

Grassroots Education Campaign Launched in Three U.S. Cities

Exposing people to math, science, and technology has not traditionally been considered the job of organizations such as the National Urban League or the Camp Fire Boys and Girls.

Yet this is the role envisioned for these and other community-based organizations as part of a national initiative aimed at increasing the math, science, and technology skills of residents in three U.S. cities.

The pilot sites chosen for "Science Linkages in the Community" are Rochester, New York; Chicago, Illinois; and Rapid City, South Dakota. Funded with a \$3.6-million grant from the DeWitt Wallace-Reader's Digest Fund, the 4-year campaign calls on community-based organizations and other educational institutions—including museums and universities—to coordinate their informal, or out of school educational programs as well as to support school-based reform. The goal is to steer the efforts of these organizations along the same course, and ultimately, boost the effectiveness of their science, math, and technology programs.

The initiative is being launched by the AAAS Directorate for Education and Human Resources (EHR). But EHR Director Shirley Malcom said that while AAAS has ample experience in developing national models to improve science, math, and technology education, only the members of each community can contribute to building a successful local campaign.

"When we go into a community, we know there are certain generalizations that can be made," said Malcom. "However, it is the members of the community who are the experts. AAAS becomes a catalyst to help community groups develop their strategy. Once their vision is articulated, we give them the assistance and tools they need to implement that vision."

The premise, according to

Yolanda George, director of Science Linkages in the Community at AAAS, is that education should not begin and end in the school.

"It is widely recognized that the time children spend out of school offers an ideal opportunity for them to take part in activities



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**—Shirley Malcom,
Director,**

AAAS Directorate for Education and Human Resources

that will help them become successful adults," said George. "While many organizations conduct out of school activities, their efforts are often fragmented. Through this initiative, communities can learn how they can improve their programs and coordinate them so that the end result is much more effective."

Children won't be the only benefactors of the strategy. With the assistance of AAAS, adults will be trained in each city to teach science, math, and technology programs to other adults, as well as to students. According to AAAS, the initiative will create a cadre of trained experts

throughout each community who can replicate effective science, math, and technology programs.

During the first year of the plan, AAAS will bring together leaders in each of the three pilot cities who represent community-based organizations, government, universities, schools, businesses, and other educational institutions. At a two-day retreat planned for each city, participants will begin making an inventory of educational resources in the community. Rapid City held its retreat in mid-October. The Chicago and Rochester retreats are scheduled for November.

Once a planning council is established in each city, it will be asked to develop a detailed concept for coordinating the various programs throughout the community to increase their effectiveness and reach a wider audience. A formal grant proposal must be submitted to AAAS within 1 year and may include requests for up to \$300,000 in grants within the next three years. A portion of the grants must be matched either in dollars or in-kind contributions from the community.

The planning councils will rely on the assistance of AAAS to help them develop their proposals. Toward this goal, AAAS will sponsor two community briefings and three training sessions in each city within the next 12 months.

The initiative includes the establishment of a national council to advise the effort and disseminate the lessons learned.

In October, leaders from the national headquarters of more than 20 community-based organizations and other educational institutions met in Washington to

explore the initiative.

Dagmar McGill, deputy national executive director for Big Brothers/Big Sisters of America who attended the national meeting, said the initiative allows her organization to take a new direction in helping youngsters.

"The excitement for me was bringing community-based organizations together with the science and education community—a partnership that Big Brothers/Big Sisters never had the opportunity to be involved with before," said McGill. "While it is true that partnerships among many of these groups exist, this initiative brings them together on a much larger scale."

In Rapid City, more than 35 local leaders within the community participated in the retreat. Among the participants was Merilee Fowler, executive director of the Big Brothers/Big Sisters of the Black Hills. She said she has already begun to identify areas where her chapter can help in Rapid City.

"We've had a mentoring program designed to help students struggling with their studies," Fowler added. "Through Science Linkages in the Community, we can work harder to recruit men and women in science, math, and technology and help match them with students throughout the community who can benefit from their expertise."

Malcom noted that at the heart of Science Linkages in the Community is the idea that every organization involved in the initiative can contribute to its success. According to Malcom, respect is key.

"By respecting what other organizations bring to the table, Science Linkages in the Community allows organizations to take ownership of their vision," said Malcom. "It is important that they realize that by participating, their intent should be twofold: to identify what they can contribute, as well as recognize how they will benefit. It is a valid partnership in every aspect."

