

Google Search Techniques

Disclaimer: Using Google to search the Internet will locate resources that are available to the public. While these resources are good for some purposes, serious research and academic work often requires access to databases, articles and books that, if they are available online, are only accessible by subscription. Fortunately, the UMass Library subscribes to most of these services. To access these resources online, go to the UMass Library Web site (library.umass.edu). For the best possible help finding information on any topic, talk to a reference librarian in person. They can help you find the resources you need and can teach you some fantastic techniques for doing your own searches.

For a complete guide to Google's features go to <http://www.google.com/help/>

Simple Search Strategies

Google keeps the specifics of its page-ranking techniques secret, but here are a few things we know about what makes pages appear at the top of your search:

- your search terms appears in the title of the web page
- your search terms appear in links that lead to that page
- your search terms appear in the content of the page (especially in headers)

When you choose the search terms you enter into Google, think about the titles you would expect to see on these pages or that you would see in links to these pages. The more well-known your search target, the more easy it will be to find. Obscure topics or topics that share terms with more common topics will take more work to find.

Enter a single word

Enter the one word that you associate with your topic. Typically this will return too many results (unless the term is a commercial trademark and you are looking for the company's web site).

Enter several words

When you enter more than one word, Google assumes you want pages with ALL of these words present. This also often returns too many results. The pages you get will have all the words in any order, and they may or may not be near each other. For example, if you enter a first and last name, you may get some pages of the person you seek, but unless they are very well known, you will also get pages where a list of names contains one person with the first name and another person with the last name.

Note: Google will exclude common words ("where") and single letters and numbers ("A" or "2") to speed up your search if these are essential to finding what you need, see below for ways to make sure they are included.

Enter a phrase in quotes

This is the most effective way to limit a search. Google will return pages with these words in this exact order. This is good if you are searching for a specific phrase ("PowerPoint is Evil") a name, ("Edward Tufte") or if there is a sentence that you would associate with the page you seek ("How to use PowerPoint"). Quotes will also force Google to search for excluded terms.

"I Feel Lucky" takes you to the top item in the search

If you use Google to find sites that you know are popular (such as the Apple Web site), you can click the "I Feel Lucky" link to bypass the search results and go straight to the top of the list. While this works well for commercial sites, it is less certain for other searches. Some practical jokesters have exploited this feature (try searching for "weapons of mass destruction").

Narrowing a Search (if you have too many results)

Use + to require specific keywords to be considered

If you want to require Google to search for common words, numbers and characters that it would typically exclude from a search, put a plus sign (+) in front of them or place them within a quoted phrase.

word1 +word2 will force Google to include *word2* in the search

Use - to exclude keywords associated with unrelated topics

If your keyword can have more than one meaning (such as “virus”) place a minus sign (-) before any keywords that would be associated with topics you do not want to see in the results.

Example: virus –computer would return only Web pages about biological viruses.

word1 –word2

Add *site:* to search only specific sites or types of sites:

If you are getting too many commercial (.com) results or know that what you are looking for is at a specific site, you can limit your search to specific areas on the Internet by entering *site:* and a domain name after your search terms.

word1 site:pbs.org will search only on the pbs site.

word1 site:.edu will search only education sites

word1 site:.gov will search only government sites (good for finding public-domain materials)

word1 site:.org will search only non-profit sites (mostly), museums, libraries, etc.

word1 site:.ma.us will search only sites in Massachusetts (can also use other county codes, e.g. *.uk*)

Add *filetype:* to search for documents other than Web pages

Filetype:pdf will return only files in the PDF format (good for finding handouts and worksheets). You can also use this to search for PowerPoint (.ppt) MS Word (.doc) Flash (.swf) and many other kinds of files.

Search Within a Google Directory

From within Google or via <http://directory.google.com/>, browse or search within specific categories.

Expanding a Search (if you don't get enough)

Use *or* to search for multiple terms

word1 OR word2 finds pages that include either word

Use *~* to search for synonyms of a term

~word1 finds pages that include *word1* or its synonyms

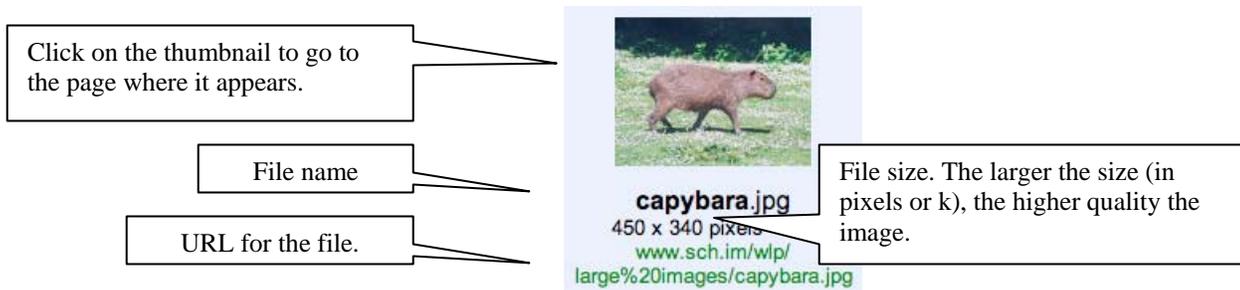
Use *** as a “wildcard” with your search terms

