Searching Google.com databases

Questions to answer for a database:

1. What subjects and publication types are included in the database?

   Any subject and every subject. However it must be freely available. On campus there are many resources you have access to that are not free because the library pays for them and makes them available to anyone on the Notre Dame network.
   Google Book indexes books and journal articles, Google Scholar indexes journal articles, Google Patent indexes patents, and Google indexes web pages and may also include books, articles, and patents.

2. What are the coverage dates?

   Anything added to a web page since 1992.

3. What Boolean operators are used by the database?

   AND Space between words or phrases is interpreted by the Google software as an AND
   OR Capitalized OR (this works some of the time)
   NOT Minus sign immediately preceding a word or phrase

4. If truncation is allowed then what symbols are used?

   None. Uses word stemming technology so the system automatically truncates.

5. If wildcards are allowed then what symbols are used?

   None

6. How do you search for a phrase?

   a. System automatically determines if something is a phrase
   b. You can force a phrase by putting “quotes around the phrase terms”
      Example: “Notre Dame”
      There is a phrase wildcard – “first-word * last-word”  Google will find phrases where the first word is within 80 characters of the last word.
      Example: “Fighting * Dame” = Fighting Irish of the University of Notre Dame

7. Is it possible to group words from the same concept?

   No

8. Any unique features?

   Definitions………………………………………………….. define:library
   Key concepts at a particular web site..................... aspirin site:edu
   Words in the title of a web page......................... allintitle:orienteering maps
Key Concepts according to You

A key concept should be a single word or a phrase. A phrase usually does not have verbs, articles, or prepositions.

1. Circle the key concept(s) in the following sentence:

   What is the effect of aspirin on blood clotting?

Key Concepts according to Google

2. Type the sentence from Q1 into Google. How many results do you get?

3. A. What key concepts did Google identify? Write them below.
   (Look at the first page of Google search results for words in bold.)

   B. Are these key concepts the same as you identified? Yes or No

   C. Google automatically searches for alternate forms of a word. Did you find clot, clots, or clotted in the search results when you typed clotting? Yes or No

   D. Google automatically searches for synonyms of a word. Did you find coagulation when you typed clotting or consequences when you typed effect? Yes or No

Keep it Simple – Use only the key concepts.

Good to Know: Generally, Google returns results matching as many of the words you included in your search as possible. Too many words will limit your results.

4. A. In general, Google identified – effect aspirin blood clotting – as key concepts. Type those key concepts into the search box. How many results do you get?

   B. Did using fewer words in Q4A reduce or expand your search results compared to Q2?
      Reduce       No Difference       Expand

   What are stop-words? Words that are not key concepts and therefore are not included by the search engine in searching the database.

   Google replaces stop-words with a space.
Advanced searching

Click on the cog symbol and select Advanced search.

5. **A.** Type *ham pork* into the **all these words** field. This is an AND search.

   How many results?

   **B.** Type *ham pork* into the **any of these words** field. This is an OR search.

   How many results?

   **C.** Type *ham pork* into the **any of these words** field and *BBQ Barbecue* into the **none of these words** field and *Christmas dinner* into the **this exact word or phrase** field and *turducken turkey* into the **all these words** field.

   How many results?

   **D.** Write the text found in the search box on the results page. This is how Google translated you search from the Advanced Search page.

   **E.** Looking at 5D. What symbol does Google use to represent the Boolean operators? Draw a line connecting the correct items in each column

<table>
<thead>
<tr>
<th>Advanced Search Text</th>
<th>Google translation</th>
<th>Boolean Operator or Proximity</th>
</tr>
</thead>
<tbody>
<tr>
<td>All of these words</td>
<td>minus sign</td>
<td>phrase</td>
</tr>
<tr>
<td>Any of these words</td>
<td>OR</td>
<td>not</td>
</tr>
<tr>
<td>Exact word or phrase</td>
<td>“ ”</td>
<td>and</td>
</tr>
<tr>
<td>None of these words</td>
<td>&lt;space&gt; between words</td>
<td>or</td>
</tr>
</tbody>
</table>

   **F.** What order does Google prefer to see the Boolean operators? Look at what you wrote for 5D. Draw a line between the columns to the right answer.

   Always First and
   Second not
   Third phrase
   Always Last or
Advanced searching - without clicking on the cog symbol

6. A. Type effect aspirin “blood clotting”  How many results do you get?

B. Is this different from your answers in Q2 & Q4?  Yes or No

All the results in 6A have blood right in front of clotting and this is a more focused search results which is usually better because you don’t have to look through a lot results where blood is not right front of clotting. However, you can make it better.

C. Do you see the phrase blood clots?  Yes or No
   (If you see the phrase then show me.  Google is always changing their search algorithm.)

D. Rewrite the search in 6A so that it includes either phrase – blood clotting - blood clots.
   (Hint: Use quotes for phrases and use the proper Boolean operator between them and look at 5E for the best order.)

E. Type what you wrote in 6D into the search box.  How many results do you get?

Beyond Advanced Searching – Allintitle:

Examples:  allintitle:caffeine
           allintitle:notre dame
           (no space on either side of the colon.)

7. How many web pages have the two key concepts (aspirin blood clotting) in their title?

Google will search for words in the title of a web page. Words in the title are more important than words in the web page because they describe the content of the page. In Chrome the entire title appears in the lower right of the window and the first part of the title appears in the tab at the top of the window. Click the eye if you don’t see the title.

Beyond Advanced Searching – Define:

Example:  define:caffeine

8. What is the definition of the following word?
   (If there is more than one definition then pick the shortest one.)

Defenestration
Let’s have some fun searching the web
Remember to apply what you have learned earlier in this worksheet.

   Write the title of the web page at the top of the first results page.
   (Does this title puzzle you? Click on the title to view the web page. Does it still puzzle you?)

10. Find a web page that shows the popular or common first names?
    (Hint: use OR and use quotes for a phrase)
    What is the rank of your first name?
    Write your answer on the blackboard.

Beyond Advanced Searching – Google Calculators and Conversions
Write the answer for each question.

11. What is the square root of 533.61? Type sqrt(533.61)

12. What is 9 raised to the power of 4.53? Type 9^4.53

13. What is 5367 multiplied by 279? Type 5367 * 279

14. What is the natural log of 68.34? Type ln 68.34

15. What is 7,650 divided by 23? Type 7650/23
16. The dimensions of a football field are 160 feet by 360 feet. What is the area? (use what you have learned from questions 11-15)

17. How many square feet are in an acre? Type *square feet in acre*

18. How many acres are needed for a football field? (use what you have learned from questions 11-17)

19. I have 5,000,000 Japanese Yen. How much US money do I have? Type *5,000,000 yen in usd*

20. I want to exchange $500 for British pounds. How many British pounds do I get? (notice the pattern in Q17 & Q19)

21. On a trip to Canada, the weather report on the radio says the day is going to be a hot one, 38 Celsius. How hot is this in Fahrenheit? (notice the pattern in Q17 & Q19)

**Range of values**

To specify a particular number range, type .. before / after / between the values.
Example:Cars with more than 300 horsepower, search *cars “300..horsepower”*

This tool can be useful but it can also retrieve meaningless results. So be careful.

22. You are looking for a 2015 Hyundai Elantra and are willing to pay between $12,000 and $14,000. Write the price you found. Type *2015 Elantra $12000..$14000*