AAAS Members Distinguished for Contributions to Science

In September, the AAAS Council elected 249 members as Fellows of AAAS. These individuals will be recognized for their contributions to science at the Fellows Forum to be held on 20 February 1994 during the AAAS Annual Meeting in San Francisco. The new Fellows will receive a certificate and a blue and gold rosette pin as a symbol of their distinguished accomplishments. Presented by section affiliation, they are:

Agriculture

Marion Fisher Baumgardner, Purdue Univ.; Dwayne R. Buxton, Iowa State Univ.; Steve A. Eberhart, National Seed Storage Laboratory; Robert R. Granados, Cornell Univ.; Robert W. Herdt, The Rockefeller Foundation; William R. Meredith Jr., U.S. Department of Agriculture; Raymond J. Miller, Univ. of Maryland; James J. Zuiches, Washington State Univ.

Anthropology

Elizabeth M. Brumfiel, Albion College; Hester Ashmead Davis, Arkansas Archaeological Survey; Karl Leopold Hutterer, Univ. of Washington; Robert L. Munroe, Pitzer College.

Astronomy

Louis C. Green, Haverford College; Catherine A. Pilachowski, National Optical Astronomy Observatories; Paula Szkody, Univ. of Washington.

Atmospheric and Hydrospheric Sciences

Martin I. Hoffert, New York Univ.; Akira Kasahara, National Center for Atmospheric Re-

search; Richard C. J. Somerville, Scripps Institution of Oceanography; Robert L. Street, Stanford Univ.

Biological Sciences

Charles F. Aquadro, Cornell Univ.; Stuart M. Arfin, Univ. of California, Irvine; Artrice Valentine Bader, Rockville, MD; Richard Bartha, Rutgers Univ.; Michael W. Binford, Harvard Univ.; Jean E. Brenchley, Pennsylvania State Univ.; I. Lehr Brisbin Jr., Savannah River Ecology Laboratory; Kathryn L. Calame, Columbia Univ.; Ronald E. Cape, Darwin Molecular Corp.; Marian Carlson, Columbia Univ.; David D. Chaplin, Washington Univ.; Norman L. Christensen, Duke Univ.; Michael T. Clegg, Univ. of California, Riverside; Stanley N. Cohen, Stanford Univ.; Daniel J. Cosgrove, Pennsylvania State Univ.; Rowland H. Davis, Univ. of California, Irvine; Stephen O. Duke, U.S. Department of Agriculture; Albert Shih-Hung Feng, Univ. of Illinois; Lafayette Frederick, Howard Univ.; Sarah P. Gibbs, McGill Univ.; Martin A. Gorovsky, Univ. of Rochester; Judith P. Grassle, Rutgers Univ.; Chris L. Greer, Univ. of California, Irvine; Gordon L. Hager, National Cancer Institute; Ronald Wilson Hart, National Center for Toxicological Research; Bernadine Healy, Cleveland Clinic Foundation; Penny M. Hopkins, Univ. of Oklahoma; David William Inouye, Univ. of Maryland; Alison Jolly, Princeton Univ.; James T. Kadonaga, Univ. of California, San Diego; Yuet Wai Kan, Univ. of California, San Francisco; Mary-Claire King, Univ. of California, Berkeley; David L. Kirk, Washington Univ.; Sydney Govons Kustu, Univ. of California, Berkeley; Hans Lehrach, Imperial Cancer Research Fund,

London; Carole A. Lembi, Purdue Univ.; Jerry E. Manning, Univ. of California, Irvine; J. Lawrence Marsh, Univ. of California, Irvine; Margaret G. Mellon, National Wildlife Federation; Mary Frances Mickovich, Smithsonian Institution; Masatoshi Nei, Pennsylvania State Univ.; Dennis A. Powers, Stanford Univ.; Timothy J. Richmond, Institut für Molekularbiologie und Biophysik, Zurich; Neil H. Ringler, State Univ. of New York, Syracuse; Frank G. Rothman, Brown Univ.; Paul A. Sandifer, South Carolina Wildlife and Marine Resources Department; Birgit H. Satir, Albert Einstein College of Medicine; Barbara A. Schaal, Washington Univ.; Lee M. Silver, Princeton Univ.; Eric Stanbridge, Univ. of California, Irvine; Juan A. Subirana, Universidad Politécnica de Cataluña, Barcelona; Donald F. Summers, Univ. of California, Irvine; Glenn W. Suter II, Oak Ridge National Laboratory; William F. Thompson, North Carolina State Univ.; Michel Tibayrenc, Unite Mixte de Recherche CNRS/ORSTOM, France; James L. Van Etten, Univ. of Nebraska; Peter Vitousek, Stanford Univ.; Stanley L. Weinberg, Ottumwa, IA.

