|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Research Worksheet** | | | | | | | | |
| **1.** | **Topic:** |  | | | | | | |
| **2.** | **Search Limits:** | **Languages:** | | | | | | |
| **Publication Dates:** | | | | | | |
| **Source Types:**   * Books * Journal Articles  Peer reviewed only: Yes / No * Popular Magazine Articles * Trade Magazine Articles * News | | | | * Dissertations & Theses * Statistics & Data * Conference Papers & Proceedings * Reports (e.g., Company, Country, Industry) * Videos & Audio * Other (specify): | | |
| **Other Limits:** | | | | | | |
| **3.** | **Search Tools:**  Use [Discovery](http://discovery.mcmaster.ca), [Databases](https://library.mcmaster.ca/databases) and [Research Guides](http://libguides.mcmaster.ca/) on the Library’s home page [library.mcmaster.ca](http://library.mcmaster.ca/) to identify databases and other search tools covering your topic and your search limits. | **Core Search Tools** [in a field of study]**:** | | | | | | |
| **Secondary Search Tools** [in other related fields of study]**:** | | | | | | |
| **4.** | **Search Terms:**  Break your topic down into individual concepts.  For each concept develop a list of keywords, synonyms, subject headings and descriptors.**†**  Combine words describing the same or similar concept with OR. Combine different concepts with AND.**††**  Use truncation or wildcard symbols to pick up word variations.**†††**  Use quotes **“ ”** around words to find exact phrases. |  | **Concept A** | **AND** | **Concept B** | | **AND** | **Concept C** |
| **OR** |  |  | |  |
| **OR** |  |  | |  |
| **OR** |  |  | |  |
| **OR** |  |  | |  |
| **OR** |  |  | |  |
| **OR** |  |  | |  |
| Construct a search string using your search terms.  Use parentheses **( )** when using a mix of Boolean operators.**††** |  | | | | | | |
| **5.** | **Search Results:** | **Search Tool:**  **Date:**  **# Results:**  **Notes:** | | | | | | |

**† Concepts**To develop a list of words for each concept in your topic …

* check citations, abstracts, articles and bibliographies to identify terms used by authors writing in the field
* review subject headings, descriptors and thesaurus terms used for the topic in catalogues, databases and other search tools
* continue to add words that come up frequently in your searching

**†† Combining Words using Boolean Operators - AND, OR, NOT**

* **AND** = all of these words
  + example: communication and organizations
  + results will **include** **all** stated words
  + narrows search
* **OR** = any of these words
  + example: salary **or** compensation **or** income
  + results will **include at least one** of the stated words
  + broadens search
* **NOT** = none of these words
  + example: galaxy **not** phone
  + results will **exclude** stated word(s) following NOT
  + narrows search
  + CAUTION use the NOT operator with extreme caution since it may result in the inadvertent loss of relevant results; there may be items that include both the wanted and unwanted terms and all would be eliminated from the results if the NOT operator is used
* **( )** use parentheses when including more than one Boolean operator in a single search string
  + ensures stated words are combined and processed in the order intended
    - ***without* parentheses** search terms will automatically be processed from left to right; the **AND** operator will be processed ***before*** the **OR** operator, and the **NOT** operator will be processed **last**
    - to change the natural order of operations, **place parentheses** around wordsusing the **OR** operator so that anything enclosed within parentheses is processed **first**;  
      example: recruitment **and** **(**teachers **or** professors **or** instructors**)**

**††† Truncation or Wildcard Symbols …**

* can vary depending on the search tool being used; the asterisk **\*** is the most common, but a dollar sign **$** or question mark **?** are often used as well; check the help section of your database or search tool to determine which symbol to use
* can be used to find word variations in a single search
  + manag**\*** finds manag**e**, manag**ement**, manag**ing**, manag**er**, manag**erial**, etc.
  + labo**\***r finds both lab**o**r [U.S. spelling] and lab**ou**r [British/Canadian spelling]
  + wom**\***n finds both wom**a**n [singular] and wom**e**n [plural]
  + CAUTION choose the placement of the symbol carefully, to avoid irrelevant results
    - for example, man**\*** will find man**age** and man**agement**, as well as man, man**ic**, man**ufacture**, Man**itoba** and other unintended words
    - if truncation proves problematic, spell out the desired word variations in full using the Boolean operator **OR** between them, e.g., manage **or** management
* typically broadens a search

Innis Library - McMaster University

Last Reviewed: September 2019