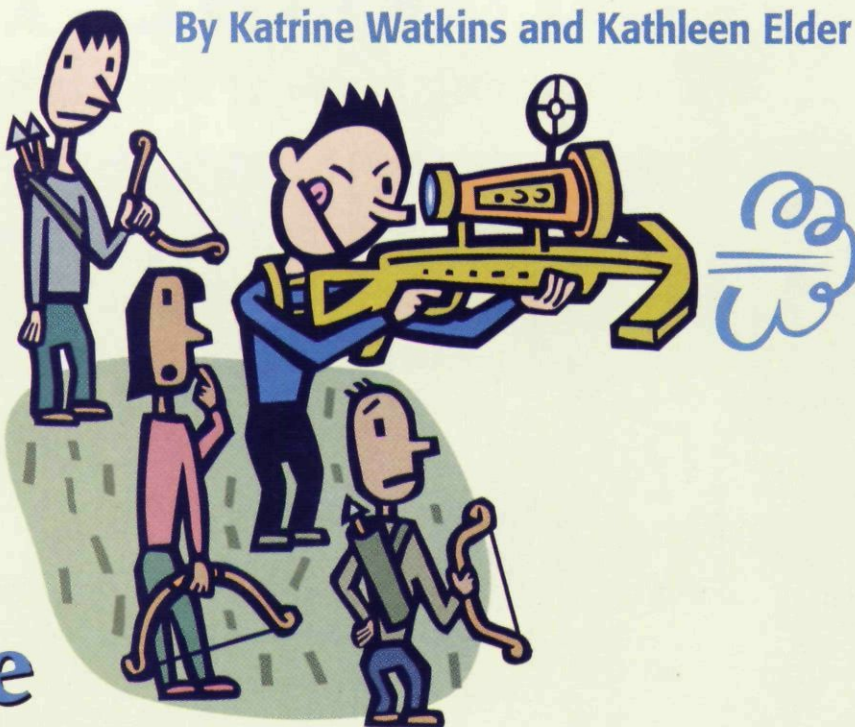
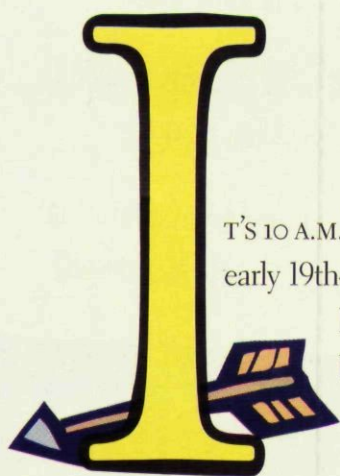


By Katrine Watkins and Kathleen Elder



The Google Game

Sure, your kids are familiar with Google (even to the exclusion of other search engines). But how effective are they at using it?



IT'S 10 A.M. AND KATE ELDER'S NINTH-GRADE ENGLISH CLASS IS IN THE LIBRARY RESEARCHING early 19th-century Paris, the setting of Victor Hugo's classic *Les Miserables*. In her first attempt to learn about the French Restoration, Emily enters www.restoration.com in the address bar, and finds herself at the site of a swanky hardware store based in Pasadena, CA.

She tries again, this time typing the word "restoration" into Google. No luck. "Restoration Hardware" is the first of 69.2 million hits, which include results



ranging from religious movements to ways to restore files from a computer's recycling bin.

Emily isn't alone. Tom, who's been asked to research the Bourbon Dynasty, one of the most powerful ruling families of Europe, is sifting through pages about Kentucky Bourbon and mixed drinks. In 45 minutes, the bell rings, and both frustrated students leave for their next class. This assignment is officially a bust.

Over the years, we've watched our students aimlessly search the Internet in an effort to complete their assignments, so we decided to design a Google game with enough appeal to help teens search the Web more effectively. We chose Google because it's the most common search engine used by our students, and even though our lesson is geared toward our gifted ninth graders, it can easily be modified to suit seventh through 10th graders. The point of the game is simple: to show students how to refine their searches by thinking critically.

Before beginning, we read up on a few things about our target audience. For one, contrary to popular belief, kids are easily bored and frustrated by the Web and are less adept at online searches than adults. They may be whizzes at instant messaging and downloading tunes, but when it comes to searching, they're just lost puppies, according to "Teenagers on the Web," a study by the Nielsen Norman Group, a user-experience research firm. Other things we had to keep in mind for our lesson? Kids' aesthetics are pretty sophisticated; they like clean and simple-looking sites. They're impatient, so any lesson should include regular searches, rather than advanced searches. And since teens like

to keep things simple, our lesson would only teach them a few basic, but essential, skills. Lastly, teens want to have fun, so the game is interactive.

With those key bits of information in mind, we devised the "Google Game," with the goal of making our students' Internet searches more efficient so that they end up with as few hits as possible. We taught the strategy in one period at the beginning of the school year, and we were amazed to see how valuable it became, not just in terms of our students' school assignments, but in all of their Web searches.

We begin the lesson by telling students that each search term is like a bead on a string. To make things simple, we limit everyone's search to 10 terms, explaining that the addition of each word or phrase is like adding one more bead to a string. The aim, of course, is to end up with the information you're looking for with as few hits as possible.

