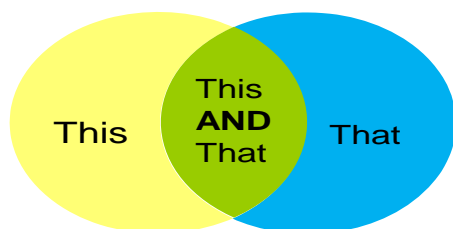**Information Tools -** Boolean Logic

Boolean logic is a system of rules, formulated in 1847 by the mathematician George Boole, that represents relationships between entities—either ideas or objects.   Those very rules, or Boolean operators, can help with your research! Whether you conduct your search across an internet search engine, a library catalog or research database - the correct use of Boolean operators within your search criteria will produce better results.

The three main Boolean Operators are:

- **AND**
- **OR**
- **NOT**

AND

Retrieves results requiring **both** search terms be present (shown visually below as the green area).

<u>A sample research situation might be:</u>

You are using a search engine to find current online information about Israel and Palestine. By using "AND" in your search you are indicating that you want websites not about Israel only, and not about Palestine only, but those with information on **both** Israel and Palestine.
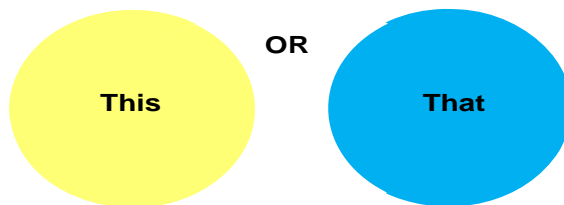
The AND operator will help to <u>narrow</u> a search.

Search	Number of Results
Israel	260,000,000
Palestine	37,400,000
Israel **AND** Palestine	33,100,000

OR

Retrieves results requiring **either** search term be present (shown visually below as both the yellow and blue areas).

OR

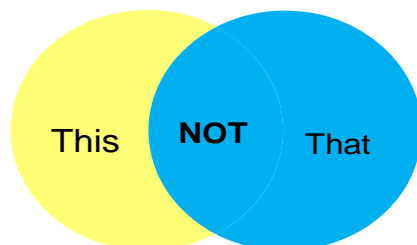**This**   **That**

A sample research situation might be:

You are looking for a book in the catalog about stocks or bonds. By using "OR" in your search you are indicating that you want books about **either** stocks or bonds.

The OR operator will help to <u>broaden</u> a search.

Search	Number of Results
stocks	199
bonds	98
stocks OR bonds	270

NOT

Retrieves results requiring the search term be present **without** the presence of the other search term (visually shown below by the yellow area).

This   **NOT**   **That**

A sample research situation might be:

You are looking for articles on team work in a database, but are getting too many results. The majority of the articles in your results list relate to sports, which is not related to your research topic. By using "NOT" in your search you are indicating you want articles about team work, **without** sports mentioned.

The NOT operator will help to <u>focus</u> a search.

Search	Number of Results
Team work	505
Team work **NOT** sports	420

Boolean algebra**.** (2010). In *Encyclopædia Britannica*. Retrieved June 08, 2010, from Encyclopædia

Britannica Online: http://www.britannica.com/EBchecked/topic/73621/Boolean-algebra

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