

**A Report to  
the**

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**THE SCIENCE EDUCATION INDUSTRY:  
An Economic Opportunity for Utah**

by

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## **A. EXECUTIVE SUMMARY**

Educational products and materials is a multi-billion dollar industry in the United States. Educationally related toys, gifts, novelties, and hobbyist supplies and materials constitute another multi-billion dollar a year industry. These industries are highly fragmented. It is difficult to obtain information regarding the industry as a whole.

The Center for Integrated Science Education (CISE) at the University of Utah, working under contract with the State Centers of Excellence program, Department of Community and Economic Development, state of Utah, has completed a preliminary analysis and survey of the science educational market in the United States.

This report briefly discusses the rapidly growing national trends towards the improvement and enhancement of science education, particularly hands-on, discovery-based science education. It cites major national reports that indicate that a new generation of science educational materials is needed. It provides case studies of Utah science-related companies that either are or could be heavily involved in the science education materials industry. It presents a brief market survey and discussions of the following segments of the market: public and private education; museums; retail chain outlets; catalog distributors; toy stores; pet and fish stores; hospital, hotel, and airport gift shops; promotional advertising; and industrial job training.

There is also a brief discussion of marketing and distribution needs and activities as well as a brief reference to the Utah Science Center initiative, a project to build and develop an interactive, hands-on science and technology center in Utah in 1996, the year of the state centennial.

The report includes an extensive appendix of information that is not generally available, including a listing of trade shows and exhibits, catalogues and catalogue distributors, directories and listings, journals and magazines, newsletters and newspapers, local publications relevant to the Utah market, and other entries.

This comprehensive report will be of immense benefit for Utah and other companies who are considering developing products related to science education.

## B. SCIENCE EDUCATION NEEDS

Life in modern society involves technical and scientific machines, techniques, and skills. The general public must cast votes and make judgements on a wide range of scientific, technical, and medical issues. Our economy is becoming more and more dependent on scientific and technical innovations, skills, and knowledge for its well-being and international competitiveness. Scientific and technical excitement, awareness, and knowledge have not been successfully imparted to a large fraction of our population; many people in our society -- including many with college and university degrees -- have strong fears and anxieties toward science. Such fears and anxieties are often transmitted to their students, co-workers, and friends. There is a growing realization that the education of our citizenry should be significantly improved and enhanced.

Recent national reports dealing with the issue and problem of science education have concluded that teachers

“Will need a new generation of books and other instructional tools... textbooks and other teaching materials in current use are, to put it starkly, simply not up to the job (1).”

The same report goes on to say;

“The present science textbooks and methods of instruction, far from helping, often actually impede progress towards scientific literacy. They emphasize the learning of answers more than the exploration of questions... they fail to encourage students to work together, to share ideas and information freely with each other, or to use modern instruments to extend their modern intellectual capabilities. The present curricula in science and mathematics are overstuffed and undernourished (1).”

There is a growing national trend towards fully integrated, multi-disciplinary science and mathematics education, and a parallel trend towards discovery and experiment-based learning. A very new book, The Unschooled Mind: How Children Think and How Schools Should Teach (2) argues that children learn by only two processes:

1. Emulation, that is seeing an adult doing the activity and trying to emulate that adult -- this is the so-called apprenticeship school
2. Discovery, that is by doing something in an experimental or experiential mode. This is the basis of the discovery/hands-on approach to learning.

The reformation of science and mathematics education will provide opportunities for existing and new companies to produce novel, innovative, and effective materials. Material technologies, bio-medical technologies, information technologies, and others will have a role in the science education industry. This means not only materials for teachers and schools, but also educational toys and gifts for all ages. It means hobbies and activities which will have a science educational component.

### **C. A UTAH SCIENCE EDUCATION INDUSTRY**

Operating under a small planning grant from the State Center of Excellence Program, the Center for Integrated Science Education (CISE) at the University of Utah (801-581-4379), has only begun to tap into the industry's potential. The Center has only begun to discover the magnitude of Utah companies with an existing role in science education and those with a genuine interest to enter this area. An entity such as CISE is necessary to bring about increased awareness, leadership, and realization of the economic benefits in Utah's initiatives to science education.

CISE has accumulated key information, such as major industry organizations, trade shows, industry trends, major outlets, and key companies (see Appendix). CISE plans to conduct workshops where business leaders and the staff of CISE can brainstorm ideas. At the workshops, business leaders will be informed of new directions in science education and of Utah's initiatives to be a leader in the national trend to improve science literacy. Business leaders will be able to exchange critical information regarding sales representatives, sales prospects, and prior experiences. CISE has already collected files on science and technology centers, museums stores, gift outlets, catalog merchandisers, retail chain stores -- all which have a major role in encouraging science literacy. CISE and business leaders will discuss and support science fairs and projects throughout the state of Utah. Science education leaders from around the country will be invited to share their success in this industry and to offer insight to the business leaders of Utah. CISE will work with Utah companies and entrepreneurs in developing new products and initiatives (Figure 1).

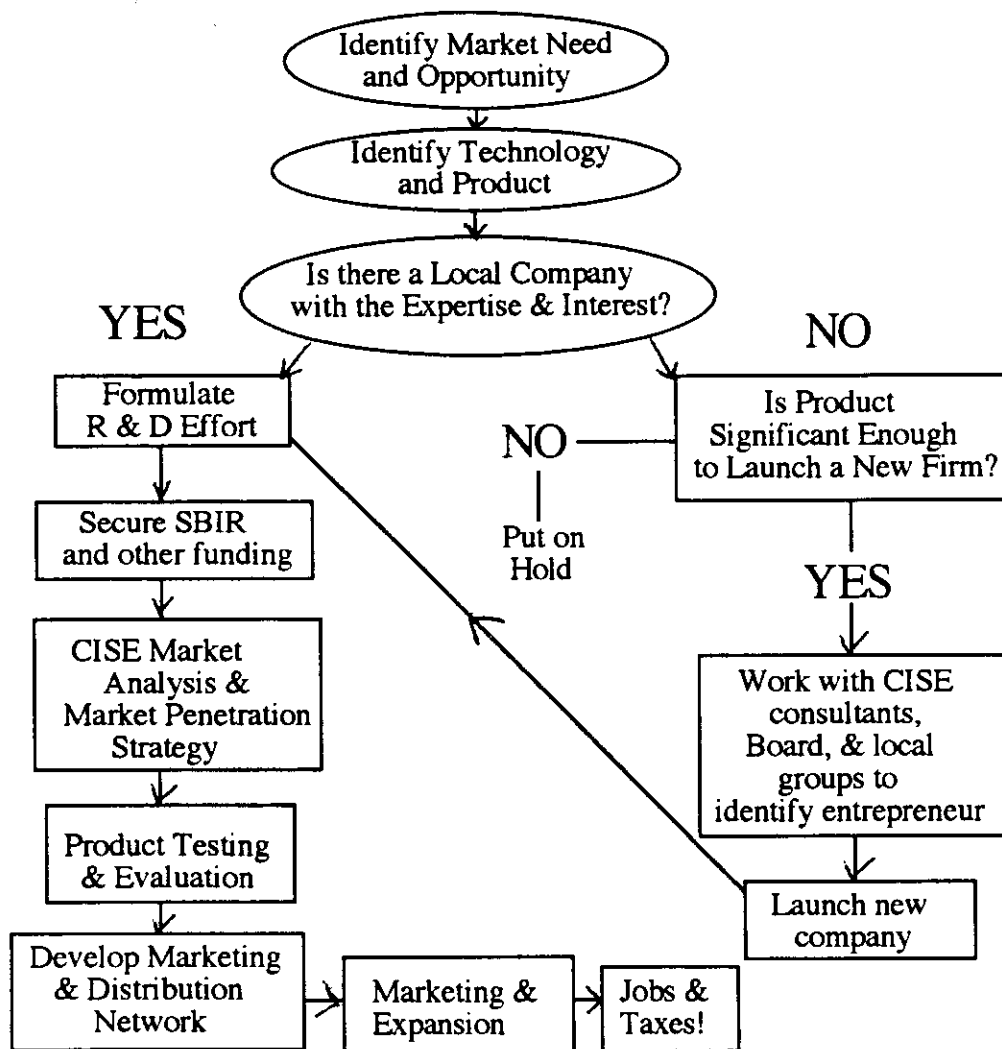


Figure 1: CISE Activities and Interaction with Industry

### 1. In Utah?

Utah already has a strong intellectual pool from which to develop new science education products. The University of Utah is a research university excelling in engineering, bio-medicine, chemistry, and business. The University's Research Park contains spin-off companies which have made contributions to the economy of Utah. Many of these companies and others in Utah fall into the various categories which have a potential for new and exciting products for the future of science education. Figure 2 illustrates only a small portion of Utah companies which can contribute to this industry.

