

Finding Free Educational Resources on the Web for Teachers & Librarians
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***Abstract:** As Web coverage and content expands and changes, it has become more difficult and time consuming for teachers and librarians to find accurate, reliable K-12+ education sites. This practical Internet@Schools West 2004 session article consists of a detailed, annotated listing of an associate professor-librarian's top ten favorite education sites, followed by a short annotated listing of Web directories and portals this educator explored to locate his top ten favorites and many other quality educational resources for K-12 research, teaching, and learning.*

Introduction

Although many resources via commercial vendors' subscription-based databases, such as full text peer-reviewed professional magazine articles, scholarly educational research reports, and experimental/empirical studies, are not freely available or easily accessible on the free Web, many other free, quality educational Web resources can be found there. General and specialty directories and portals can be efficient, effective alternatives to general-purpose search engines for locating these quality resource Websites, especially concerning K-12+ teaching and learning materials. Since general search engines do not normally evaluate, annotate, and classify sites, distinguishing superb Web resources from non-evaluative or even "bad" ones can be difficult. Many educators and students get lost within these search engines' enormous lists of "hits" while attempting to search for the possible valuable resources hidden within.

To assist all K-12 audience members to more easily locate high-quality educational resource materials, the following conference proceedings article will first explore in detail an educator's list of "top ten" quality educational Websites—sites that can make teaching, learning, and research easier. Following that, this article will also briefly cover some highly rated educational directories and portals that carefully evaluate resources for inclusion into their collections. K-12+ audiences will find all of these very useful in assisting them to develop their own favorite lists of quality educational Websites.

Selective "Top Ten" Favorite Educational Websites

Good educational sites really should make teaching, learning, and research easier. The truly excellent sites offer educators help in developing a curriculum that will prepare students for the future. Great sites should also give students an exciting addition to the curriculum and help everyone evaluate what is already available. The following "top ten" Websites do just that and are worth taking the time to explore:

Academic Info [<http://www.academicinfo.net/>]

Academic Info's mission is to "improve access to online educational resources by developing an easy to use subject directory covering each academic discipline." The focus of the site is on academic materials, "with its intended audience at the upper high school level or above." They can browse by subject headings, search by keywords, or choose a subject gateway. Choosing the "Education" subject gateway will lead searchers to a wealth of information on various education topics, including recommended sites under the sections of Distance Learning, Teacher Training, Teaching with Technology, School Librarianship, Resources by Subject, and more. The Area & Country Studies gateway is also worth exploring. Mike Madin, formerly of the University of Washington's Gallagher Law Library, maintains Academic Info full time and uses advertising to maintain the site; therefore, sponsored information is presented along with the recommendations.

Blue Web'n [<http://www.kn.pacbell.com/wired/bluwebn/index.cfm>]

Blue Web'n is a highly rated and user-friendly searchable database of over 1800 "outstanding Internet learning sites categorized by subject, grade level, and format" (tools, references, lesson plans, hotlists, information resources, tutorials, activities, & projects). Dewey Decimal Number enthusiasts can even search for sites by Dewey number. The database is not extremely large, containing only what they "hand-picked" and consider to be the "most useful" sites—especially online activities targeted at the K-12+ learners and professionals. Users can browse the Content Table or Subject Area guides, or conduct a Refined Search by Grade Level. Blue Web'n, brought to us by SBC Knowledge Network Explorer (an education company on the Web since 1995 helping schools and libraries acquire and effectively use Internet and videoconferencing technology). With Blue Web'n, they annotate and rate their chosen sites using a five-star system (evaluation rubric), and they weed and update weekly. If this is not enough, check out their searchable *Filamentality* section, where teachers, librarians, and students can easily develop and create their own Web "hotlists," "multimedia scrapbook," "treasure hunts," "subject samplers," and "webquests" by plugging information into their online forms and allowing the free *Filamentality* tool to use that data to construct a Webpage or activity designed to meet every educator's needs—this is probably this author's favorite general purpose K-12+ education site.

EdSelect [<http://www.edselect.com/>]

EdSelect is a first-rate collection of Websites chosen for classroom use by teachers in Ontario, Canada. Pat Elliott, a certified teacher and library specialist in Ontario, selected these sites to support the Ontario curricula, but they are definitely of value to librarians, teachers, and students here in the USA as well. In addition to the general purpose help, teacher resource, and professional development sections on the entry page, this author highly recommends the Curriculum Areas (Grades 1-8, with some info for Kindergarten, Special Education, and FSL/ESL), providing the entire curriculum for The Arts, Language, History, Social Studies, Geography, Science & Technology, Mathematics, and more—all very detailed and available full text for free on the Web.

Education Index [<http://www.educationindex.com/>]

This "annotated guide to the best education-related sites [over 3000 now] on the Web...provides learners and educators with access to the best educational Websites in a variety of subjects and life stages [resources for preschoolers, college students, continuing education, and careers, to

name a few].” Hobsons (college and career publisher with 25+ years of experience) is the provider of the index. Instead of just providing links, Hobsons’ editors review the recommended sites and summarize the content on each site, employing the entertaining Web Weasel character as our “guide” through their site. Although explorers will find broken links occasionally throughout their site (and the index does not provide a search function), the recommendations are extensive and well annotated. If they cannot find what they are looking for using their directory approach, conducting a specific site search on the online index using a well-known general-purpose search engine may find what they need.

