

Education Research Collaborative Projects - Closed

- [A Practice-Based Approach to Professional Development in Science](#) —

Principal Investigators: [Ann S Rosebery](#) and [Beth Warren](#)

Funders: [Institute of Education Sciences, US Department of Education](#)

Website: <http://chechekonnen.terc.edu/>

A Practice-Based Approach to Professional Development in Science (PBA) addresses an enduring challenge in U.S. education: providing students from historically non-dominant communities (e.g., students of African descent, students from low-income households, students for whom English is a second language) with high-quality, intellectually-engaging learning experiences in science. [More »](#)

- [Access Algebra](#) —

Principal Investigator: [Andee Rubin](#)

Funders: [National Science Foundation](#)

This project is developing and testing strategies for building math literacy through interactive exhibits and activities that replicate the algebraic thinking that creative professionals use in their careers. [More »](#)

- [Accessible Mathematics](#) —

Principal Investigator: [Judith \(Judy\) Storeygard](#)

Funders:

This project aims to explore the ways that students with disabilities can improve their mathematical learning. [More »](#)

- [Adult Numeracy Instruction \(ANI\) Professional Development](#) —

Principal Investigator: [Donna Curry](#)

Funder: U.S. Department of Education's Office of Career, Technical, and Adult Education (OCTAE)

Website: <https://external-wiki.terc.edu/display/ANC/Our+Projects>

TERC has partnered with OCTAE to implement a nationwide, revised version of a year-long adult numeracy professional development model for practitioners. [More »](#)

- [Agua, Water, Dlo](#) —

Principal Investigator: [Eli Tucker-Raymond](#)

Funders: [The Motorola Foundation](#)

Agua, Water, Dlo (AWD) is an afterschool learning environment that engages underrepresented middle school youth in inquiries about water. [More »](#)

- [ANI PD-Kent State](#) —

Principal Investigator: [Martha Merson](#) and [Donna Curry](#)

Funders: [Kent State University](#)

Website: <http://adulnumeracy.terc.edu/>

Building off the successful pilot of a year-long adult numeracy professional development model for practitioners (Adult Numeracy Instruction - PD) created by the University of Tennessee, MPR Associates, Rutgers University, and TERC, TERC is partnering.. [More »](#)

- [ARC Center Project Renewal](#) —

Principal Investigator:

Funders: [National Science Foundation](#)

Website: <http://www.comap.com/elementary/projects/arc/>

The Alternatives for Rebuilding Curricula (ARC) Center Project Renewal is built on the work of the Investigations Implementation Center. [More »](#)

- [Beyond the Double Bind: Women of Color in Science, Technology, Engineering, and Mathematics](#) —

Principal Investigator: [Mia Ong](#)

Funder: [National Science Foundation](#)

Website: [Chèche Konnen Center](#)

This project seeks to understand the elements that support the success of women of color in science, technology, engineering, and mathematics (STEM) higher education and early careers. The project has two simultaneous and complementary tracks. [More »](#)

- [Bridging Math Literacy and Digital Media Creation: Students as Learners, Teachers, and Leaders of STEM Content](#) —

Principal Investigator: [Eli Tucker-Raymond](#)

Funder: [National Science Foundation](#)

TERC is researching how middle school, high school and college students experience learning, teaching, leading, and organizing within a math-based computer programming curriculum developed with the Young People's Project (YPP). YPP is an out-of school math literacy organization that employs a near-peer mentoring model [More »](#)

- [Bridging Math Literacy and Digital Media Creation: Students as Learners, Teachers, and Organizers](#) —

Principal Investigator: [Eli Tucker-Raymond](#)

Funders: [National Science Foundation](#) and the [The Young People's Project](#)

TERC is researching how middle school, high school and college students experience learning, teaching, leading, and organizing within a math-based computer programming curriculum developed with the Young People's Project (YPP). [More »](#)

- [Building an Inclusive Mathematics Community](#) —

Principal Investigator:

Funders: [National Science Foundation](#)

TERC is developing teacher professional development modules to help K-6 students with disabilities learn meaningful mathematics and to reach their potential as mathematics learners through participation in the classroom community. [More »](#)

- [Children and Science Tests](#) —

Principal Investigator: [Ann S Rosebery](#) and [Beth Warren](#)

Funders: [National Science Foundation](#)

Website: <http://chechekonnen.terc.edu/>

This project seeks to understand how elementary school children from diverse ethnic, linguistic, and socioeconomic backgrounds interpret items on high stakes achievement tests. [More »](#)

- [Computing Beyond the Double Bind: Women of Color in Computing Education and Careers](#) —

Principal Investigator: [Ariel Hodari](#)

Co-Principal Investigator: [Mia Ong](#)

Funder: [National Science Foundation](#)

Eureka Scientific, Inc., in collaboration with TERC, seeks to advance the understanding of social and cultural factors that increase retention of women of color in computing. [More »](#)

- [Cultural Context of Learning: Native American Science Education](#) —

Principal Investigator: [Megan Bang](#)

Funders: [National Science Foundation](#) and [Northwestern University](#)

Past research shows that rural Menominee children and urban inter-tribal children begin school with advanced understandings of biology and that they reason ecologically, much like practicing expert scientists. [More »](#)

- [DNI: Diabetes Numeracy Intervention for American Indians and Alaska Natives](#) —

Principal Investigators: [Martha Merson](#) and [Donna Curry](#)

Funder: [National Institutes of Health](#)

This project is developing and pilot testing an intervention to improve numerical skills required for diabetes self-management among American Indians and Alaska Natives. The study site is the Yakama Indian Health Center in Toppenish, Washington. [More »](#)

- [Educating the Imagination](#) —

Principal Investigator: [Ann S Rosebery](#), [Beth Warren](#), [Eli Tucker-Raymond](#), and [Linda Nathan](#) (BAA)

Funders: [National Science Foundation](#)

Website: <http://chechekonnen.terc.edu/>

In *Educating the Imagination*, a collaborative team of [Chèche Konnen](#) staff, faculty of the Boston Arts Academy and King Open School, and scientists and artists from the greater Boston community are designing, developing and investigating a prototype "studio science learning environment" for high school students from historically underrepresented communities. [More »](#)

- [EMPower II](#) —

Principal Investigator: [Martha Merson](#) and [Donna Curry](#)

Funders: [Nellie Mae Foundation](#)

Website: <http://empower.terc.edu/> and <http://adultnumeracy.terc.edu/>

TERC is funded to continue the work launched by Diploma Plus [teachers and students] to design a blended learning program to support performance-based math education for its students. [More »](#)

- [English Learners and Science Tests \(ELAST\)](#) —

Principal Investigator: Tracy Noble and [Ann S Rosebery](#)

Funders: [US Department of Education](#)

Website: <http://chechekonnen.terc.edu/>

In this project, Chèche Konnen Center researchers will explore whether linguistic features of multiple-choice science test items on high-stakes assessments are interfering with the ability of English Learners (ELs) to demonstrate what they know about science. [More »](#)

- [Enhancing Math in Afterschool](#) —

Principal Investigator: Marlene Kliman and Jan Mokros

Funders: Massachusetts 2020 Foundation and Boston Centers for Youth and Families

TERC produced a white paper focused on recommendations for the role of math in afterschool programs in Boston. [More »](#)

- [Fantasy Sports Games as Cultures for Informal Learning](#) —

Principal Investigator: Paula Hooper

Funders: [National Science Foundation](#) and [Pennsylvania State University](#)

TERC is evaluating the Fantasy Sports project at Pennsylvania State University. The project is studying the decision-making strategies used by fantasy sports players, with focus on informal mathematical practices. [More »](#)

- [Foundations of Algebra](#) —

Principal Investigator: Susan Jo Russell

Funders: [National Science Foundation](#)