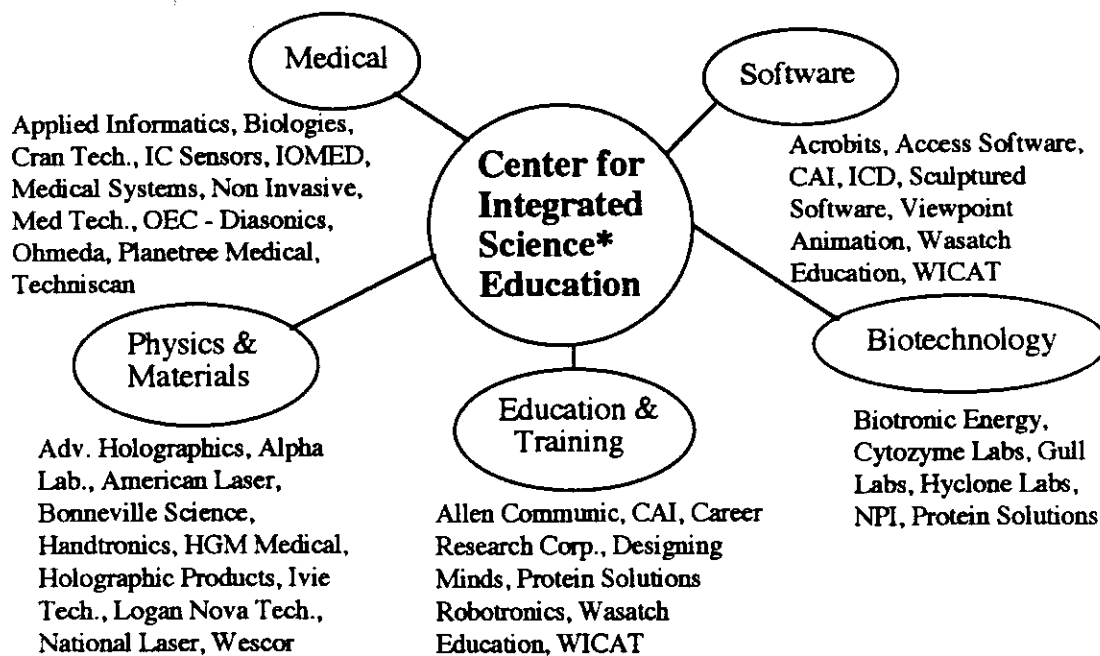


Figure 2: Components of the Utah economy relevant to a science education industry.  
(Source: Utah's High Technology Directory, 1991)

CISE has only begun to contact these companies and meet with them to discuss their role in a science education industry. Joe Andrade, Director of CISE, has had enthusiastic responses from business leaders. From preliminary discussions and interactions with a number of these Utah companies, the potential for existing firms to develop new products for the science education market was clearly demonstrated. In some cases local companies have the technology and interest for the development of science education products, but have never considered it as their corporate mission or objective. In some cases the technology and product ideas would be spun off to another entity whose focus and objectives are in science education, and who would develop, market, and distribute the product. The development of a science education materials industry in Utah would draw from all appropriate and relevant segments of the economy, expand and enhance it, and contribute royalties and profits to all those involved.

**Robotronics** is a Spanish Fork, Utah company, which designs, manufactures, and sells educational robots, primarily in the safety education area. In a very brief visit, "Sally the Scientist" and "Ernie the Engineer" robots were conceived. They could be used, particularly in the pre-school and early elementary grades, to enhance and expand the teaching of science and technology concepts. Another unique product concept that

came out of the discussions was the Lunch Box Lab, essentially a lunch box designed to serve a variety of science educational functions. For example, a solar cell could be incorporated, powering a little battery which would then provide light for the inside of the lunch box. A spring could be mounted in the inside and a small sensor could be installed to indicate the force of the spring. A temperature sensor could give readings of the inside of the insulated lunch box or of the exterior. Various measuring units could be built into the box; there could even be a magnifier or other various small optical components built in. Such a lunch box would have enormous appeal to both parents and children.

**Cambell Scientific**, in Logan, Utah, a manufacturer of remote monitoring for weather stations, showed great interest in using optics for sensing and communications purposes. The discussion led to the development of a small, self-contained science lab which looks like a book. Basically it would be a companion to an existing textbook, but when one opens the "book", there would be a little laboratory inside. Since Cambell Scientific has a particular expertise in laser diodes and optical sensing, a small optics lab could be mounted on the cover or inside pages. The third dimension could be included by using some of the pop-up technology so common in pre-school children's books. Little plastic lenses, prisms, and other optical components would "pop up" into position as soon as the page were opened. Essentially all of the principles of optics could be directly discovered and experienced within the optical lab "book."

Following on the optics theme, **U.S. Holographics**, in Logan, is one of the major suppliers of small-sized holograms and holographics in the country. These products have already made their way into science novelty shops, but have not been fully developed into science education products. U.S. Holographics' holograms could be an integral part of an optics/holographics module or kit for education purposes.

Utah has a fairly large and diverse industry in the area of software, including entertainment software. **Sculptured Software**, of Salt Lake City, is one of the largest Nintendo programmers. Another Utah company, **Electro-Brain**, is a major player in the electronic game industry. Anyone who has seen the group of kids surrounding computer games in galleries knows how motivating and attractive such technologies are for today's youngsters. The games contain many levels of skill and strategy. By simply putting a few of these programmers in a room together with a few science teachers, a series of incredible educational games that would be as motivating and stimulating as existing gallery entertainment could be developed.



Measurements on physiologic fluids are of particular interest and relevance to children because they can do experiments on their own bodies. Measurements could be readily performed on their own sweat or saliva. **Wescor**, in Logan, provides unique technologies in the use of osmosis and other physical phenomena to measure biochemical solutions and physiologic fluids in research and clinical labs. Such technologies could easily be incorporated into a book-like lab in addition to a range of individual products.

The idea of a labless lab is being developed by **Protein Solutions**, a Salt Lake City company. The Labless Lab is designed for university level courses. Many university science and technology courses do not have laboratory components, they are lecture only courses, and thus the students do not obtain a direct experience with the phenomena and concepts. In particular, Protein Solutions is developing a labless lab for polymeric materials science, plastics, where all of the samples and all of the experiments are simply incorporated into a tiny lab configured to look like a book. They estimate that for this one very specific university course alone, the market for such a labless lab in polymer materials would be several million dollars per year, not counting overseas or Canadian sales. Protein Solutions already has several science educational products based on bioluminescence technologies on the market.

Utah's medical informatics and hospital information systems industries can also play a major role. In discussions with Homer Warner Jr. at **Applied Informatics**, in Salt Lake City, their Iliad system, which is now being used in medical schools throughout the country to help medical students learn the principles of diagnosis and treatment, could be applied to the home consumer market and educational markets. Children enjoy learning about their own bodies and the whole idea of self-diagnosis and self experimentation could literally revolutionize biology and physiology education.

