

# TERC Profile 2006



## About TERC

TERC is a not-for-profit education research and development organization founded in 1965. Our mission is to improve mathematics and science teaching and learning.

TERC's staff of dedicated researchers, scientists and mathematicians, and curriculum and professional development specialists are constantly expanding the scope of their work to contribute to the understanding of learning and teaching, foster professional development, develop applications of new technologies, create curricula and other products, and support improvement and reform in formal and informal settings.

In 2005, TERC had estimated revenues of \$16 million, including contributions from government agencies, foundations and other non-profits, universities, and royalties. Our programs and products reach over 3.5 million students in the U.S. and abroad each year. TERC is particularly concerned with those students least well-served in mathematics and science education.

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## Organizational Highlights Include:

### Mathematics Education

TERC's mathematics research and classroom materials reach students from kindergarten through adult education, helping prepare them for a lifetime of engagement with mathematics.

- TERC's landmark standards-based math curriculum, *Investigations in Number, Data and Space*® (Scott Foresman), is currently being used in over 800 school systems and 2700 elementary schools nationwide.
- The *EMPower* curriculum (Key Curriculum Press) helps students enrolled in adult basic education, high-school equivalency courses, and transitional courses to college develop basic numeracy skills.
- The award-winning computer games, *Zoombinis Logical Journey*, *Zoombinis Mountain Rescue*, and *Zoombinis Island Odyssey* have sold over 1.6 million copies. The mental skills developed using these games are essential to becoming a mathematics or science problem solver.

### Science Education

TERC continues to develop novel ways to nurture in students an understanding and love of the science necessary to participate in an increasingly technical society.

- The Chèche Konnen Center is in its nineteenth year of research on improving science education for urban students from ethnically and linguistically diverse backgrounds, many from working class families with limited formal education. The work focuses on the intellectual resources these students bring to the study of science.
- The Lesley/TERC Science Online master's in science education program is now available through both Lesley University and Walden University. The program is among the first online courses to use an inquiry model.
- With TERC's new full-year curriculum, *Physics That Works* (Kendall/Hunt), students develop confidence and proficiency as they apply new knowledge and skills to long-term physics projects.

### Professional Development & School Improvement

Pre-service programs and ongoing teacher professional development are just two ways TERC is supporting teachers in their practice and improvement in informal and formal educational settings.

- MSPnet, funded by NSF, creates a web-based learning community for the National Science Foundation's Math and Science Partnership (MSP) program. MSPnet fosters collaboration between K-12 teacher leaders, administrators and faculty from post-secondary educational institutions to improve mathematics and science education nationally.
- Since 1997, over 16,000 educators have participated in the *Investigations* Workshops for Transforming Mathematics, week-long workshops that prepare teachers, staff developers, and math specialists to introduce the mathematics curriculum *Investigations in Number, Data and Space* in elementary classrooms.
- Nancy Love's book *Using Data/Getting Results* (Christopher Gordon) is helping over 8000 educators use multiple sources of student achievement and other data to support lasting school reform. Using Data workshops have reached over a thousand educators from over 50 districts nationwide. An online version launches in 2006.

### Research

TERC conducts original research aimed at answering the most difficult questions surrounding the teaching and learning of science and mathematics.

- Building on TERC's work in online learning and equity, the project Women's Science Equity Online is studying the characteristics of online science courses for teachers that correlate to positive learning outcomes for women. WSEO is one of very few aggregate studies or meta-analyses of online courses focusing on women learners.
- The VISOR (Visualizing Statistical Relationships) project has been working for the past three years with educators from five Boston-area schools, investigating how advanced visualization tools affect the development of teachers' and students' statistical reasoning.

- The Early Algebra, Early Arithmetic project is using research to develop novel methods to introduce children to algebra in the elementary grades. This research will be published as part of an international series on mathematics education.

### Out-of-School Learning

TERC creates tools, games and programs for out-of-school learning environments.

- In the Mixing in Math project, TERC, collaborating with the YMCA, US Air Force, BELL, St. Louis Science Center, Citizen Schools, and Girls Inc., is supporting afterschool programs nationwide in integrating math into their programs. Project activities will reach at least 330 programs, 8,500 staff, and 38,000 children.
- The Math Momentum in Science Centers project, led by TERC in collaboration with the Association of Science-Technology Centers (ASTC), is establishing professional development tools for science centers across the country to help make the math in their exhibits and programming more explicit and accessible.
- TERC developed the games *At Home with Math* and *GeoSafari GeoQuest USA* for play by parents and their elementary grades children, or children alone. The games have also been used in afterschool programs.



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