This project is a collaboration of teachers and researchers who are developing a sourcebook consisting of year-long portraits of classrooms in grades 1-8.. [More »](#)

- [I Believe in Math](#) —

Principal Investigator: Marlene Kliman

Funders: IBM Global Work/Life Fund

Website: <http://mixinginmath.terc.edu/>

Funded with support from the IBM Global Work/Life Fund, TERC researchers have developed three math-related activity kits for parents and caretakers of IBM employees'™ children. [More »](#)

- [iCue Evaluation](#) —

Principal Investigator: James (Jim) Hammerman

Funders: [Massachusetts Institute of Technology](#) and [NBC](#)

Website: <http://www.icue.com/>

TERC's Evaluation Group worked with researchers at MIT's Education Arcade to conduct quantitative analyses of usage data for an online educational game, *iCue*. [More »](#)

- [INK-12: Interactive Ink Inscriptions in K-12](#) —

Principal Investigator: [Andee Rubin](#)

Funders: [National Science Foundation](#)

Website: <http://ink-12.terc.edu/>

INK-12 is an innovative project exploring the capabilities of a wireless network of tablet computers in elementary and middle school math and science classrooms. [More »](#)

- [Inside the Double Bind](#) —

Principal Investigator: [Maria \(Mia\) Ong](#)

Funders: [National Science Foundation](#)

Little information exists about women of color in science, technology, engineering, and mathematics (STEM), since most data are reported by race or by gender. [More »](#)

- [Lead Learners in Mathematics](#) —

Principal Investigator:

Funders: [National Science Foundation](#)

The project is designed to build teacher leadership in elementary schools in Boston by providing teachers in each school with professional development that strengthens their mathematics teaching practice. [More »](#)

- [Leadership for Mathematics Improvement](#) —

Principal Investigator: Mark Kaufman

Funders:

Website: <http://cep.terc.edu/>

Leadership for Mathematics Improvement (LMI) helps schools and districts plan, implement and monitor a comprehensive mathematics improvement process. [More »](#)

- [Learning in Practice](#) —

Principal Investigator: Ann S Rosebery and Beth Warren

Funders: [National Science Foundation](#)

Website: <http://chechekonnen.terc.edu/>

The [Chèche Konnen Center](#) at TERC is collaborating with a K-8 faculty to investigate ways of developing a professional learning-in-practice community in which teachers learn to use their everyday practice as a terrain of analysis and action. [More »](#)

- [MA ACLS Numeracy Study Circle Model](#) —

Principal Investigator: Martha Merson and Donna Curry

Funders: [Massachusetts Department of Elementary and Secondary Education](#)

Website: <http://adulnumeracy.terc.edu/>

TERC's Adult Numeracy Center is developing a "study circle" professional development program for the Massachusetts state Adult and Community Learning Services (ACLS) staff. [More »](#)

- [Math in Zoos and Aquariums](#) —

Principal Investigator: Jan Mokros

Funders: [Institute of Museum and Library Services](#)

TERC and the Phoenix Zoo will pioneer the infusion of mathematics into educational programs involving animals by providing professional development for staff. [More »](#)

- [Math Momentum in Science Centers](#) —

Principal Investigator: Jan Mokros

Funders: [National Science Foundation](#)

Website: <http://mathmomentum.terc.edu/>

This project, led by TERC and the Association of Science -Technology Centers in conjunction with a group of distinguished science centers, will expand and enrich the use of math in exhibits and programs at science centers nationwide. [More »](#)

- [Math Off the Shelf](#) —

Principal Investigator: Marlene Kliman

Funders: [National Science Foundation](#)

TERC is collaborating with eight public library networks across the country to make math a fun, visible part of after-school library programming for elementary-age children and their families. [More »](#)

- [MathCore for Museums](#) —

Principal Investigator: Tracey Wright

Funders: [National Science Foundation](#)