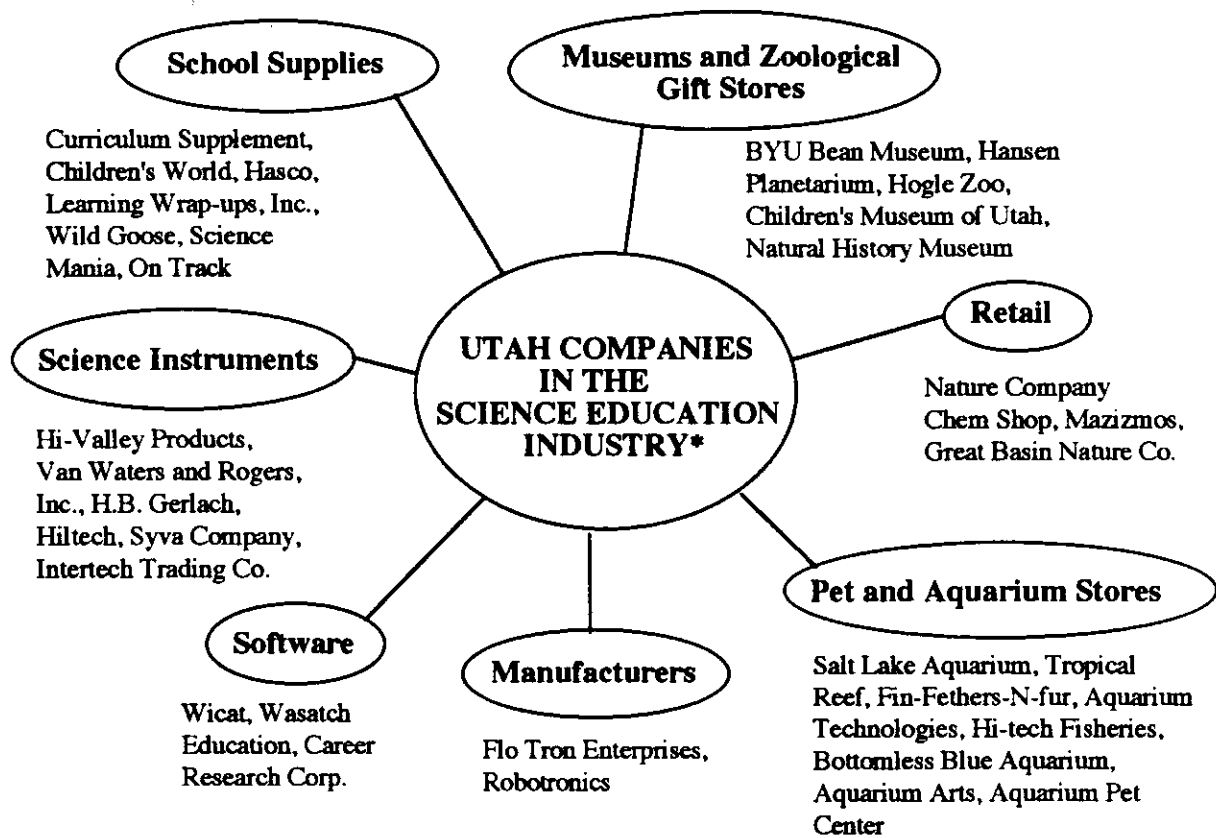
These responsive Utah companies are just a few examples of the opportunities which exist in Utah. How many of us were aware of **Robotronics** as a company which sells educational robots nationally? How many of us were aware that two Utah companies, **Sculptured Software** and **Electro-Brain**, play a major role in the manufacturing of Nintendo and electronic games? How many of us were aware that **Protein Solutions** is actively developing a unique concept of the labless lab which could alter the way university classes are taught in the future? Given the limited time and resources in the planning grant, CISE staff were only able to interact with a very small

number of Utah companies. Given sufficient time and resources, CISE could find literally dozens and perhaps hundreds of similar examples and ideas right here in Utah.

## **2. Utah's Science-Related Companies**

An obvious outlet for science educational products is the Hansen Planetarium. The Planetarium is recognizing the need to expand the marketing activities of its publications enterprise. **Hansen Planetarium Publications** publishes space science themes in the form of posters, charts, calendars, postcards, and slides. The products produced and marketed are selected for their educational value as well as for their marketability. With a new aggressive marketing plan, the Planetarium is increasing their sales to distributors. The publications division generated a gross profit from operations of \$65,630 in 1991. For 1992, gross profit from operations is projected to be \$85,500. Previously, the publications division marketed directly to the consumer, mainly through its gift store. By improving the image and product lines of the gift store, sales have grown and they have received favorable public comment. The store has an assortment of science educational toys and gifts for science enthusiasts of all ages and interests. In the past five years, gross revenue from the gift shop has varied from \$61,041 to \$98,750. In 1991, sales were at \$94,272 (3).

The Hansen Planetarium Publications and Gift Store are only two of many companies throughout Utah which exist or have the potential in the science education industry. Figure 3 illustrates only a beginning of a list of Utah companies active in science education directly or who contribute indirectly.



\* This list is not comprehensive

Figure 3: Utah Science-related companies  
(Source: Dialog Information System)

Recently, a newcomer, the **Nature Company**, moved into the Utah market. Operations began in September 1992 in a downtown mall. During a weekday morning, many shoppers were browsing over the nature gift items -- Utah people do have a genuine interest in science and do purchase science-theme items. Perhaps the move into the market by a highly respected retailer is an indication that Utah is ready to join the national trend in science education.

**Wild Goose** is a Utah company which assembles and markets science kits. Their kits are closely developed to follow state curriculum guidelines and come complete with a book of experiments and instructions. Their major market has been the California school system, but with increased effort, they are expanding and planning to sell product in eleven Western states within the next few years. In addition, they operate a retail store

where parents and science enthusiasts can purchase more kits and science items for use and gifts.

**Wicat and Wasatch Education** are both Utah companies which produce computer software for use in schools. Their product lines include mathematics and science components. Such programs enable a student to interact with a computer to encourage scientific thinking through problems, some with an emphasis on the environment. Wicat has recently formed a partnership with Jostens, one of the largest players in the computer software for educational use.

Due to limited time and resources, CISE staff was not able to contact each Utah company that the Dialog Information System provided (Figure 3). CISE staff is certain that there are many enthusiastic business leaders in Utah who support an entity such as CISE and the state's initiatives in this area. Workshops and newsletters will allow CISE to better bring this group of people together to enhance Utah's activities. This report is invaluable as a tool to business leaders who are looking for directions to better their profitability and market share. CISE has only begun to tap into the science education market and has discovered along the way that this report is the only one known to bring the industry into perspective.

## D. THE MARKETS FOR SCIENCE EDUCATIONAL PRODUCTS

Science educational materials are distributed through channels into the public and private educational market or through the wholesale/retail segment. These markets serve a total United States population of over 240 million with almost 45 million of them who are school aged (Figure 4). Nearly 65 million of the population are over the age of fifty and are actively making purchases for grandchildren. Parents, aunts, uncles, and other adults frequently purchase science articles for children's gifts. Where do they buy? Museum stores, toy and hobby stores, pet and fish stores, gift stores, and promotions advertising gimmicks are all outlets for science-related products, toys and novelties. Educational suppliers provide products for school and classroom use which serves a large population of children.

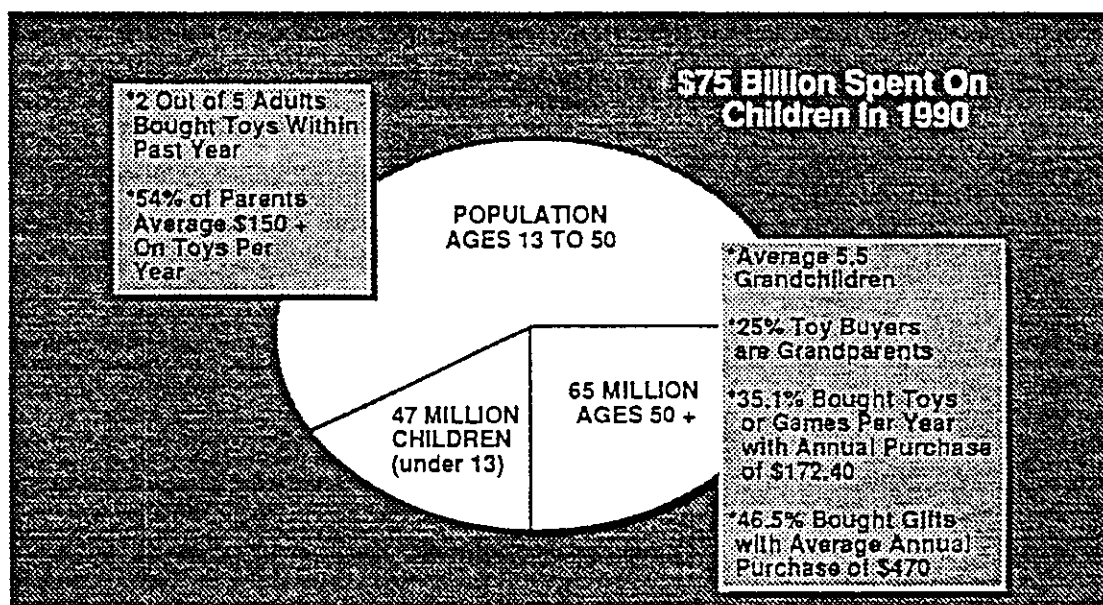


Figure 4: Demographics and Buying Trends in the United States  
(Sources: References 13, 15, 16, 17)

### 1. Education Market

Educational supplies include teacher materials, new science textbooks, science kits for classroom use, and science lab equipment. Over 2 million teachers in the United States teach in public, private, and Catholic schools. Of those 2 million, there are more than 100,000 who are science teachers (4). A majority of teachers, most of whom have no background in science, teach science in addition to other subjects, especially in the

elementary grades. Home schooling is a market which has rapidly expanded this past decade. Over 500,000 children are now schooled at home (5). Most at-home teachers have no training in the sciences and look to suppliers for help. Some suppliers cater specifically to this market (see Appendix).