Education World [<http://www.education-world.com>]

This “Educator’s Best Friend” site boasts a searchable database of 500,000+ sites, providing one of the most user friendly and comprehensive help centers/site guides this author has seen on the Web. Visitors can browse information and sites listed under Lesson Planning, Professional Development, Technology Integration, School issues, Administrator’s Desk, and more, offering reliable evaluated content. Their topic guide and advanced search interface are very useful, as both simplify the search for specific information on class lessons without overwhelming the user. Their Professional Development Center’s “Joke of the Day,” “Classroom Management Tip of the Day,” and “Quote of the Day” can also be useful for teachers and librarians. And this author especially advocates browsing their Site Review Center, which provides detailed reviews of some of the best education sites on the Web, grouped either alphabetically, by subject, or by date. Last but not least, do not forget to explore their “Best of” Series selections for the top “20 A+ sites” of each year, currently 1997-2003—teachers and librarians will be happy that they did.

Educator’s Reference Desk [<http://www.eduref.org/>]

This brand new site (began December 20, 2003) contains the 2000+ lesson plans, the 3000+ links to value-added online education information, and the 200+ question archive collected on the award-winning AskERIC site during the past decade. The new site also provides access to the Education Resources Information Center (ERIC) database—the world’s largest source of information on education research and practice. Frequently visit/browse their Librarianship, Subjects, and Teaching resources guides, especially when looking for quality Internet Sites, Online Communities, and Organizations concerning any education topic. Their Topics A-Z page via a link at the bottom of every page is also useful for specific topic searching, and they provide Site Search and Site Map aids as well. Since AskERIC was the first registered education site on the Web to provide quality education information, it will be interesting to see what services this new site—also from the U.S. Department of Education—will offer to “educators, administrators, librarians, parents, and pre-service teachers (not K-12 students)” in late 2004 beyond that of the now discontinued AskERIC site. They are looking right now for volunteer librarians (commitment of about 2 hours per week) to help maintain their online resource collections, so visit their official volunteer page (<http://www.eduref.org/About/volunteers.shtml>) for details, and keep visiting this and other ERIC info sites to read about future plans for the ERIC database.

Gateway to Educational Materials (GEM) [<http://thegateway.org/>]

The very recently “reinvented” GEM site has added a new interface with many “new features” and much better “functionality,” effectively providing students, parents, and teachers “with quick and easy access to thousands of educational resources found on various federal, state, university, non-profit, and commercial Internet sites.” Chosen as one of the “Best of 2002” sites for

educators at all levels by Education World, this very large teacher resource site allows users to browse content and/or search by subject, type, level, keywords, mediator, and beneficiary. Sponsored by the U.S. Department of Education, GEM truly does seem to be a one-stop educational resource for educators in search of first-rate lesson plans, curriculum units, activities, and much, more, pertaining to all K-12+ subjects. Until August 2004, it was a bit cumbersome to search because of its size/large number of results, but the detailed refinement tool section that appears on the right after searching is a dramatic and much needed improvement, as is the new Help section with its Glossary and Search & Browse Help guides, among others. This author is looking forward to exploring this new interface and experimenting in depth with its new utilities.

Kathy Schrock's Guide for Educators [<http://school.discovery.com/schrockguide/>]

Updated daily, this guide includes some of the best sites for teaching and learning, and it has an impressive annotated Subject Access directory. There are also sections on Search Engines and other search tools, as well as general Internet information. The Teacher Helpers section holds Kathy's training slide shows, multiple online articles by her, Assessment & Rubric Information, material on evaluating Web pages—educators must check out the “Sites to Use for Demonstrating Critical Evaluation” listed there—and more. This multiple award-winning education site is designed for teachers to enhance curriculum and professional development, assisting them with “infusing technology throughout the curriculum in all areas and at all grade levels.” Previously a library media specialist, Kathy Schrock is currently Administrator for Technology for the Nauset Public Schools in Massachusetts.

Kid Info [<http://www.kidinfo.com/>]

This is a frequently cited homework helper resource site that is simple enough for elementary school students to navigate and use, but it also useful for middle school students, teachers, and parents. In fact, the site is separated into four broad resource sections: a Student Index (homework/resource help), a Young Children Index (online activities & educational games), a Teacher Index (“Teacher Tid Bytes” Web resources, slide shows, lesson plans, & tutorials), and a Parent Index. All links are annotated and grouped by topic within each section. The reference resources consist of the almanacs, atlases, dictionaries, and encyclopedias, as well as online libraries, Ask-An-Expert, and study skills sites. The Homework Help section covers the subject areas of American History, Art, Computers, Current Events/Newspapers, Foreign Languages, Geography/Social Studies, Health, Language Arts, Math, Music, Sciences, and World History. Kids search engines, searching tips, and fun sites for children are also included. Veteran classroom teacher Linda Guterba is the Website author and Webmaster.

