

Lesson Plan for Fifth Grade Information Literacy, part two:



FINDING INFO

Preparation:

1. Materials:
 - ◆ strings of red and blue beads for the students, enough so that roughly 40% of the students will get blue beads only, 25% will get red beads only, and 35% will get both red and blue beads.
 - ◆ slips of paper with “AND” “OR” and “NOT,” in quantities to match the bead distribution where “OR” corresponds to blue beads, “AND” to both colors, and “NOT” to red.
 - ◆ print examples of dictionary, encyclopedia, thesaurus (general and subject), index, atlas/map and bibliography
 - ◆ copies of “Bibliographic Information Worksheets” for all students
2. Technical prep:
 - ◆ TV or projector to display computer monitor output for PowerPoint in the area of the tables (PowerPoint can be loaded on the web-page for easy access if an internet connection can be obtained)
 - ◆ TV or projector (projector preferred) to display computer monitor output in lab area
 - ◆ computers (or one laptop) for both areas, with internet connection in lab area
3. Ask teachers:
 - ◆ to advise students that upon entering the library, each will be given a string of beads and a piece of paper with a word written on it. They are to enter the library, get their beads & word, and sit down at the tables.
 - ◆ if students could wear name-tags for the information literacy session
 - ◆ that students be paired up again, and have already decided who’s “driving” first. Use that day’s attendance to make any adjustments, and if there are extra computers assign some students to “fly solo.”
 - ◆ if they would be the “teacher computer” team, doing the searches on the teacher station along with the students so that the librarians can be free to move around the lab

Instruction Period: total time 12:45 – 2:05; 80 minutes

➤ **Intro to Boolean operations: estimated time 15-20 minutes**

1. Give students beads and slips of paper as they enter the library.
2. Ask several students what word is on their slips of paper (be sure to get some of each word, using the beads to check self and student)
3. *Dory’s grammar moment* – what parts of speech are these???

4. From grammar to logical operators: words are all caps = logical operator; regular words, two conjunctions and one adverb, are used as “function words.”
“Function” and “operate” = something’s being done or some condition is required.
5. Librarian becomes an “information seeker” – perform “searches” for bead colors. Have students stand up if they are a “hit.” Point out that students with both beads stand up when seeker is looking for either color alone or both colors (red OR blue). Do an AND search. Introduce using “NOT” to filter out those with both.
6. *Marvin’s math moment*: AND, OR, NOT and set theory. OR = Union, AND = Intersection, NOT = complement
7. Show Boolean Operators PowerPoint to review the logical operator terms and what they mean.
8. Have the students take their beads to their teacher (*Dory’s grammar moment*: “Give your beads to whoever’s/whomever’s class you are in today”) and go to the computers.

➤ **Are you following me? estimated time 5-10 minutes**

1. Ask students what a “resource” is. They’ll probably think about natural resources – somebody should say something about things that are used or consumed or a supply of something needed. Make the connection to information resources – things you can use to get the information you need, an information supply.
2. Note that, with the exception of web-pages, information resources that are available over the internet have counterparts (often identical) in print. Ask what some of the advantages to electronic resources may be (if have internet at home, unrestricted access). Ask about disadvantages (no one to show you where to go, technical difficulties, sometimes errors in electronic version, electronic version may be only part of print, electronic collections require ongoing expense to the library, etc.)
3. Review the different types of information resources, print & online:
 - a. Reference works: dictionaries, encyclopedias, thesauri, bibliographies, maps/atlas and indexes [have print samples on hand]
 - b. Non-fiction books (Observe that unless doing a book report or literature paper, fiction books are not really information resources)
 - c. Serials (play with this a bit – may even bring in a flattened cereal box, and have a periodical inside of it):
 - i. popular magazines
 - ii. journals written by experts
 - iii. newspapers
4. Is Googling ever good? Note that it has a place, but needs to be used prudently & viewed with a skeptical (and cautious!) eye.

➤ **Talking Whale (searching 2 databases): estimated time: 30 minutes**

1. Note that not each database interface is the same – and the differences are more than “skin deep.” We’ll look at two databases, Kids InfoBits and the Junior Edition K12.