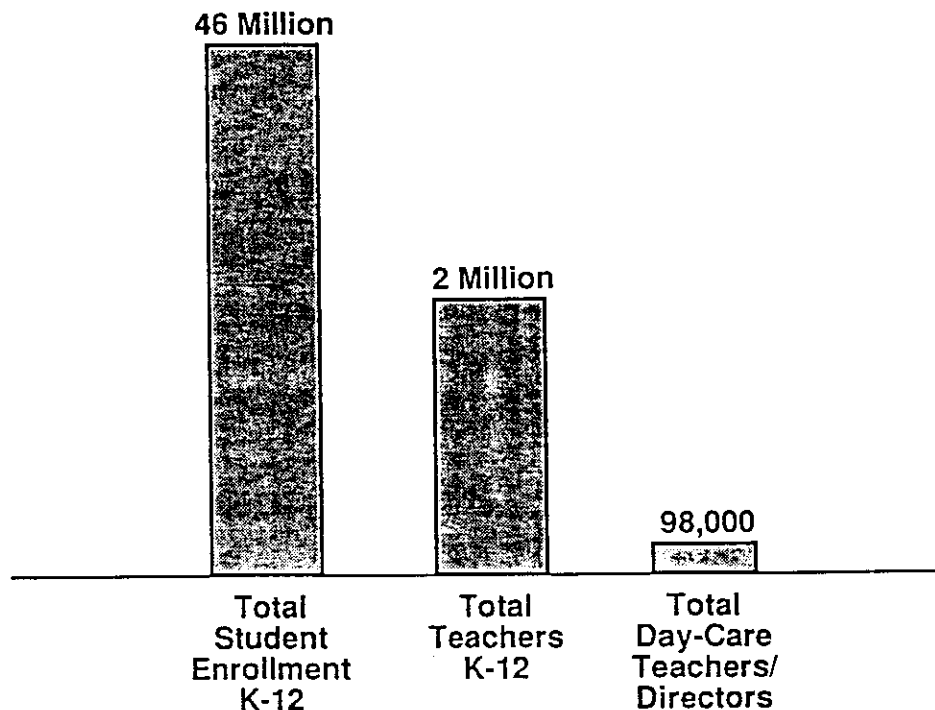


Figure 5: U.S. Education Market  
Includes Public, Private, and Catholic Schools  
(Source: Market Data Retrieval, 1990-1991)

Purchasing in schools varies from district to district. Large districts usually have a central purchasing departments. In smaller districts, purchasing is done by the teachers or a designated buyer. Independent and manufacturer's representatives call directly on the purchasing agent at the school or district office. The superintendent (and occasionally an assistant) makes the buying decision for very small districts. As district size increases, assistant superintendents, curriculum coordinators, and subject specialists are often responsible for the buying. The growing trend towards site-based management means principals and even individual teachers may become more important in the purchasing decision process.

Publishers of educational materials have seen changes in their market as new technology found its way into the classroom. This market once encompassed everything that was put on paper, from textbooks to tests to teacher manuals to supplementary

materials. Print publishing in education is still a very big business with over \$3 billion spent annually in the United States (Figure 6) (6).

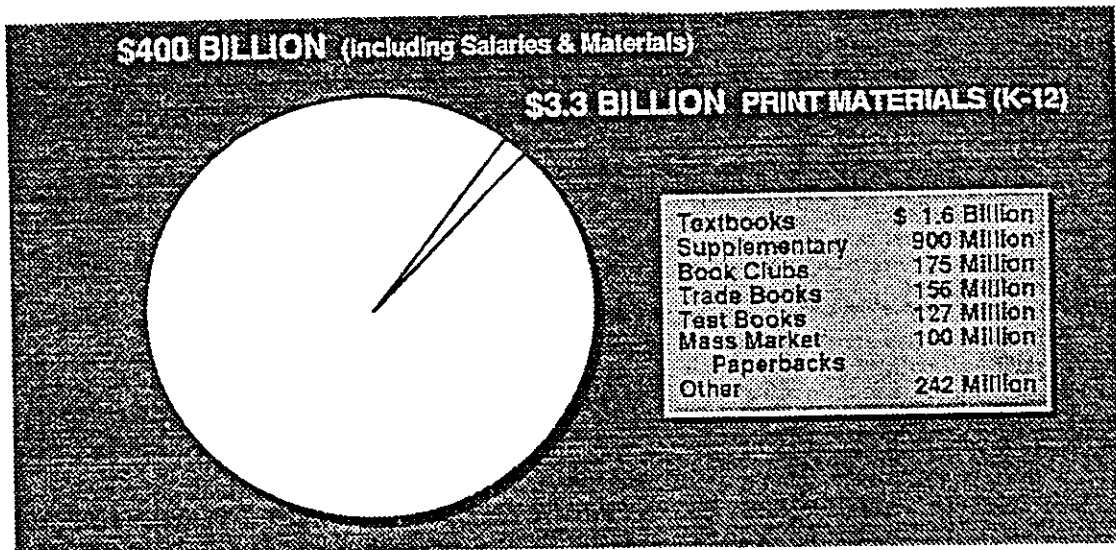


Figure 6: Educational Market-Publishing  
(Source: SIMBA Information, Inc./Education Marketer)

The most notable increase was in science textbooks from 1982 to 1989. According to the American Association of Publishers, there was a 125% increase during this short period.

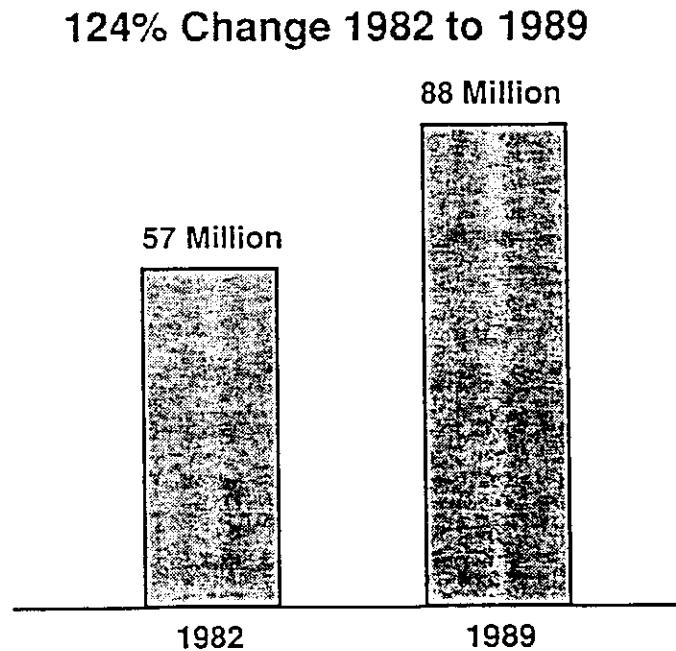


Figure 7: Estimated Industry Sales  
Science Textbooks K-12  
(Source: SIMBA Information, Inc./Educational Marketer)

The increase can be attributed to the reforms in science education and curriculum that are sweeping the country. With the increasing use of computers in the classroom, software has entered the educational publishing arena. SIMBA Information, Inc. has available a profile library which provides reports on key companies in book, educational and database publishing and distribution. The Educational Marketer, a newsletter from SIMBA, provides detailed information about educational publishing, materials, and equipment companies (see Appendix).

## 2. Museums

Museum stores in science-technology centers and museums are a familiar place to locate science-related items. At the Smithsonian, the world's largest complex of museums, the museum shops are among the most profitable. Here, they generated \$24 million in sales in 1987 (\$1,000 per square foot)(7). The Smithsonian draws a good portion of revenue from mail-order catalogs. These catalogs are mailed to more than 2.3 million people a year (7). Science and natural-history museum shops have scored big with dinosaur-type products. In the three years from 1982 to 1985, sales at Boston's Museum of Science store have almost doubled (8). Managers of museum shops are recognizing the need for effective marketing plans and more aggressive efforts.

There is a growing need for companies who specialize in science displays. Science exhibits are more interactive and require considerable time in the developing phase. The mechanical workings, the text or message, and the visitor's interaction must all be considered in building a successful exhibit. Companies, such as the New Curiosity Shop of California (415-966-1772), develop, construct, and market exhibits to museums. Several large museums, such as the Ontario Science Center (416-429-4100), market their displays to other museums who may wish to duplicate an exhibit at their facility.