Teachers Helping Teachers [<http://www.pacificnet.net/~mandel/>]

Although geared for beginning teachers, this free nonprofit educational service site founded, designed, and directed by master teacher Dr. Scott Mandel, is an excellent resource for teachers at all levels. Dr. Mandel's goal for the site was to provide basic teaching tips to inexperienced teachers, while providing helpful advice and resources for all teachers, especially in the areas of classroom management, lesson planning, language arts, math, science, social studies, and special education. Experienced teachers are encouraged to supply their expertise to newer teachers using the site as the forum, giving rise to the site's name. The Lesson Plans and online Educational Resources sections are updated frequently during the regular school year. Last but not least, take

a quick look at the Topic of the Week, the Poem of the Week, and especially This Week's Stress Reduction Moment sections of his site—these alone merit frequent visits.

Other Directories/Portals for Finding Excellent Education Sites

As stated above, many excellent free educational sites do reside on the Web. Unfortunately, because of the size of the Web, it is sometimes difficult to find these first-rate sites. Listed earlier were favorite quality educational sites, and although this author believes these will prove to be useful to many librarians and teachers, many searchers may be looking for something more specific. Fortunately, there are free, highly rated Web directories and portals that can lead searchers to other excellent educational resources. Listed below are some of these directory/portal sites: *About*, *InfoMine*, *Internet Public Library*, *Librarian's Index to the Internet*, and a site this author produced and maintains, *Sci-Math World*.

***About* [<http://www.about.com/education>]**

More than a directory, this portal neatly organizes thousands of topics, with especially good information and links to Adult/Continuing Education (including Distance Education), College/University (Business Majors, College Admissions: U.S., Graduate School), and Primary/Secondary Education (including Creative Writing for Teens, Family Crafts, Homeschooling, Private Schools, Special Education, and more) under their "Education" section. Bookmark each of these and check back every week for special topics.

***InfoMine* [<http://infomine.ucr.edu>]**

Celebrating its tenth year of service on the Web, this highly ranked scholarly resource collection includes some 100,000+ "academically valuable resources," grouped into nine separate annotated, indexed categories (databases) for easy search and retrieval. A librarian-built "virtual library of Internet resources," it is considered by many to be an excellent resource guide for "faculty, students, and research staff at the university level," while also very useful for higher-level high school and professionals.

***Internet Public Library* [<http://www.ipl.org/>]**

A free high-quality public service site, IPL is a great starting place to find quality information on the Internet. Click on the "Education" section, for instance, and search under the available subcategories, such as Early Childhood & Pre-school, K-12, Alternative, Special, and more. They also have links to Associations and Serials in this area, as well as links to specific educational resources. Check out their award-winning "TeenSpace" and "KidSpace" special feature sections on their main page, too.

***Librarians' Index to the Internet* [<http://lii.org/>]**

This "searchable, annotated subject directory of more than 14,000 Internet resources selected and evaluated by librarians...is meant to be used by librarians and non-librarians as a reliable and efficient guide to described and evaluated Internet resources." Possibly the most highly recommended general directory on the Web, lii.org can quickly lead searchers to some of the best educational sites on the Web. Choose the "Education" link and browse the list of general and specific education resource links, or type a broad keyword or phrase into the search block.

Sci-Math World [<http://library.rider.edu/scholarly/rlackie/sci/>]

This directory site is designed for all teachers and librarians who wish to expand their knowledge of science and math education resources on the Web. Containing annotated Web links to relevant K-12 through higher education science and math subjects, this site is arranged as free quality Web “Directories & Portals,” “Invisible Web Searchable Sites,” “Science & Math Search Engines,” and numerous “Interactive Science & Math Websites,” leading K-12+ educators and students to outstanding directories, databases, and selective science and math education sites.

Conclusion

This *Internet@Schools West 2004* conference proceedings article mentions only a few of the quality educational resources that exist on the free Web. Many more are out there. Other free resources to consider exploring for curriculum resource materials would be those free professional development materials, subject-specific databases, and specialty search engines that several commercial vendors produce and make freely available to the public. Many librarians have expressed their surprise to this author when they learn about what commercial vendors, such as EBSCO, Elsevier, Thomson, and ProQuest, provide for free to the K-12+ community. For more information on this, read Robert J. Lackie and Robert J. Congleton’s “Free and Fee-based Online Science Resources for the K-12 Community” article, scheduled for publication this fall in *MultiMedia and Internet@Schools* magazine (<http://www.infotoday.com/MMSchools/>). It specifically offers recommendations leading to invaluable online curriculum resource materials available to elementary, middle, and high school science teachers and librarians, as well as other K-12 educators, students, and parents. *Internet@Schools West* hopes that you find this article to be useful for effectively and efficiently locating the pertinent free Web resources available for your K-12+ community—resources that truly can make teaching, learning, and research easier for all interested audiences.

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