"What is a Boolean Operator?"

Boolean Operators are simple words (AND, OR, NOT or AND NOT) used as conjunctions to combine or exclude keywords in a search, resulting in more focused and productive results. This should save time and effort by eliminating inappropriate hits that must be scanned before discarding.

Using these operators can greatly reduce or expand the amount of records returned. Boolean operators are useful in saving time by focusing searches for more 'on-target' results that are more appropriate to your needs, eliminating unsuitable or inappropriate. Each search engine or database collection uses Boolean operators in a slightly different way or may require the operator be typed in capitals or have special punctuation. The specific phrasing will be found in either the guide to the specific database found in Research Resources or the search engine's help screens.

Proximity Operators (with, near and others) can also help you in searching. See Using Proximity Operators for more details and examples.

AND—requires both terms to be in each item returned. If one term is contained in the document and the other is not, the item is not included in the resulting list. (Narrows the search)

> Example: A search on **stock market AND trading** includes results contains: stock market trading; trading on the stock market; and trading on the late afternoon stock market

OR—either term (or both) will be in the returned document. (Broadens the search)

> Example: A search on **ecology OR pollution** includes results contains: documents containing the world ecology (but not pollution) and other documents containing the word pollution (but not ecology) as well as documents with ecology and pollution in either order or number of uses.

NOT or **AND NOT** (dependent upon the coding of the database's search engine)—the first term is searched, then any records containing the term after the operators are subtracted from the results. (Be careful with use as the attempt to narrow the search may be too exclusive and eliminate good records). If you need to search the word not, that can usually be done by placing double quotes (<< >>) around it.

> Example: A search on **Mexico AND NOT city** includes results contains: New Mexico; the nation of Mexico; US-Mexico trade; **but does not return** Mexico City or This city's trade relationships with Mexico.

Using Parentheses—Using the ( ) to enclose search strategies will customize your results to more accurately reflect your topic. Search engines deal with search statements within the parentheses first, then apply any statements that are not enclosed.

Example: A search on **(smoking or tobacco) and cancer** returns articles containing: smoking and cancer; tobacco and cancer smoking; cancer, and tobacco; **but does not return** smoking or tobacco when cancer is not mentioned.