For the state's bicentennial in 1996, Utah is currently considering a new science center facility. The new center will have interactive displays and will have many facets of science education. With diverse technology and leaders in their fields in Utah, the new science center promises a unique opportunity to the people of Utah and to others around the country (see Section F).



### **3. Retail Chain Outlets and Catalogs**

Of particular interest is the rapid growth and proliferation of retail outlets focusing almost exclusively on science-related products, such as **Worlds of Wonder**, **Natural Wonders**, and the **Nature Company**. The nation's growing interest in environmental and ecological issues has in part fueled this interest in science educational products. That interest is expected to continue and expand over the next decade or so. Both the Nature Company and Natural Wonders are rapidly expanding, each with over fifteen new stores expected to open this year.

The Nature Company retail chain sells a wide range of products through catalogs and retail outlets. They currently have over fifty retail stores nationwide and mail about six million catalogs a year (9). The unique selection of products were designed to increase the appreciation and understanding of the natural world. Product categories include books, audio and visual tapes, posters, paper products, gifts, educational toys, garden items, minerals, sculptures, and jewelry. Gift shoppers account for approximately 60% of sales, with fun shoppers bringing in another 30% of total sales. The remaining 10% are looking for specific items suited to their needs (10).

Looking at the dimension of this market and the vitality of the nature theme, Nature Company has grown from \$5 million in sales in 1983 to over \$50 million in 1991 (9). This represents a compounded growth of over 48 percent. Sales for 1992 are expected to be well over \$60 million. Another approach, which Nature Company anticipates to expand, is the establishment of kiosks. Kiosks are small retail outlets, as little as 100 square feet. Nature Company plans to open six kiosks in 1992 and estimates another 20 in 1993. They will be placed in high traffic areas such as train stations, airport, and test mall locations and will have an ordering area for catalog sales. With a tremendous success rate, many more stores similar to the Nature Company will be appearing nationwide.

### **4. Toy Stores and Books**

As a partial remedy to the declining proficiency in science, parents are turning to science toys. This category has also been fueled by growing concern nationally for the environment, nuclear energy, and recycling. According to the Toy Manufacturers of America (212-675-1141), education/science toy shipments reached \$44 million in 1990.

Manufacturers are becoming more aggressive in their marketing methods. For example, Tasco has come out with a new merchandising package called "Science Center" and which features over 16 different products. Skilcraft science kits have changed their packaging design to improve the "image" of science. Fisher-Price is now marketing new science products which are intended to interest the preschool set. The future looks bright for science toys, especially new and innovative products.

Electronic games, like Nintendo and Gameboy, account for the largest portion of the toy industry. Other electronic games are available which can connect to a TV and have an educational emphasis. Imagine the possibilities if Nintendo or other have makers were to incorporate a science theme into their products.

Books are changing with the science education reforms. Children's books are increasingly being published with fold-outs and pop-up activities. The newer generation of books will be more interactive, for example, the Explora Book published by the Exploratorium in San Francisco. This book comes with a magnet, agar, and other materials. Its pages are filled with activities which the reader performs in order to discover and understand. Explora Book is available from local nature/science theme stores or the nearest Nature Company store. There could be hundreds of such Explora Books for different age groups, different audiences, and different topics.

## **5. Pet and Fish Stores**

Pet and fish stores offer an excellent environment for developing science awareness products. Maintaining an aquarium is a task of duplicating a mini-ecosystem, and many store clerks are unaware of the science involved. The pet fish market is one of the fastest growing segments of the pet industry. According to Trevor Linc, the founder of fish franchises in the United States, there are 22 million aquarium owners nationwide buying \$3.5 billion worth of fish and supplies a year (11). Pet Supplies and Marketing and Tropical Fish Hobbyist are two of the trade publications for this market. Ray E. Hunziker, editor of Tropical Fish Hobbyist, claims that miniature coral reefs are leading the nationwide boom in the tropical fish industry (12). A fully stocked aquarium with a miniature reef costs between \$600 and \$4,000. Tropical fish may someday replace dogs and cats as the preferred domestic house pet.

The industry is bracing itself for regulations on the importation and removal of natural organisms due to the environmental damage now occurring in many areas. This will create a demand for technologies and companies who can produce and reproduce fish in captivity, minimizing the need to collect from natural populations.

## **6. Hospital, Hotel, and Airport Gift Stores**

While visiting with a sick child or grandchild, a parent or grandparent slips out of the hospital room and ventures to the gift shop to look for a gift to occupy the child's extra time and to provide an educational play time. With more people now educated than ever, parents and grandparents are shopping for educational gifts. Combine that with the recognition for improving science and mathematics in this country and you have an ideal setting for science-related gifts. People are also living longer and traveling more, hence, they are more likely to pick up gifts along the way to bring home to their children or grandchildren. Hotels, national parks, and famous landmarks typically have gift shops.

Parents and grandparents are spending nearly \$75 billion on children (Figure 4). Grandparents, which account for 25% of the toy buyers, have an average of 5.5 grandchildren. About 2 out of 5 adults are toy buyers. As for spending, 54% of parents averaged \$150 on toys in a year while grandparents spent an average of \$172 (13).

Airport terminals are changing across the nation to becoming shopping malls. Thousands of consumers are passing through and waiting in major airports everywhere. Europe has already tapped into retail development at airports. Carnegie Museum has been seriously considering opening museum shops at airport terminals. Bloomingdale's of New York has developed a Bloomi's Express, and Cockpit, a catalog retailer with an aviation theme, are both looking at space in airport stores. At Denver's International Airport, specialty shops will accommodate to airport travelers with a greater emphasis on customer service. At Portland's airport, a Nike store allows passengers to purchase athletic shoes while waiting for flights. Stores with a "Made in Oregon" and "Made in Pennsylvania" theme are capitalizing on traveler's appeal to purchase in-state products. The type of products available at airport stores are impulse items. Ira Weinstein, President of Airport Interviewing and Research Inc., a White Plains, N.Y. consulting firm (914-428-3805), has interviewed airport travelers about what they would like to see in their airport experiences. AIR provides comprehensive information about travelers and concessions at airports.

## **7. Promotional Advertising Efforts**

Fast food restaurants are cashing in on the science craze. Marketing efforts aimed at children's meals are focused on environmental and ecological themes. Rax restaurants, a 500-unit sandwich chain headquartered in Ohio, has a long-term commitment to science in collaboration with the National Science Teachers Association. The project, The Discovery Club, is multi-layered through classroom participation, community activities, and a science education fund. The Discovery Club is essentially a teacher-designed program that rewards students in elementary school for science achievement. Within the store, several children's meals will have a scientific theme. "Optic Topics" was the title of the first children's meal and it included magnifying glasses, 3-D glasses and periscopes. The Rax Educational Fund will provide additional money to teachers to purchase classroom science equipment. Other support from Rax will go to community-related activities and to local science fairs (14).

## **8. The Business of Job Training**

Many companies must train new employees to develop the skills required for the work they will perform. Many of the skills are technical and require some science and mathematical abilities. One estimate indicates that U.S. companies are spending \$25 billion a year to upgrade employee skills. Outside companies are sometimes contracted to come in and provide the appropriate training. Software designed specifically for this application has become big business.

## E. MARKETING AND DISTRIBUTION

You have spent many years and numerous hours to develop your product and are now ready to place it into the market. Where do you start? First, you must define where the product best fits. Is it for classroom use? If so, is it for elementary, middle, or high school level? Are you going to concentrate your marketing efforts on public or private schools? Perhaps your product is too costly for school budgets, or, maybe, your product is a mass-marketable item. Is your product suited for mail-order catalogs, a large company's product catalog, or will you need to have your own printed marketing tool?

Individual representatives may be interested in your product to add to their existing lines or you may want to consider putting your product with a dealer who is a school supplier with a showroom setting and a catalog. Most states and school districts have annual teacher conventions where product booths are set up. The National Science Teachers Association (NSTA) sponsors an annual meeting in the spring and a variety of regional meetings with large attendance by science educators. Trade shows to consider include the Ed Expo and EDSA International. For those catering to the home school market, separate conventions exist (Appendix). Mailing lists for various school personnel are available through Market Data Retrieval and QED. NSTA will provide a mailing list of all member science teachers for a fee. Other selection options, like geographic area or schools with computers, are available from the companies above and are worth considering.

Before investing large sums of money into the finished product, a market test and sampling would reveal any flaws and would act as a gauge of responsiveness. This may be done by gathering science teachers and possibly students to try your product, or, you may attend seminars and training sessions for science teachers and pass your product around for response.