Chemistry

Philip Coppens, State Univ. of New York, Buffalo; Alice J. Cunningham, Agnes Scott College; Nar S. Dalal, West Virginia Univ.; Rick L. Danheiser, MIT; David Adams Dixon, DuPont Research and Development; Dennis A. Dougherty, California Institute of Technology; Richard W. Fessenden, Univ. of Notre Dame; Barbara J. Finlayson-Pitts, California State Univ.; Peter C. Ford, Univ. of California, Santa Barbara; Louis C. Glasgow, DuPont Research and Development; Robert C. Haddon, AT&T Bell Laboratories; Donald Hilvert, Scripps Research Institute; Michael Jaffe, Hoechst Celanese

Research Division; Thomas J. Katz, Columbia Univ.; Roger D. Kornberg, Stanford Univ.; John W. Moore, Univ. of Wisconsin; Michael D. Morse, Univ. of Utah; Christer E. Nordman, Univ. of Michigan; Maynard V. Olson, Univ. of Washington; Kenneth R. Poeppelmeier, Northwestern Univ.; David W. Pratt, Univ. of Pittsburgh; Stephen T. Quigley, Washington, DC; Wolfgang M. H. Sachtler, Northwestern Univ.; Philip B. Shevlin, Auburn Univ.; Stephen Gary Sligar, Univ. of Illinois; Kenneth G. Spears, Northwestern Univ.; Larry F. Thompson, AT&T Bell Laboratories; Zdenek Valenta, Univ. of New Brunswick; Charles A. Wight, Univ. of Utah.

Dentistry

R. Bruce Donoff, Harvard School of Dental Medicine; Deborah Greenspan, Univ. of California, San Francisco.

Education

Douglas M. Lapp, National Science Resources Center; Celia L. Marshak, San Diego State Univ.; William E. Spooner, North Carolina Department of Public Instruction; Emmett L. Wright, Kansas State Univ.

Engineering

Ramesh K. Agarwal, McDonnell Douglas Aerospace Corp.; Alice M. Agogino, Univ. of California, Berkeley; H. Kent Bowen, Harvard Univ.; Ali B. Cambel, George Washington Univ.; Dov Jaron, Drexel University; Edwin C. Jones Jr., Iowa State Univ.; Thomas J. Kozik, Texas A&M Univ.; Joseph C. Logue, Poughkeepsie, NY; Carl L. Monismith, Univ. of California, Berkeley; Richard K. Moore, Univ. of Kansas; Karl S. Pister, Univ. of California, Santa Cruz; Herbert E. Rauch, Lockheed Palo Alto Re-

search Laboratory; Eberhardt Rechtin, Univ. of Southern California; Jerome L. Sackman, National Science Foundation; Wilson K. Talley, Fannie and John Hertz Foundation; Richard M. White, Univ. of California, Berkeley.

General Interest in Science and Engineering

Lynn Edward Elfner, Ohio Academy of Science; Karl Hess, Univ. of Illinois; Michael Templeton, Portland, OR; David A. Ucko, Kansas City Museum.

Geology and Geography

Robert G. Coleman, Stanford Univ.; James W. Head III, Brown Univ.; C. Simon L. Ommanney, Environment Canada; Donald W. Peterson, U.S. Geological Survey; Paul G. Richards, Lamont-Doherty Geological Observatory; Bruce N. Runnegar, Univ. of California, Los Angeles; H. Catherine W. Skinner, Yale Univ.; George H. Sutton, Woods Hole Oceanographic Institution; James R. Underwood Jr., Kansas State Univ.

History and Philosophy of Science

Stanley Goldberg, Washington, DC; Rachel Laudan, Univ. of Hawaii; Albert Van Helden, Rice Univ.

Industrial Science

Charles S. Tuesday, Bloomfield Hills, MI.

Information, Computing, and Communication

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Santa Barbara; H. Edward Kennedy, BIOSIS; Ken Kennedy, Rice Univ.; Clifford A. Lynch, Univ. of California, Oakland; W. David Penniman, Council on Library Resources; Barbara Simons, IBM Santa Teresa Laboratory.

Linguistics and Language Sciences

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Mathematics

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Societal Impacts of Science and Engineering

William A. Blanpied, National Science Foundation; George Campbell Jr., NACME, Inc.; David Doniger, Office of Environmental Policy; Mary L. Moller, The Chapin School; Norine E. Noonan, Florida Institute of Technology; Richard A. Rettig, National Academy of Sciences; Louis E. Slesin, *Microwave News*.

Statistics

Patrick Lee Brockett, Univ. of Texas; Edward J. Dudewicz, Syracuse Univ.; Nancy Flournoy, American Univ.; Janet Wittes, Statistics Collaborative.