Then we supply our students with three crucial search tips: use quotation marks (for example, "French Restoration," "human rights," "affirmative action") to look for words in the exact order that you enter them. This may seem like common knowledge, but most kids don't know to use quotation marks. Use

a minus sign to exclude a word from your search (for example, *vikings -Minnesota*). And to limit a search to Web sites by certain groups, such as colleges and universities or organizations, use the site operator (for example, *site:edu* or *site:org*). If a student is searching for information about lacrosse, for instance, and only wants results from educational institutions, she would type *lacrosse site:edu* in the search bar.

Students often make the mistake of conducting searches by asking questions, which isn't the way Google works best. Effective searches consist of typing in carefully chosen words and excluding those that are irrelevant to your search. For example, while researching seasonal depression, a mental disorder that occurs at the same time each year, choosing the right words can make the difference between a search result with millions of hits or just a couple hundred. Using the search terms *depression -great* (to exclude hits that include the Great Depression) will result in 42.6 million hits, while searching the words *depression -great seasonal FAQ site:edu symptoms*, will lead to 650 hits because the search was limited to Web sites by educational institutions that were

Diminishing Returns

More questions that students have really enjoyed...

What are the methods of tattoo removal that a teen might consider?

Optimal search terms: "tattoo removal" teen site:gov (82 hits)

Answer: Laser surgery, dermabrasion, surgical excision

Which of William Shakespeare's plays has been said to refer to the Gunpowder Plot of 1605?

Optimal search terms: "William Shakespeare" play "Gunpowder Plot" 1605 site:edu (82 hits)

Answer: *Macbeth*

What does Don Colgan have to do with cloning an extinct tiger?

Optimal search terms: "Don Colgan" cloning extinct tiger site:org (21 hits)

Answer: Head of research team

Who is the Prince of Pop, and what is the blotted line that he made famous?

Optimal search terms: "Prince of Pop" "blotted line" (12 hits)

Answer: Andy Warhol's early drawing technique

Who was head of the Woman's Peace Party during the Progressive Era?

Optimal search terms: "Woman's Peace Party" "Progressive Era" site:org (seven hits)

Answer: Jane Addams

What connection does the ferris wheel have to Pittsburgh?

Optimal search terms: "ferris wheel" "Pittsburgh Pennsylvania" site:edu (35 hits)

Answer: Invented by George Ferris, a Pittsburgh bridge builder

What sport was Mamie Peanut Johnson playing when she got her nickname?

Optimal search terms: "Mamie Peanut Johnson" sport nickname site:gov (two hits)

Answer: Negro League baseball



restricted to frequently asked questions related to symptoms of seasonal depression. Using these basic strategies to gradually reduce the number of results from more than 74 million to just 650 makes students sit up in their seats.

But we don't stop there. Showing kids how to search for information about the Great Depression of the 1930s really gets their attention. Using the search term the "great depression" results in 5.1 million hits, but using the terms "the great depression" site:org okies occupations, results in only 89 hits.

With their newfound search skills, students are ready to play the Google Game—and the team with the fewest number of hits in 15 minutes wins. The rules are simple: while working in pairs, students use their new search techniques to answer a question posed by a librarian or teacher; students record the search terms that they used

to get their results; and the team with the fewest number of hits and the correct answer wins the game.

One of our first games consisted of asking students the following question: Can you explain how Edgar Allan Poe used the raven as a symbol in his poem "The Raven"? A pair of students won by typing in the terms "Edgar Allan Poe" raven symbol site:edu and getting 253 results.

The search results for the next question simply blow their minds: How was Edgar Allan Poe related to Virginia Clem? In 15 minutes, another pair of kids high-five each other with excitement. By typing in "Edgar Allan Poe" "Virginia Clem" site:edu, the pair found out that Poe married Clem, his 13-year-old cousin. And their search terms resulted in just three hits!

Keep in mind that librarians need to test their own questions before the

beginning of a class to see how many search results they end up with. The results change from day to day because sites frequently come and go on Google, so it's best to construct questions shortly before the lesson is taught.

Although the librarian guides students through the search process and updates the questions used to demonstrate that the search strategies are effective, the classroom teacher plays an equally critical role in the lesson's success. Students are engaged in the lesson if their teacher monitors their progress, and if she encourages a friendly competition among the teams by egging on one team to beat the other.

When students are finished searching, the winning team (or teams) copies its search string on a white board and explains its solution to the class. The teacher and librarian should emphasize that the lesson is constructed to demonstrate more effective ways to search, and that there is no guarantee that every search will produce so few results.

In the words of one satisfied student who tried his new search skills as soon as he got home from school, "I found exactly what I was looking for in less than 10 minutes, which normally would take me about an hour. I think the technique should be taught to other classes, so it will help them like it did me." And it was music to our ears when another student said, "I have always been annoyed with search engines because I could never get the Web sites I wanted on the topic I wanted... until [I played the Google game] yesterday."

We've been very pleased by our students' enthusiasm to apply what they've learned in our Google game to all their Internet searches, but we're more gratified by the fact that teaching this lesson has earned us increased credibility. Now, when we recommend a book or a subscription database as the best place to start researching, our students actually listen to our advice.

Librarian Katrine Watkins and English teacher Kathleen Elder work at Shaler Area Intermediate School in Glenshaw, PA.

© 2006 School Library Journal, Reed Business Information, a division of Reed Elsevier, Inc. All Rights Reserved. Copyright of School Library Journal is the property of Reed Business Information and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.