The retail market is much different than the educational market. While not restricted by low school budgets, other factors such as inventory controls and rate of product turn-over will set limits. Does your product have a gift potential or is it more of an educational toy? Many stores exist that are ready to grab innovative-type products. Several specialized stores exist which have a science/nature emphasis such as Nature Company and Natural Wonders. Products which can be marketed at these stores are often suitable for museum shops at science-technology centers, zoos, natural history

museums, and aquariums. Does your product resemble more of a gift which would appeal to grandparents or parents? Is your product appropriate for pet and aquarium stores?

Marketing techniques will depend on the size of the retail outlet you have chosen. For example, product selection for chain outlets, such as Nature Company and Natural Wonders, will need to be coordinated at the corporate offices for nationwide distribution. Key personnel may be the sales manager, purchasing agent, or marketing manager. You will need to make calls to determine who is in charge of product selection. For smaller stores, often the person to speak to is the manager and can usually be found on the premises. Still, the manager may not be the person making the purchasing decisions and you should ask to speak to the proper person.

Trade shows are an excellent mechanism for presenting your product into the market. Other exhibitors may be interested in your product or provide the name of another potential manufacturer or outlet. Toy Manufacturers of America can provide show information regarding toys and hobbies. America Museum Association and Association of Science-Technology Centers have listings and information about museum gift stores nationally. Gifts and Decorative Accessories, a gift industry magazine, is a useful source if your product fits into the gift category (Appendix).

## **F. THE UTAH SCIENCE CENTER**

Utah's Unique Science Center (UUSC) is a major state initiative to develop a fully modern, state of the art, interactive, discovery-based, science and technology center for the state of Utah. The plan is to have the center open during the state's centennial year, 1996.

The Utah Science Center task force has been meeting for over two years, has produced a variety of reports, studies, and plans to provide the basis for the science center initiative.

In addition to contributing dramatically to science and technology literacy and experiences for Utah citizenry, the science center will provide a major stimulus for the development and growth of a science education industry in Utah.

As indicated earlier in our discussion of the Hansen Planetarium's commercial activities, the science center would be expected to produce a variety of materials for science education which would be distributed and sold primarily out of state and internationally. These products include interactive hands-on exhibits, science and technology discovery kits, various science project materials, workshops, short courses, and other activities with national and even international draw, and of course a variety of books and other publications.

Like any other high technology activity, the science center will spin off a variety of initially small, rapidly growing companies which will, in their own right, make significant contributions to the Utah economy. The Utah Science Center is expected to be a 30 to 50 million dollar project. It will dramatically increase Utah's visibility and reputation as a science and technology-based state, and through its activities, will dramatically enhance Utah's economic base.

For further information contact the Hansen Planetarium/Utah Science Center, (801) 538-2104 ext. 227, or the Center for Integrated Science Education (CISE) at the University of Utah, (801) 581-4379.

## **G. GROWTH POTENTIAL FOR SCIENCE EDUCATION INDUSTRY**

Science illiteracy is widely recognized as a threat to our great nation, both economically and ecologically. It is increasingly difficult for high-technology firms to find the scientists and engineers who will make tomorrow's discoveries and develop tomorrow's products. The shortage of competent people is a long-term problem that threatens the competitiveness of the United States in today's global economy. The citizenry is called upon to make legislative decisions which affect our national and global environment. In order to make such decisions, this generation and future generations must base these decisions on scientific fact and understanding.

This decade will be the beginning of an increased effort to preserve the global environment. Companies everywhere are pitching in to promote recycling. Environmentalists are fighting to protect natural habitats for species everywhere. The EPA keeps watchdog over companies for the safe disposal of chemicals and nuclear wastes. But these efforts require the scientific skills to creatively find ways to effectively deal with these problems without further harming the delicate balance of nature.

The success of Nature Company, Natural Wonders, National Wildlife, National Geographic, the Smithsonian shops, the Boston Museum of Science, the Exploratorium, new aquarium centers, and science centers everywhere are evidence of the increased awareness among the general public. Opportunities exist that never did before. Airport terminals are becoming shopping centers, nature theme stores are rapidly expanding, museum managers are more aggressive marketers, software and videos are increasingly found in classrooms, children's books include interactive mechanisms, aquarium business is booming, and hotel gift shops have boosted revenues as more people travel.

With many new technological advances and businesses, the potential to pour innovative products into the market is immense. Medical technology companies can adapt their devices for classroom use or retail sales. Imagine looking at the inner structure of a frog through inexpensive imaging equipment. Animal dissection is already prohibited in some classrooms. Physics and materials technology can play a role in this industry. Lasers can be safely built into interactive educational books for children. Biotechnology can be incorporated into novel products. Protein Solutions, a Utah Company, has developed "Night-Life" and "Galaxsea", which captivate a child by using bioluminescent organisms. Software technologies can design programs which can cover



a vast array of scientific inquiry. Electronic games can introduce science concepts into a game cartridge. In the field of bioengineering, acquired knowledge of body mechanics can be applied to teach about joint structure, body movement, and muscles, particularly related to sports. Devices can be used to educate people about the flow of electric currents in their bodies and their relevance to muscle contractions.

In order to bring about new uses for technology in science education, brainstorming is essential. Partnerships among colleges, universities, and businesses are helpful. Workshops could be established to coordinate efforts to develop new products and determine the marketing potential. Colleges and universities could employ students to conduct market analysis and product evaluation. If the product is a "hit" after doing actual market testing, the final market strategy and distribution network can be decided. Existing companies, and possible new ones, can successfully enter their innovative product into the market.

## H. REFERENCES

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10. Company Report, 7 Jan (1992) pp 6-8.
11. Dunlap, Lisa. "Aquapreneur Lanches First Fish Franchise," Houston Business Journal, 25 Sept. (1989) p 1.
12. Keith Bradsher, "And Now, in Living Coral...," The New York Times, v. 139, 3 Dec. (1989) p 74 (L).
13. Monica Gonzales, "Toys that Teach," American Demographics, v. 10, Dec. (1988) p 21.
14. Bill Carlino, "Rax Kids' Program Has Learning Down to a Science," Nation's Restaurant News, 30 July (1990) p 12.
15. Don Longo, "Family Key to Nurturing Kids' Market Growth," Discount Store News, v.30, July 8 (1991) 8.
16. Liane McAllister, "Kids' Market is Bomming," Gifts and Decorative Accessories, v 91, Feb. 1991, p. 63.
17. Jeff Ostroff, "An Aging Market: How Businesses can Prosper," American Demographics, May. 1989, p. 26.

## APPENDIX

### A. Trade Shows and Exhibits

#### ED EXPO, April

National School Supply and Equipment  
Association  
P.O. Box 13276  
8300 Colesville Road, Suite 250  
Silver Springs, MD 20911-3276  
(301) 495-0240  
(800) 395-5550

#### AAAS (American Association for the Advancement of Science), February,

##### Annual Meeting

Meetings Office  
1333 H. Street, NW  
Washington, DC 20005  
General Information: (202) 326-6450  
Marketing and Exhibits: (202) 326-6462  
FAX: (202) 289-4021

#### EDSA INTERNATIONAL, April

##### EDSA INTERNATIONAL

711 W. 17th Street J -5  
Costa Mesa, CA 92627  
(714) 642-3986  
(800) 654-7099  
FAX: (714) 642-7960

#### ANNUAL FALL CONVENTION

##### November

National School Supply and Equipment  
Association  
P.O. Box 13276  
8300 Colesville Road, Suite 250  
Silver Spring, MD 20910  
(301) 495-0240  
(800) 395-5550  
FAX: (301) 495-3330

#### HELP (Home Educators Leadership Program), June

Bob Jones University  
Greenville, SC 29614  
Reservations: (803) 242-5100

#### NSTA (National Science Teachers Association), Spring Annual Conference

National Science Teachers Association  
1742 Connecticut Ave., NW  
Washington, DC 20009-1171  
(202) 328-5800  
FAX: (202) 328-0974

#### ASTC (Association of Science- Technology Centers), Fall Annual Conference

1025 Vermon Ave., NW,  
Suite 500  
Washington, DC 20005-3516  
(202) 783-7200

#### AMERICAN INTERNATIONAL TOY FAIR, February

Toy Manufacturers of America, Inc.  
200 Fifth Avenue  
New York, NY 10010  
(212) 675-1141  
FAX: (212) 633-1429

### B. Catalogues:

#### Beckley-Cardy Inc.

5 West First Street  
Duluth, MN 55802  
Kay Kleffman  
(218) 725-2234

#### Educational Toys, Inc.

P.O. Box 630685  
Miami, FL 33163-9950  
(800) 554-5414 + 109

#### Flinn Scientific

Batavia, IL  
Phillip Nyren  
(708) 879-6900

#### Gifted Child Today Catalog

Mobile, AL  
Marvin Gold  
(205) 478-4700

Hubbard Scientific  
Boulder, CO.  
Joe Distelano  
(303) 443-0020

Learning Things, Inc.  
P.O. Box 436  
Arlington, MA 02174  
(617) 646-0093  
Richard A. Onanian, President

Middle School Catalog  
J. Weston Walch, Publisher  
321 Valley Street  
P.O. Box 658  
Portland, Maine 04104-0658

Midwest Scientific  
P.O. Box 458  
228 Meramec Station Road  
Valley Park, MO 63088

MP1  
Lansing, Michigan  
Elaine Miller  
(517) 393-0440 x 45

Science and Nature Distributors  
Yarmouth, Maine  
Julie McMurry  
(207) 846-3746

### **C. Directories/Listings**

Aquarium Society Directory  
Federation of American Aquarium  
Societies  
923 Wadsworth Street  
Syracuse, NY 13208

Fresh Water and Marine Aquarium  
Magazine  
Pet Shop Directory

Marine Parks and Aquaria of the U.S.  
A.L. Pacheco  
Lyons and Burford, Publ, 1989.

