



## Beyond the Book

Students learn how to think creatively as Web researchers. **By Alexandra R. Moses**

**E**avesdrop on a conversation about what's next for one suburban Chicago school district, and you might think the superintendent wants the students to take over. In a way, he does. District 181 superintendent James Tenbusch has a plan to cultivate student creativity and independent thought, starting with how they use the Web.

In August, students at Hinsdale Middle School, in Hinsdale, Illinois, will train to become Web researchers: They'll learn how to track down scholarly materials from the Internet, search for opposing points of view, and take control of their own education. Tenbusch believes that this part of the school district's pilot program in one-to-one computing program is essential for today's students.

Students, more than just typing keywords into Google, learn how to come to an answer independently, using their own ideas about the lesson, subject, or debate at hand. According to Tenbusch, schools teach kids how to read, write, and add, but they

generally don't teach them how to speculate, hypothesize, and free associate.

### Seek and Find

"When you rely on textbooks, what you're actually doing is taking someone else's opinion for granted instead of developing your own," Tenbusch notes. "There is no reason, even beginning in third and fourth grade, that you can't have kids seek out and find scholarly works, newspaper accounts, or original documentation for any point in history or for any scientific study."

For instance, if students in a science class are wondering why Pluto is no longer considered a planet, the teacher can turn to that day's Web researcher for the answer. The student would then use his or her Internet-sleuthing skills to dig up information, such as a copy of the resolution from the International Astronomical Union explaining Pluto's new designation.

It's a job that lets students in on the education process, giving

them the tools to find information on their own. It also teaches them how to truly use the Web. "Many children who use the Web every day don't have a clue how it works," says Alan November, who gives workshops on education technology. He says many students don't know how to discern a legitimate source of information from a site that's unreliable, or how to search for primary sources and material. "Like reading and writing, Web literacy ought to be embedded in every discipline," adds November. This approach, he believes, will lead to more engaging and global assignments.

### Get Started

November believes students should act as Web researchers in every class in the country. If there's an Internet-connected computer in the classroom, students can do this, he says. Here are some ways to get going:

- **Create the researcher role as a student assignment.** Tenbusch says the role should change daily so everyone gets a chance to do it. He adds, "In class, you let the researchers freewheel. They pay attention to the degree that they need to." Their research could expand on the conversation, or it could be an assignment given at the beginning of the lesson. Some teachers may want to have students come to class prepared with supplemental sources.

- **Show students different search engines.** November likens the reliance on just one search engine to using the dictionary without knowing there's a thesaurus.

- **Build a search engine for your classroom.** On the Google Custom Search Engine page, teachers can set up a search engine to fit their particular class needs. You can invite anyone, including teachers, parents, students, and community members, to help build it, and you can allow students to add to it at any time. For a sample,

see Mrs. Gray's Research Sites for Kids. This search engine aims to aid searches on global warming and the environment by searching seventeen relevant sites.

### Conjunction Junction

It's also important to teach students about the basics of Internet research. Students need to learn how to be specific with search terms as well as how to use *and*, *or*, and *not* to limit and expand searches. In addition, students should understand how to use quotation marks, asterisks, and synonyms. A Martha's Vineyard Regional High School Library page on search engines offers links to different search sites and a page on search strategies.

Tenbusch and November both say a key to conducting good Internet research is the ability to find a variety of sources. Students should have diversity as a main goal when they look for resources. For instance, a search for information on the American Revolution could include primary-source documents that offer the British point of view. According to Tenbusch, we shouldn't use the Web just to reinforce preexisting ideas about topics.

The researcher role lends itself well to social studies, science, and the language arts—just about any class for which a more complete understanding of a topic is needed. "These are not Google jockeys. They are digital librarians," Tenbusch explains. "The teacher stops being the only educator in the room. You end up with a true collaborative learning environment." **e**

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### SEARCH SAMPLES

Find examples of kid-friendly and classroom search engines at [edutopia.org/web-research](http://edutopia.org/web-research)