

Boolean Games

Information Literacy GEO this assignment addresses: Develops an effective search strategy.

There are many ways to demonstrate the art of combining keywords using the Boolean Operators AND, OR and NOT for effective searching. Students do not appreciate that they can significantly improve their search results by carefully crafting searches combining unique keywords using Boolean operators, and that the same techniques apply to academic databases and Google.

Objectives of assignment:

- Understanding the importance of finding unique terms to describe their concept
- Understanding the mechanics of Boolean Operators
- Understanding that combining keywords and Boolean Operators together can save them time and effort by producing the most relevant results
- Understanding that search engines and the databases they search all work essentially the same way.

The following games reinforce these concepts. They are from The Active Learning Center (http://active_learning.yccc.edu/library/active_learning/active_learning.htm) where Information Literacy practitioners post their personal favorites. Variations on these games are endless. Instructors should feel free to improvise.

Assignment: Boolean Games

Boolean Game 1: Lunch for Two

Preparation: No preparation, no props, but willingness to ham it up to turn it into a lively and entertaining exercise

- First explain the concept of a database as a collection of anything that can be organized and searched. Then tell students that they are going to be your personal database and that you are going to search the database for some companions to take to lunch.
- Tell the students that you can only take a few students out to lunch, because after all, you're a poor, underpaid librarian. However, you are very selective about whom you take out to lunch, so ask for all students who are wearing denim of any kind to stand up. Have a student count the number of people standing. Sadly, the number is always too many people for you take out to lunch.
- Refine your search and ask instead that all students wearing corrective lenses stand up. Have another student count the number of people standing. This number is also too large - it's so sad!

- Refine your search again by asking those students wearing denim and corrective lenses to stand up. This usually brings the number of students down to a much smaller number and voila!, you have your lunch companions. Prizes might be in order here, if not the actual lunch.
- Ask the students to explain what just happened. Reinforce the idea that the Boolean operator AND helps to narrow your search, returning fewer results.
- There are a variety of ways that you can vary this activity:
 - try the exercise using the or operator and the not operator.
 - use different characteristics, depending on your class participants

Boolean Game 2: Boolean “52 Pick-up”

Preparation: A standard deck of 52 playing cards

- Hand each student one card from the deck.
- Ask those students with face cards to raise their hands (or stand up).
- Ask those with cards that are both face cards AND red cards to raise their hands.
- Point out that there are fewer cards now than there were before...because of the Boolean operator AND.
- Ask those students with "number" cards to raise their hands.
- Ask those with "number" cards OR black cards to raise their hands.
- Point out that there are more cards now than there were in the previous "hand" because of the Boolean operator OR.
- Similar examples can be used to show the NOT operator if desired (a Jack that is NOT a spade, etc.)

Important summation/review points:

Students should be aware that Boolean Operators control how the search engine combines their keywords terms. (Internet search engines often label Boolean Operators "All the words," "Any of the words," and "Not this word.") They should be reminded that the more precise their terms are the more accurate the results. Synonyms should be used for concepts that have many possible descriptions. They may find good synonyms from subject headings in catalogs and academic databases. Students may always modify their searches by analyzing "what went wrong" if they get too many, too few, or irrelevant results.