*“word1 * word2”* finds pages that includes this phrase where *** can be any one word

If you are having trouble getting results, it may be that the authors of the pages on a given topic use specific jargon to describe what you are looking for. In this situation, consider using a directory-style site that lets you select topics from a list (*Google*, *Yahoo*, and *About* all have directory interfaces), locating a few pages this way will help you familiarize yourself with the terms associated with the topic you are researching.

Google's Image Search

The Google image search is a great way to find pictures. You use the same Google search techniques, but the results will be a collection of small images (“thumbnails”).



To capture an image you find in Google:

1. Click the thumbnail in Google to go to the page with the image.
2. Locate the image on the page, or click **See Full-Size Image** at the top to open just the image.
3. Right-click on the full-size image (control-click on a Mac). A popup menu will appear.
4. Select “Save image as...” or something similar (depends on browser).
5. Save the file on your hard drive or portable disk.

To use the image in Word, PowerPoint or other Microsoft program:

1. Go to **Insert > Picture > From File**
2. Locate the image file on disk and select it. It will appear on the page.

Other software packages will have similar commands such as **Insert, Place** or **Import**.

Advanced Image Search:

Use the **Advanced Image Search** to specify the kind of images you want Google to find:

Size - the size of the image will determine what you can use it for. If you want an image that will print well or fill a PowerPoint slide, search for “large” images (500 or more pixels on a side).

Filetypes - JPG files will work best for photographs. GIF files are OK for simple line art, but don’t resize well. PNG is a relatively new format that may not work in all programs.

Coloration - lets you search only for black and white, line art or full color images.

Domain - limits the image search to a single site or domain. This is especially useful for images because .gv sites tend to contain more images that are in the public domain.

Filtering Objectionable Materials

Google’s *Safesearch* feature operates in “moderate filtering” mode by default. This blocks nearly all sexually explicit content from your results. If you want to be more certain, change the *Preferences* to **strict filtering**. If you are researching a topic that may be blocked, you can turn filtering off.

Copyright

Not everything you find on the Web can be used for free. In most cases, you do not have to ask permission of the copyright holder for a one-time use of an image in a classroom. You should get permission before reproducing the file for use by others—some copyright holders don’t mind individual use, but want to control any further duplication. Watch out for materials that are specifically marketed as classroom materials (such as worksheets), they may require a fee or permission.

Google Extras

For detailed instructions on these and other features go to <http://www.google.com/help/>

Advanced search

If it is hard to remember the correct codes for special searches, or if you are interested in finding out what *else* Google can do, visit the *Advanced Search* page. It provides a simple form that includes all of the techniques mentioned above, plus much more: languages, dates, locations of keywords, all kinds of attributes that can be used to craft more effective searches.

Searching for other kinds of information

Definitions	(define:) this search will return definitions listed in online dictionaries. In addition to standard definitions, this also returns jargon definitions from specific disciplines such as sports, science, geek, etc. (e.g. try “pickle”).
Contact information	when you enter a person or business name with a location (city, state) any contact information listed in an online white page will appear in the results.
Phone number	(phonebook: rphonebook: bphonebook:) when you enter a phone number, any name or address listed in an online white page will appear in the results
Address	entering a full address will return a link to a map to that location.
Calculations	entering mathematical expressions will return the result simple math (+ - * /) exponentials (^) percentage (% of) even advanced math (see the Google site for details)

Saving a search

If you work hard on a search that you want to keep, you can bookmark it for future use. You can also copy the URL from the location field in the browser and paste it into a Word file or email message.

Shortcuts to Google tools:

www.google.com	search for Web pages
www.google.com/help	learn more about using Google
news.google.com	search news sources on the Web
images.google.com	search for pictures on the Web
directory.google.com	browse categories of Web pages
answers.google.com	experienced researchers find answers for a fee
groups.google.com	search the content of online discussions
froogle.google.com	search for items on sale on the Web
labs.google.com	check out the latest inventions from Google

Google-related tools:

Google Zeitgeist <http://www.google.com/press/zeitgeist.html> (or search for *google zeitgeist*)

Google Zeitgeist History <http://www.google.com/press/zeitgeist/archive.html>

Googleism <http://www.googlism.com> - searches for declarative statements: “___ is ___”

GooglePeople <http://www.avaquest.com> - enter questions starting with “who”

Google Smackdown <http://www.onfocus.com/googlesmack/down.asp> - find out which of two terms is mentioned more on the Web.

“GoogleWhacking” – a term for finding a two word search with only one result