that have the word "technology" in the document but will not include any document that has the word "computers"  
(similar to using the - symbol)

For Example: Technology OR Computers

Results: a list of links that have the phrase "technology" or "computers" in the document

For Example: Technology AND NOT Computer

Results: information with the key word "technology" and not "computers"

For Example: Technology AND Computers NOT Internet

Results: the sites that have "technology" and "computers" but not "Internet"  
(similar to using the + and - symbol)

- Near

The NEAR phrase indicates to the search tools that those terms must be located within a certain number of words. The results may vary depending on the search tool. To illustrate, some search tools may try to locate the terms within 2, 10 or 25 words of each other. The command to use is NEAR/#

For Example: Technology NEAR/10 lesson plans  
Results: documents that have the words technology and lesson plans within 10 words of each other

*\*\*\*Currently AOL Search, Alta Vista, Lycos and Webcrawler support this feature. Read the specific search tool tips for more detailed information.*

- Nesting

Nesting allows the user to perform multiple tasks and build a complex search. The parentheses are used to group the key words and Boolean operators together. This is an excellent technique for complex searching.

For Example: Technology AND (Internet OR World Wide Web)

Results: locate all documents that have the word "Technology" and "Internet" or "Technology" and "World Wide Web."

## More Tips on Searching

The OLRC Technology team also recommends:

- Reading the tips provided by each search engine, subject directory, or meta-search engine.
- Using synonyms if you are having trouble with a particular keyword or phrase.
- Deciding which search tools (engine, directory, or meta-search engine) would work best for you and your needs.
- Using more than one search engine or subject directory; this will expand the results of your search.
- Making sure the spelling of the keyword or phrase is correct.
- Being aware that some search tools (engine, directory, or meta-search engine) have a percent symbol located on the side of the annotation. This indicates the amount of information that is relevant to the key words or phrases. The higher the percentage, the closer the result is to the search criteria.
- Remembering to bookmark your findings.

(see "Additional Information on Searching on page 4)



## Additional Information on Searching

- Learning More about Search Engines and Subject Directories FAQs  
[www.cln.org/searching\\_faqs.html](http://www.cln.org/searching_faqs.html)  
A complete and detailed set of frequently asked questions on using search engines and subject directories.
- The Amazing Internet Guide  
[www.sunstorm.com/amazing/](http://www.sunstorm.com/amazing/)  
A wonderful site that contains information on over 20 search tools and provides subscription and key techniques needed for each tool.
- The Search is Over  
[www1.zdnet.com/pccomp/features/fea1096/sub2.html](http://www1.zdnet.com/pccomp/features/fea1096/sub2.html)  
Excellent web site that provides detailed instructions on all the major search directories, indexes, and meta-search engines. This site contains the pros and cons of each as well as which will meet your particular needs
- Search Engine Watch  
[www.searchenginewatch.com/](http://www.searchenginewatch.com/)  
Tips about Internet search engines and search engine submission.
- Cyward Internet Education: Search Engines & Specialized Directories  
[www.cyward.com/speciali.htm](http://www.cyward.com/speciali.htm)  
Information on major and minor search engines, search engines for children, and a directory of specialized search engines
- Finding it On-line: Web Search Strategies  
[home.sprintmail.com/~debflanagan/main.html](http://home.sprintmail.com/~debflanagan/main.html)  
An easy-to-understand tutorial on using search engines, subject directories, and meta-search engines.
- The Spider's Apprentice-Tips on Searching the Web  
[www.monash.com/spidap.html#ratings](http://www.monash.com/spidap.html#ratings)  
Tips on searching for AltaVista, Infoseek, Excite, Web-crawler, Lycos, HotBot, and Yahoo. This site rates each of these search tools and provides a page with FAQs dealing with search engines, subject directories, and meta-search engines.
- Life on the Internet: Subject Directories and Search Engines  
[www.screen.com/start/guide/searchengines.html](http://www.screen.com/start/guide/searchengines.html)  
Extra information on search techniques, subject directories, search engines, or meta-search engines. Life on the Internet has some great resources.



## The One-Stop Cross Curriculum System On-line

Still trying to locate reliable, useful and worthy lesson plans for your ABLE, ESOL, Family Literacy, or GED students? If so, look no further. This new resource will allow you to search our database for lesson plans on specific topics, see related topics, and find recommended trade books for those topics. The best part is you can send in your own lesson plans to be added into our database to be used by other educators. For more information about Eureka go to [literacy.kent.edu/eureka](http://literacy.kent.edu/eureka)

## Great On-line Resources

- **Funbrain.com** [funbrain.com/index.html](http://funbrain.com/index.html)  
Funbrain.com, designed for K-8 teachers and kids, is a great way for adult learners to increase and strengthen the grammar, spelling, math, science, and history skills. The site contains on-line games and quizzes dealing with each subject matter listed above. There are two levels of the quizzes, and positive feedback for correct and incorrect answers is provided as well.
- **Learning Resources** [literacynet.org/cnnsf/](http://literacynet.org/cnnsf/)  
Sponsored by CNN San Francisco and Western Pacific Literacy Network, Learning Resources is intended for adults with average reading and speaking skills. The activities include full text of each story as well as interactive activities to test comprehension. Learners also have the option to read or listen to the stories.
- **Free-ed.net** [www.free-ed.net/](http://www.free-ed.net/)  
Free.ed.net offers free "GED" education on the Internet. Free-ed.net does not administer the GED tests. However, it does provide resources to learners in order to prepare for the actual test. Some of these resources include demonstrating how the tests are set up, helping with the subject matters, and getting comfortable with the way the tests are administered.