Museum Directory (1993 Official ), and  
Products and Services Guide  
American Association of Museums  
1225 Eye Street, NW  
Washington, DC 20005  
1-800-521-8110  
(Available from National Register Publ.  
Co., 1-800-323-6772)

National Park Cooperating Association  
CNB Plaza, Suite 302  
200 Forks of the river Parkway  
Sevierville, TN 37862  
(615) 428-4239  
Debra Trout, Exec. Director

Zoo Life (magazine)  
Guide to American Zoos  
summer, 1992, pp. 99-109

Zoological Parks and Aquariums in the  
Americas, 1992-93, AAZPA, 1992.  
L.J. Boyd, Editor

### **D. Journals and Magazines**

American Biology Teacher  
National Association of Biology  
Teachers  
11250 Roger Bacon Drive, #19  
Reston, VA 22090  
Dan Wivagg, Associate Editor  
Letters

American School Board Journal  
National School Board Association  
1680 Duke Street  
Alexandria, VA 22314  
(703) 838-6210  
Sally Banks Zakariya, Editor  
Letters/Advisor

Aquarium Fish Magazine  
Fancy Publishers  
P.O. Box 6050  
Mission Viejo, CA 92690  
(714) 855-8822  
Edward Bauman, Editor

Physics Teacher

American Association of Physics  
Teachers  
5112 Berwyn Rd.  
College Park, MD 20740-4100  
(516) 632-8019  
Clifford Swartz, Suny Stony Brook, Ed.

BioScience

American Institute of Biological  
Sciences  
730 11th St. NW  
Washington, DC 20001-4521  
(202) 628-1500  
Articles/Viewpoint/Roundtable/Educ.  
Editor: Julie Ann Miller

Childhood Education

Journal of the Association for Childhood  
Education International  
11501 Georgia Ave., Suite 315  
Wheaton, MD 20902  
(301) 942-2443  
Editor: Lucy Prete Martin

Creative Classrooms (elementary)

Children's Television Workshop  
One Lincoln Plaza  
New York, NY 10023  
(212) 875-6733  
Editor: Elaine Israel  
Tips from Teachers/For Your  
Information

Curriculum Product News

Educational Media, Inc.  
992 High Ridge Road  
Stamford, Connecticut 06905  
(203) 322-1300  
Editor: Jane Y. Woodward  
Special Focus/New Products/Product  
Showcase (ads)

Discover

114 Fifth Avenue  
New York, NY 10011  
(202) 229-0120  
Robert Kunzig, News Editor

Education Dealer Magazine

171 Reed Street  
P.O. Box 1080  
Geneva, NY 14456  
(800) 344-0559

Executive Educator

1680 Duke Street  
Alexandria, VA 22314  
(703) 838-6722  
Sally Banks Zakariya, Managing Editor  
Endpaper

Gifted Child Today

P.O. Box 6448  
Mobile, AL 36660-0448  
(205) 478-4700  
Editor: Marvin J. Gold  
Activities/Reviews/Articles

Instructor

Scholastic, Inc.  
P.O. Box 53895  
Boulder, CO 80323-3895

J. Chemical Education

J.J. Lagowski, Ed.  
University of Texas at Austin  
Austin, TX 78712  
New Products/Labs/Articles

J. Science Teacher Education

Association for Education of Teachers in  
Science (AETS)  
Rm. 310, 1200 Chambers Rd.  
Columbus, OH 43212  
David Haury, Editor

Junior College Science Teaching

National Science Teachers Assoc.  
3140 N. Washington Blvd.  
Arlington, VA 22201  
(703) 243-7100  
Editor: Lester G. Paldy @ SUNY  
(516) 632-7075  
Letters/Point of View/In Brief/Favorite  
Demo/Articles

Learning 92, Springhouse Corp.

1111 Bethlehem Pike  
Springhouse, PA 19477  
(215) 646-8700  
Editor: Charlene Gaynor  
Tips/Features/New Products

National Geographic World

17th and M Streets, NW  
Washington, DC 20036  
1-800-638-4077  
Editor: Pat Robbins  
Kids Do It!/Features

National Parent Teachers Association Magazine

Natural History

Central Park West at 79th St.  
New York, NY 10024  
(212) 769-5500

Pet Supplies and Marketing

Salt Water Sportsman

280 Summer Street  
Boston, MA 02210  
(617) 439-9977  
Barry Gibson, Editor  
(617) 439-9977

School Days (Elementary)

Frank Schaffer Publ., Inc.  
23740 Hawthorne Blvd.  
Torrance, CA 90505  
(310) 378-1133  
Editor: Barbara Allman  
Theme Units/Ready to Go Science

Science Educator

National Science Supervisors Assoc. J.  
Department of Curriculum and Instruction  
East Tennessee State University  
Johnson City, TN 37614  
Editor: Jack Rhoton  
(516) 267-3692

Science and Children

(preschool/elementary/middle school)  
National Science Teachers Association  
1742 Connecticut Ave., NW  
Washington, DC 20009-1171  
(202) 328-5800  
Editor: Phyllis R. Maraccio  
In the News/Eureka!/Teaching Teachers/Res. Reviews/Features

Science Probe!

433 Twin Oaks Road  
Seguin, TX 78115  
(512) 372-0548  
Forest M. Mims, Editor

Science Scope

National Science Teachers Association  
1742 Conn. Avenue, NW  
Washington, DC 20009  
(202) 328-5800  
Steven J. Rakow, Editor

Science Teacher

National Science Teachers Association  
1742 Connecticut Ave., NW  
Washington, DC 20009  
(202) 328-5800  
Editor: Juliana Texley  
Briefs/Letters/Ideas/Notes/Articles/news

Teacher Magazine

Washington, DC  
Editor: Laura Miller  
(202) 364-4114

Teaching K-8

1200 Park Newport, Suite 421  
Newport Beach, CA 92660  
(714) 644-2402  
Michael Hegden, Science Columnist

Toy and Hobby World

Toy Book

Tropical Fish Hobbyist Magazine

1 TFH Plaza  
Neptune City, NJ 07753  
Maymond Hunziker, Editor

**E. Newsletters/Newspapers:**

\*Indicates unlikely to run press release or product evaluations

AETS Newsletter

Association Education Teachers Science  
5040 Haley Center, Auburn University  
Auburn, AL 36849-5212  
(205) 844-6799  
Bill Baird, Exec. Sec./Ed.

