

# Sources of Objective Assessment of Web and Multi-Media Learning Materials in Science and Mathematics

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*The Internet can be a great source for obtaining noncommercial, objective assessments and reviews of different web and multi-media learning material available in print and on line. CD-Roms, web sites, videotapes and books are among products that are reviewed on a continuous basis. This is a particularly valuable tool for parents, teachers and students, since there is a wide variety of material available, but only some of it is considered to be “developmentally appropriate” and thus able to achieve the desired impact on student learning. Some site examples include [www.enc.org](http://www.enc.org) and ([www.childrensoftware.com](http://www.childrensoftware.com)).*

## **The Eisenhower National Clearinghouse ([www.enc.org](http://www.enc.org))**

Since its creation in 1992, the Eisenhower National Clearinghouse (ENC) has been playing a major role in efficiently identifying and disseminating high-quality mathematics and science material to improve K-12 education on a national level. The clearinghouse is located at Ohio State University and receives funding from the U.S. Department of Education’s Office of Educational Research and Improvement. It is part of the overall ERIC (Educational Resources Information Center) system covering all of education, which can be accessed at [www.ask.eric.org](http://www.ask.eric.org). The ENC collection of math and science curriculum resources is the most comprehensive in the nation, containing over 18,000 resources collected from federal and state agencies, professional organizations, commercial publishers, local school districts and individuals. This collection includes software, videotapes, CD-ROMs, useful Internet sites and print material.

ENC’s comprehensive, user-friendly web site includes an extensive database, features the on-line version of the *ENC Focus: a Magazine for Classroom Innovators* and offers its visitors selected links to web sites that contain useful information on additional curriculum resources. The web site is visited on a regular basis by educators, students and parents all over the country because it provides a great selection of math and science education materials on line and it enables users to request free quality products and services. In addition, ENC Information Services staff provides individual assistance for those users searching for specific math and science education information.

ENC constantly receives material for submission from different sources. ENC staff carefully scan vendor catalogues, search various web sites, hold discussions with educators and staff working in professional organizations, read different journal and magazine reviews, and take into account suggestions coming from publishers and users on an ongoing basis. Material selected to form part of the ENC collection must meet certain basic criteria—it should be in tune with state or national education standards and be appropriate for K-12 math or science education, professional development, reference use, or for pre-service education. Once math and science education specialists determine that the material meets the desired criteria, they inspect the material in a detailed manner and decide how and if indeed it will be catalogued and/or used in special education programs or projects. The specialists pay particular attention to material that has been previously reviewed by third parties and material prepared with federal funding.

Materials that are considered to be “exemplary math and science educational resources” are highlighted in *ENC’s Focus* magazine, which is distributed quarterly in print to over 200,000 educators free of charge and is also available on line for review. The criteria used to select materials that appear in the magazine are determined on an individual basis depending on the theme that is chosen for any given magazine issue. Every selection of *Focus* materials includes information on how the materials were selected. All the web sites mentioned in the magazine can be accessed directly from the on-line version.

While ENC does not evaluate in depth all the materials featured in its collection, the staff examines each product carefully in order to describe the philosophy behind each product, its intended audience and its components. Staff watches videotapes, try out the games and manipulatives, load and use software material, and make an effort to track and include any available evaluative information that can provide users with links to that information. This type of information can usually be found next to the products' catalog records. In addition, the specialist team selects 12 web sites each month that it considers exceptional in technical and academic content. These sites are called the "Digital Dozen" and are featured every month.

### **Children and Computers ([www.childrenandcomputers.com](http://www.childrenandcomputers.com))**

It is reported that 25 percent of the products designed for children in the United States now consist of software and/or web sites. The website [www.childrenandcomputers.com](http://www.childrenandcomputers.com) includes a systematic classification system for software and for web sites designed for children. The "Haugland Developmental Software Scale" and the "Haugland/ Gerzog Developmental Scale" for web sites provide 10 dimensions of review and assessment, with scores and sub-scores on the areas of age appropriateness, nonviolence, technical features, process orientation, real world model, clarity of instruction, independence, transformations, expanding complexity, and child in control. For products to score a "1" on each criterion, the characteristics described must fully exist. The highest score is "10." This systematic rating leads to a single number on the quality of the software and web sites. To this score is added a score on the extent of "anti-bias" in the software.

This site also provides annual developmental software and web site awards for programs that do an exceptional job in meeting children's interest, needs and abilities. The awards are featured at the annual meeting of the National Association for the Education of Young Children.

### **Children's Software Review ([www.childrensoftware.com](http://www.childrensoftware.com))**

A recently established real and virtual subscription magazine, *Children's Software Review* [www.childrensoftware.com](http://www.childrensoftware.com), provides objective reviews of children's educational software, is not funded by any providers, and takes no advertisements. This site utilizes a six-dimensional checklist for rating software. The dimensions are as follows: can the child use it with minimal help; is the software designed with children's reality in mind; what can a child learn from this program; is the program fun to use; what design features does the program have; and what is its value in consideration of the price. While the magazine's main focus is on educational materials it also reviews games.