Using the internet for research has become a common academic experience. Knowing how to effectively use the internet can be an invaluable tool in making your research efforts simpler and more productive. Learning basic search techniques, including **Boolean**, **phrase**, and **field searching**, can help you find information that is specific to your needs much faster.

**When using any of these search techniques, remember to:**
- start by deciding what you are specifically searching for (i.e., are you searching for dogs, or for a poodle?).
- keep it simple.
- narrow or broaden your results by using specific or general language (i.e., “chocolate cupcakes” is a narrower search than “dessert”).

**Boolean Searching** involves the use of *and*, *or*, and/or *not* to limit search results. Most search engines today use an implied *and* Boolean, without you having to type it in.
- *or* searches give results with any, but at least one, of the words
- *and* searches should contain all words
- *not* searches should leave out certain words
- Boolean search words can be combined (i.e., car *and* wheel *or* tire)

**Examples:**
- pigs *or* swine will give results containing pigs and/or swine
- peanuts *and* cotton candy *and* snowcones will give results with all three
- seafood *not* sushi will give results that contain seafood but not sushi

**Phrase Searching** involves the search for an entire phrase.
- To use phrase search, type in a phrase in quotation marks.
- Phrase searching is especially useful if you want to make sure words such as “a,” “the,” “in,” etc. are included in the search. Otherwise these little words, called “stop words” are not included in searches.
- Phrase searching is useful if you are looking for a title, quote, or lyrics, but not as useful if you are searching for a general topic such as poverty.

**Example:**
- “the leprechauns” results in movies with “the” and “leprechauns” in the title, while searching just for leprechauns results in general information about leprechauns.

**Advanced Search and Field Searching**
- Many search engines offer advanced search options, including field search selections.
- Field searching is searching within a field such as “title,” “author,” or “keyword.”
- Advanced search pages usually provide both field searching and Boolean searching options. Advanced searches are useful for finding more specific results.
Example:
• A library search engine generally has field searching options (“title,” “title keyword,” “author,” “subject keyword,” etc.). They also typically offer an advanced search page that allows you to search for both “title” and “author” (provides Boolean search options).

Google Search Tips
Different search engines provide different results, but Google is a good general engine to start with. Here are some tips for searching with Google. For:
• **Boolean searches:** Boolean or must be capitalized. Basic Google search automatically includes and but does not recognize the Boolean not. Example: “dogs OR cats”
• **Definitions:** define:word gives you the word’s definition. Example: “define:bog”
• **Math answers:** enter basic math problem for answer. Example: “5x375”
• **Conversions:** enter desired conversion for answer. Example: “8$ in pounds”
• **Synonyms:** ~word results in searches for that word and its synonyms. Example: enter “~T.V.” and Google searches “T.V.” “television” and “flatscreen,” etc.
• **Site Specific Results:** search term site:website gives site-specific results. Example: “snow storms site:cnn.com” only gives results for “snow storms” found on cnn.com
• **Links:** link:website gives results with links to that website. Example: “link:www.westminstercollege.edu” gives websites with links to Westminster’s website

Searching the Deep Web
• The deep web, also called the invisible web, refers to internet content not accessible with basic search engines, such as database content, archives, material requiring passwords for access, etc.
• To access material on the deep web, you can use vertical search engines, which focus on specific areas of online content.

Examples of vertical search engines include:
• Google engines like Google Maps, Google Images, Google News, etc.
• PubMed: searches medical journals
• Bible Browser: searches through several versions of the Bible
• THOMAS Legislative Information on the Internet: searches sites with information on legislative acts

Scholarly Searching
• There are some vertical search engines particularly useful for scholarly searching. One of these is Google Scholar.

Google Scholar:
• allows you to search many bodies of scholarly literature in many disciplines.
• allows you to narrow your search by offering many field searching options on the Google Advanced Scholar search page.
• allows you to link Google Scholar with your library’s resources by using the “scholar preferences” button. When this option is set up, links to journal articles, etc. that your library has access to will display next to the search results. However, Google Scholar will not pull up all of your library’s resources, so it is still beneficial to use database searches such as EBSCO and JSTOR.

Other Scholarly Tools: Using Firefox
Mozilla Firefox provides some free add-ons that can be extremely useful for students. Check out the “Reference Desk Collection,” which includes:
• **SimilarWeb:** generates a list of websites similar to the one you are using
• **Converter:** places a tool in your right-click box that allows you to highlight a measurement, time zone, or currency and convert it

• **Wired-Marker:** lets you highlight text on a website and saves your markings so you can return to read them later (even if you shut down the page!)

• **Read It Later:** allows you to save and organize web pages to read later. Allows you to access your saved pages from any computer, or even from your iPhone!

*Another useful add-on is:*

• **Dispute Finder:** alerts you when an issue you search for is controversial, and provides arguments for both sides of the debate

If you have any questions about using the internet to conduct research, about search engines, or about using add-ons, please feel free to ask a librarian!