Science – Searching ScienceDirect, College Edition

Objective:
To demonstrate effective strategies for using the ScienceDirect database.

I. General Computer Search Techniques
Many of the same search strategies can be used from one computer system to another. Master the concepts listed below and you will be a successful searcher.

Computer Searching Concepts

Boolean Operators/connectors
AND combines search terms so all of them must appear in each item retrieved.
OR combines search terms so that either or both will appear in each item retrieved.
AND NOT combines search terms so that the first term will appear but not the second term in each item retrieved. Be careful as this will eliminate all occurrences that contain both words.

Nesting
Searching is processed in the following order: OR, W/n | PRE/n, AND, AND NOT. To override this, nesting is used to specify the order in which search terms are combined, e.g. formaldehyde and (preparation or manufacture).

Proximity (Adjacency) Searching
Multiple terms may be entered in a search box without an operator between them and an AND relationship is assumed, e.g. acid rain. PRE/n finds documents where the first term precedes the second term within a certain number of words. W/n finds the terms in any order within a certain number of words.

Exact Phrases
Enclose multiple word terms in quotation marks to indicate that the words should appear in the order presented, e.g. "multiple endocrine neoplasia".

Stop Words
A list of words not searched is listed in the help files for ScienceDirect. If you need to search a stop word, enclose in single quotes. You may also search a stop word as part of a phrase using quotation marks, e.g. "cream of wheat" is searchable.

Truncation
Truncation using the asterisk (*) replaces zero, one or more characters in the word and can be used in multiple positions in the word, e.g. bio* will search biology, biochemical, biologist, etc.; h*r*t will find heart, harvest, homograft and lots of other words. To replace exactly one character, use the question mark. For example, gro?t retrieves grout or groat but not groundnut.

Plurals, Synonyms and Alternate Spellings
Related forms of certain terms are retrieved automatically. In addition to simple plurals, mouse also retrieves mice; mice retrieves mouse. Alternate spellings like color and colour need only be entered one time. When in doubt about synonyms, use the OR connector.

Limiting
Limiting allows restricting a set of information by criteria such as publication year, subject, or document type. Select these from the basic search screen.

Help Files
Click on the help at the top of the search screen for general help. There are also interactive tutorials.

II. Accessing Science Direct
From the library resources page, click on ScienceDirect Basic Search or ScienceDirect Quick Search. From off campus, use the remote user login.

III. Set Preferences
To set preferences, register by clicking on the top left of the screen. Create an account which will allow you to customize the screens and send alerts on topics of interest, new issues of journals of interest or additional citations added since your last search of a topic. Note: you must login for your preferences to be active in a session. On a public computer, be sure to logout after a session.

IV. Email/Printing
You can email articles and citations to any email address. Using your browser's print capabilities, you may print relevant pages.

V. Searching a Topic
List research topic.
Problem: The connection between butyrylcholinesterase and dementia.

Break down topic into individual concepts/ideas.

Select appropriate search terms.
Be flexible.
Combine concepts using correct Boolean logical operators. (AND, OR)

Limit by publication year or type of document as appropriate.

VI. Evaluate Results
Is the topic the main focus of the article?
Is the material too dated?
Is there too much or too little retrieval?
Is the material available locally or through Interlibrary Loan?

Refine search if necessary
Using the display results, evaluate other terms.
Apply limits.

VII. Obtain the Article
ScienceDirect is a full text database with articles and prepublication articles from 2002. Abstracts are also available. If the full text article is not in ScienceDirect, click on the "find full text" link. If necessary, interlibrary loan the material by using the ILLiad link in the same location.

VIII. Consider other Databases
WilsonWeb
A. *Applied Science & Technology Online (AST)*
B. *Biological & Agricultural Online (BA)*
C. *General Science Online (GS)*

ProQuest Direct – Research Library – Peer Reviewed

BIOSIS (Biological Abstracts)

FirstSearch – MEDLINE, AGRICOLA, GEOBASE or WorldCat (for books)
Lexis Nexis Academic – select Sources, Scientific materials, Medline
PubMed –http://www.ncbi.nlm.nih.gov/sites/entrez?holding=paacllib
MEDLINEplus – http://www.nlm.nih.gov/medlineplus