Web of Knowledge:
Web of Science

Overview

• Assignment #2 comments
  -- Research Strategy
  -- Abstract
    • Presentation
  -- Searching
• Assignment #3 – due next week
• Web of Science - overview
• Practice

Trust & Verify

• Any information from Secondary Sources
  -- Confirm your information with another source
    • Another source = primary literature
  -- Especially true with Wikipedia
    • Good place to start
    • Horrible place to end

Research Strategy

• Step 1 – Summarize
  -- I want to find information on the chemical and physical properties and uses of aspirin.
• Step 2 – Identify key concepts
  -- Properties: Chemical & Physical
    -- Aspirin -- Uses
    -- Pain -- Analgesics

ASSIGNMENT 2

Quote

• “University of Minnesota researchers, as many others do, discovered after three years of research that results they were writing up had already been published.”
  -- Fogarty, Mignon; Bahls, Christine. Information overload. The Scientist 2002, 16 (Aug 19), 16.
Research Strategy

• Step 1 – Summarize
  – I want to find information on the chemical and physical properties and uses of aspirin.

• Step 2 – Identify key concepts
  – Properties: Chemical & Physical
    – Aspirin
    – Pain
  – Uses

  Where are these in step 1? – Analgesics

• Step 3 – Related Terms / Synonyms
  – 2-acetoxybenzoic acid; 50-78-2; acetylsalicylic acid; analgesics

  Questionable key concepts

• Step 1 – Summarize
  – I want to find information on the chemical and physical properties and uses of aspirin.

• Step 2 – Identify key concepts
  – Properties: Chemical & Physical
    – Aspirin
    – Pain
  – Uses

  Analgesics

  Related Term to a key concept

• Step 3 – Related Terms / Synonyms
  – 2-acetoxybenzoic acid; 50-78-2; acetylsalicylic acid; analgesics

  What about the other key concepts?
Research Strategy & Abstract

• Step 1 – Summarize
  – I want to find information on the chemical and physical properties and uses of aspirin.

• Problem Statement
  – How do the chemical and physical properties contribute to aspirin being an effective drug in managing the pain associated with arthritis?

Abstract comments - Motivation

• First draft of Abstract:
  – “The compound I will investigate is xyz…”
  – “Xyz comes from the oak tree…”

• Motivation
  – Big picture
  – Role in big picture

Abstract & Presentation

• Abstract is a summary of the Presentation
  – Advertisement
  – Seven words
    • I want to find information on the chemical and physical properties and uses of aspirin.

Presentation

• Focus on Chemistry
  – Avoid pronouncements/conclusions
    • “Compound x causes/prevents disease y”
      – Explain chemistry for cause/prevention
      – If chemistry is unknown
        » Then show data/chart(s) summarizing clinical evidence
    • “Compound x contributes to global warming”
      – Explain chemistry in the environment
      – If chemistry is unknown
        » Then show data/chart(s) summarizing evidence
    – Let the audience make up their own mind
**Presentation**

- Avoid policy discussions
  - Leave policy to the ethicists/politicians
  - Talk about chemistry or biochemistry

- Keep it focused
  - One topic rather than two or three

**Search like a Native: Goolese**

- Aspirin AND pain management
  vs

- Aspirin pain management
  vs

- Aspirin “pain management”

**ASSIGNMENT 3**

**Assignment #3**

due next week

- Q1 – Research Strategy
  - Update steps 1-3 with new terms or new focus

- Q2-7 – SciFinder

- Q8-10 – Web of Science

**Old search habits**

- One concept

**New search habits**

- Two concepts – minimum
  - Not vague
  - Not related terms

- Quotes for “words in a phrase”

**Search Tips/Advice**

- Results over 250
  - Add another term
  - Use narrower terms
  - Search terms as a phrase

- Results under 25
  - Subtract a term
  - Use broader terms or synonyms
  - Maybe system considers your terms as a phrase
    - Use AND between concepts
Web of Science

- Search interface
- Databases
  - Web of Science Core Collection (varies - present)
    - ~1,000,000 records added annually
    - 62,000,000+ document references (2016)
  - MEDLINE (1950 – present)

WEB OF SCIENCE

Web of Science Core Collection

- Subject & Date Coverage:
  - Science Citation Index
    - Science-Engineering-Medical subjects
    - 1899 to present
    - 8,090 journals indexed
      - DOES NOT index books, conference proceedings, dissertations, non-English articles (last 50 years), patents, preprints, technical reports
  - Social Science Citation Index
    - 1956 to present
    - 2,000 journals indexed
  - Arts & Humanities Citation Index
    - 1975 to present
    - 1,200 journals indexed
  - Conference Proceedings Citation Index
    - 1990 to present

WoS Access Limitations

- Unlimited simultaneous users
- Contents not searchable via Google
- Must use computer attached to nd.edu network

Summary

- Research Strategy and Abstract
- Assignment #3
- Web of Knowledge
  - Web of Science
- Practice

Learn by doing

- For the assignment & in-class practice
  - Go to chemistry.library.nd.edu
  - Look in the Quicklinks section
  - Select Web of Science
Review Answers

Google
✓ “animal feed” OR fodder “linoleic acid” ¬dietary ¬supplements
✓ “animal feed” OR fodder “linoleic acid” ¬“dietary supplements”

SciFinder
✓ linoleic acid against animal feed (fodder)

Web of Science
✓ “linoleic acid” (“animal feed” or fodder) not “diet* supplement*”

9/20/16  CHEM 21201.5  31