2. Controlled vocabularies: thesauri, indexed terms and subject searching
3. Keyword searching (not exactly full text or natural language, necessarily)
4. **Kids InfoBits**: Have students go to library's reference page and choose Kids InfoBits. Discuss the interface:
 - a. familiar search box at top
 - b. subject categories given
 - c. no choices on main search page for type of resource
 - d. directions say "search term" – don't know if it is doing keyword or index term or maybe even full text
 - e. nothing indicates what category is being searched, or how the categories are related to the search box
 - f. also nothing to tell you how to handle multiple-term searches. Ask why this might be (designed for elementary school students)
 - g. TRY A SEARCH: repeat "caves" from last week
 - i. use search box on main screen – note number of results & discuss the different types of information resources given in the tabs. Ask students how you can tell which resources have results for you? (different color, changes on mouse-rollover)
 - ii. go to subject area "Geography" and repeat search (same results) – theory: there is no connection between subject categories and search box
 - iii. go to back to the main page and choose the category "Science and Math" and repeat the search – still same results, so our theory is probably valid! Note, however, that database structures and search features often change without warning!
 - iv. So...what the heck are those categories??? Explore ("drill deeper") into the Science & Math, choosing "Biology and Nature"
 1. Note you get a text-only list of sub-categories
 2. Choose "Marine Biology and Ocean Ecology" – you've now gotten to the bottom of this! These categories serve as a subject index, and you dig down by category & subcategory until you find all the resources under that particular subject.
 3. How many reference works are listed under "marine biology and ocean ecology"? (2) How many magazine articles? (65).
 - v. Let's go back to searching. Try searching for limestone caves – enter in search box as just that.
 1. What warning message comes up above the folder tabs? ("no exact matches in the subject guide...") This means that "limestone caves" is not a subject category or index term.
 2. look at the first three results in "magazines" and the first one in "newspapers" What does this indicate InfoBits

means by a “keyword search”? (appears to be searching the full text)

3. Do your results change any if you put the two words in quotation marks? (Nope)
 4. Try using the Boolean “AND” – note that we still get the warning (Boolean terms do not belong in subject terms!) and that the results INCREASE dramatically (from 3 magazine to 15, and 1 newspaper to 3) Why? (looking for the two words anywhere in the same article, but “limestone caves” was looking for the phrase, even without the quotes)
 5. Look at one article – Creepy Caves – and note the “my backpack” option. This saves the article you’re viewing so you can get to it easily at a later time (but only before you leave InfoBits!). When you click on this, note the “Look in My Backpack” link in the upper right of the screen. Note also that “search history” is available.
 6. Go to the “help” menu to show it is there, and point out “Topic Tree” and “Subject Guide”.
 - vi. Return to the library’s reference page by clicking on the “home” icon in Internet Explorer’s menu bar at the top of your IE window.
5. TIME TO STRETCH! Move students away from computers and have them do simple stretches for a minute or two. Maybe play with Boolean terms (touch your nose AND your toes)
6. Return to the computers, having changed “drivers”
7. Junior Edition K12: have students select Junior Edition K12 from reference page
- a. discuss interface, noting differences between this and InfoBits:
 - i. no subject categories
 - ii. different types of searches (subject, keyword and advanced); default is subject
 - iii. save list for saving checked results
 - iv. help page
 - v. resource groups; defaults to all sources
 - vi. Advise students to use the “start over” button to do a different search – using the browser’s back button sometimes seemed to leave the original search, even if you change some options
 - b. for simplicity and ease of instruction, repeat searches used in InfoBits (obviously omitting the part about the “Topic Trees”)
 - i. note that encyclopedia article for caves is an “excerpt”
 - ii. note that results are given by resources – what happens if you search for “caves” using the restriction “reference”? (No results – get taken to list of terms to choose an alternative. Choosing “caves” takes you to the same results set as searching all sources)
 - iii. have students save the encyclopedia excerpt for later use

- iv. note “limestone caves” searches ONLY for “limestone” (with or without quotes) in subject search
 - v. keyword search allows you to choose if it is searching full-text or not, but DOES NOT have option to choose type of resource; quotes make no difference
 - vi. use of Boolean AND increases results because default for two words is as a phrase
 - vii. results dramatically smaller if not searching full-text
 - viii. have students save two keyword results: the one about the British rock-art (newspaper) from full-text “limestone and caves” and Hobbits of the South Pacific (Time mag) from “limestone caves.” We’ll get back to those in a minute.
 - ix. Do a keyword search for “Dogs OR cats,” once with “Sort results by relevance” checked, and once with it not checked (not full-text). Note the search string at the top of the results page (different in two searches), and observe how the results are ordered.
- c. Note that we’ll look at the advanced search options during the next info lit session.
 - d. Have students go to their Save List and print it for the next section
 - e. Close the browser window

➤ **Intro to bibliographic information: estimated time 10 minutes**

1. Have students go back to the tables – they will need pencils for this next part
2. Hand out Bibliographic Information worksheets and tell students to put their name on it
3. Have students find article title, author name (where there is one), resource title, date published for each item – ask them to identify the type of resource (this is from a magazine, the author is Michael D. Lemonick, etc.)
4. Ask what the database name is for all of these
5. Have them find the right place on the worksheet, and fill in the information for each article as you go through the list
6. Promise them more at the next session:
 - a. writing bibliographies for print and online resources
 - b. search strategies and advanced searching
 - c. evaluating results
7. ?????? Have students give their worksheets to (their teacher or librarian)



➤ Until next time....Just Keep Searching!