Announcer

American Association of Physics Teachers  
5112 Berwyn Rd.  
College Park, MD 20740-4100  
(301) 345-4200  
Bernard Khoury, Editor

ASTC Newsletter (bimonthly)

Association of Science and Technology Centers (ASTC)  
1025 Vermont Ave., NW, Suite 500  
Washington, DC 20005-3516  
(202) 783-7200  
Jill Reiss, Interim Editor  
Chris Raymond, Director of Publications  
"Museum Marketplace" column

\*BSCS -- Innovative Science Education Newsletter (semi-annual)

830 N. Tejon St., Suite 405  
Colorado Springs, CO 80903  
(719) 578-1136  
Catherine M. Monson, Editor

Center Piece Newsletter

Lesley College  
Center for Math, Science & Technology in Education  
29 Everett St.  
Cambridge, MA 02138-2790  
Judith Royer

Communique (AAZPA)

Oglebay Park  
Wheeling, WV 26003  
(304) 242-2160  
Linda Boyd, Managing Editor  
"Announcements" column

CSTA Newsletter

Conn. Science Teachers Assoc.  
Hurlbutt Elementary School  
9 School Rd.  
Weston, CT 06883  
(203) 869-4020  
Eileen G. Gengston, Co-Editor  
William Peltz, Co-Editor

\*Curriculum Report (bimonthly)

National Association of Secondary School Principals (NASSP)  
1904 Association Dr.  
Reston, VA 22091  
(703) 860-0200  
Thomas F. Koerner, Dir. of Publications

Environmental Education News

Wisconsin Dept. Natural Resources  
P.O. Box 7921  
Madison, WI 53707-7921

EPA Earth Notes

U.S. EPA  
Office of Environmental Education  
A-107, 401 M. Street, SW  
Washington, DC 20460  
(202) 260-4484

Federation Report

Federation of American Aquarium Societies  
923 Wadsworth Street  
Syracuse, NY 13208

Focus on Science Education

Calif. Academy of Sciences  
Golden Gate Park  
San Francisco, CA 94118  
(415) 750-7145  
Mary Marcussen, Editor

Hands On!

TERC  
2067 Mass. Ave.  
Cambridge, MA 02140  
(617) 547-0430  
Lori Kenney, Editor

Helping Children Learn

Parent Institute  
P.O. box 16  
Fairfax Station, VA 22039-0016  
(703) 323-8925

High Strides Newsletter

Education Writers Association  
1001 Connecticut Ave, NW  
Washington, DC 20036-5541  
(202) 429-9680  
Anne C. Lewis, Editor

Marine Conservation News

1725 De Sales St. NW  
Washington, DC 20036  
(202) 429-5609  
Rose Bierce, Editor

Masthead

Mass. Association of Science Teachers  
P.O. Box 87, West Side Station  
Worcester, MA 01602  
Joyce Gleason, Editor  
"Goods and Services"

Missouri Science News

16 E. Church St., Box 46  
Bowling Green, Missouri 63334-0046  
Claud T. Greenlee, Editor

NCEA Notes

National Catholic Education Association  
Suite 100, 1077 30th St., NW  
Washington, DC 20007-3852  
Mr. Frank Savage, Editor

NEA Today

National Education Association  
1201 16th St., NW  
Washington, DC 20036  
(202) 822-7207

News and Views

National Association of Biology  
Teachers (NABT)  
11250 Roger Bacon Dr. #19  
Reston, VA 22090  
(703) 471-1134  
Cheryl Merrill, Editor  
"Update" and "Regional News" columns

\*NSRC Newsletter (Quarterly)

National Science Resources Center  
Smithsonian Institution, MRC-502  
1201 Arts and Industries Bldg.  
Washington, DC 20560  
(202) 357-2555  
Douglas Larp, Executive Director

NSTA Reports!

National Science Teachers Association  
1742 Conn. Avenue, NW  
Washington, DC 20009  
(202) 328-5800  
Ann Wild, Editor  
"Science Teachers Grab Bag"

Playthings

51 Madison Avenue  
New York, NY 10010  
(212) 689-44??  
End paper column

\*Science Education News (monthly)

American Association for the  
Advancement of Science (AAAS)  
1333 H Street, NW  
Washington, DC 20005-4792  
(202) 326-6620  
Barbara, Walthall, Editor

Science News

1719 N. Street, NW  
Washington, DC 20036  
(202) 785-2255  
Patrick Young, Editor

Science of Food and Agriculture

CAST (Council for Agric. Sci. Tech.)  
137 Lynn Ave.  
Ames, IA 50010-7197

Science Weekly Teaching Notes

Level A  
P.O. Box 70154  
Washington, DC 20088-0154  
(301) 680-8804  
Rebecca Brune, Editor

\*SMILE Update

Oregon State University  
Ads A-100  
Oregon State University  
Corvallis, OR 97331-2104  
(503) 737-2388  
Sue Borden, Editor

Super Science Red

Scholastic, Inc.  
730 Broadway  
New York, NY 10003  
Frances Nankin, Editor

Teacher Magazine

Suite 250  
4301 Conn. Ave., NW  
Washington, DC 20008  
(314) 324-2100  
(314) 734-3940  
C.T. Greenlee



VSTA Newsletter  
Vermont Science Teachers Assoc.  
RR 1, Box 1128-D  
Charlotte, VT 05445  
Roberta Whitmore, Editor

**F. Local:**

\*Adventures/Utah Natural History  
Utah Museum of Natural History  
University of Utah  
S.L.C., UT 84112  
Patty Kimball, Editor

Collaborator  
Edith Bowen Laboratory School  
College of Education  
Utah State University  
Logan, UT 84322  
Donald Daus

Growing Wild  
Utah's Project WILD Newsletter

\*Molt  
Wild Goose Company  
5181 So. 300 W.  
Murray, UT 84107  
B.K. Hixson, Editor

POINT Newsletter  
American Federation of Teachers  
1865 So. Main St., #5  
S.L.C., UT 84115  
466-8700  
Clitt Millward, Editor

Project Learning Tree  
Joan Dolph  
538-5505

\*Safari -- News from Utah's Hogle Zoo  
(monthly)  
2600 E. Sunnyside Ave.  
P.O. Box 58475  
S.L.C., UT 84158-0475  
(801) 582-1631

Sound-Off  
Utah State PTA  
Newsletter  
Sherma Yeates, Editor

UEA News (Utah Education Association)

Utah Private Childcare Assoc.  
not in phone book

Utah Society for Environmental Education  
350 E. 500 So., Suite 2018  
S.L.C., UT 84111  
(801) 328-1549  
Vern Fridley

Utah Science Teachers Association (USTA) Newsletter  
Department of Zoology  
Brigham Young University  
Provo, UT 84602  
378-4398  
Richard Tolman, Editor

Viewpoints  
Utah Association for Supervision and Curriculum Development  
Jordan School District  
9361 So. 300 E.  
Sandy, UT 84070-2998  
Jean Wullam, Editor

**G. Miscellaneous:**

Canadian Museum Association  
280 Rue Metcalfe Street, Suite 202  
Ottawa, Ontario, CANADA K2P 1R7  
(613) 233-5653  
John McAvity, Exec. Director  
1991 June, Hamilton, Ontario

Educational Marketer  
SIMBA Information, Inc.  
P.O. Box 7430  
Wilton, CN 06897  
(203) 834-0033  
Glenn Sanislor, Editor

Gifts and Decorative Accessories  
Geyer-McAllister Publications, Inc.  
51 Madison Avenue  
New York, NY 10010

Giftware News  
Talcott Communications Corp  
3405 Empire State Building  
New York, NY 10118

Home School Source Book  
By Don Reed  
Brook Farm Books, Maine (publisher)

Market Data Retrieval  
16 Progress Drive  
P.O. Box 2117  
Shelton, CT 06484-2117

Mid Atlantic Association of Museums  
P.O. Box 817  
Newark, DE 19715-0817  
(302) 731-1424  
Rebecca Wilson, Exec. Director  
1991 Oct. Buffalo, NY

Midwest Museum Conference  
Illinois State Museum  
Spring and Edwards Streets  
Springfield, IL 62706  
(217) 782-7388  
Edward Munyer, Assist. Director

Museum Store Association  
1 Cherry Center, Suite 460  
501 South Cherry Street  
Denver, CO 80222  
(303) 329-6968  
Beverly Barsook, Exec. Director

Science and Mathematics Education  
Briefing Book  
National Science Teachers Association  
1742 Connecticut Avenue, NW  
Washington, DC 20009  
Profile and Buying Influence Study

National Diffusion Networks  
US Dept. Education  
555 New Jersey Ave.  
Washington, DC 20208  
Linda Jones

National School Supply and Equipment  
Association  
8300 Colesville Road, Suite 250  
Silver Spring, MD 20910  
(301) 495-0240

New England Museum Association  
Boston National Historical Park  
Charlestown Navy Yard  
Boston, MA 02129  
(617) 720-1573  
Laura Roberts, Exec. Director

Quality Education Data, Inc. (QED)  
A division of Peterson's Guides, Inc.  
1600 Broadway, 12th floor  
Denver, CO 80202-4912

School Market Research Institute  
P.O. Box 10  
Haddam, CT 06438  
(203) 345-4018  
Bob Stimolo

Toy Manufacturers of America  
200 Fifth Avenue  
New York, NY 10010  
(212) 675-1141

Western Museums Association  
5801 Wilshire Boulevard  
Los Angeles, CA 90036  
(213) 857-6307/6328  
Kate Sibley, Exec. Director