The Science Museum of Minnesota in Saint Paul, Minnesota; Museum of Science in Boston; North Carolina Museum of Life and Science in Durham, North Carolina; Explora in Albuquerque, New Mexico and the Center for Research in Mathematics and Science Education at San Diego State University are collaborating with TERC to create a set of math exhibits for use in science centers and museums. [More »](#)

- [Methods for Studying Adult Development in Math Professional Development](#) —

Principal Investigator: [James \(Jim\) Hammerman](#)

Funders: [National Science Foundation](#)

This project developed and tested several measures of constructive-developmental difference to be used in studies of math teacher professional development. [More »](#)

- [Mini-Symposium on Women of Color in STEM](#) —

Principal Investigator: [Maria \(Mia\) Ong](#)

Funders: [National Science Foundation](#)

Website: http://www.nsf.gov/od/oia/activities/ceose/mini-symp-pres/Women_of_color_stem_Oct2009/presentations.jsp

A mini-symposium took place in Arlington, Virginia, October 27-28, 2009 that focused on paving pathways to success for women of color in science, technology, engineering, and mathematics through perspectives on experiences, research, evaluation and policy in higher education and careers. [More »](#)

- [Mixing in Math | Spanish IBM](#) —

Principal Investigator: [Marlene Kliman](#)

Funders: [IBM Global Work-Life Fund](#)

Website: <http://mixinginmath.terc.edu/>

The [Mixing in Math](#) group received funding from the IBM Global Work-Life Fund to develop a version of the *I Believe in Math* materials for child care and after school providers in Argentina. [More »](#)

- [Mixing in Math/SMILE Database](#) —

Principal Investigator: [Marlene Kliman](#)

Funders: [National Science Digital Library \(NSDL\)](#)

Website: <http://mixinginmath.terc.edu/>

[Mixing in Math \(MiM\)](#) developed a set of over 130 digital materials for inclusion in the SMILE Pathway database - an online collection of free activities useful for integrating math and science into elementary children's routines in school and beyond. [More »](#)

- [Mixing in Math: Transforming the Role of Math in Afterschool Programs](#) —

Principal Investigator: [Marlene Kliman](#)

Funders: [National Science Foundation](#)

Website: <http://mixinginmath.terc.edu/>

TERC, collaborating with the YMCA, Girls Inc., the St. Louis Science Center, BELL, and Citizen Schools is developing and implementing an engaging and accessible approach to integrating math into the routines and activities that constitute a solid youth development program. [More »](#)

- [Model Chance](#) —

Principal Investigator: [James \(Jim\) Hammerman](#) and [Andee Rubin](#)

Funders: [National Science Foundation](#) and the [University of Massachusetts](#)

TERC staff worked with UMass-Amherst researchers to create middle school math and data analysis curriculum activities for use with probability modeling software embedded in [TinkerPlots](#). [More »](#)

- [MoreThanOneMath](#) —

Principal Investigator: [Donna Curry](#)

Funders: [Nellie Mae Foundation](#)

Website: <https://external-wiki.terc.edu/display/ANC/Our+Projects>

Building off the content and pedagogy of the EMPOWER adult numeracy curriculum, a cadre of teachers and TERC educators or staff will develop, deliver, and evaluate ... [More »](#)

- [National Center for Improving Student Learning and Achievement](#) —

Principal Investigator: [Ann S Rosebery](#) and [Beth Warren](#)

Funders:

Website: <http://chechekonnen.terc.edu/>

In collaboration with the National Center for Improving Student Learning and Achievement at the University of Wisconsin, Madison, the [Chèche Konnen Center](#) worked with teachers of grades 2-9 to investigate ways of building communities in diverse classrooms. [More »](#)

- [New York City Professional Development for Adult Educators](#) —

Principal Investigator: [Mary Jane Schmitt](#)

Funders: [New York City](#)

Website: <http://empower.terc.edu>

Building on TERC's *EmPower* curriculum and workshops, TERC will provide ongoing professional development opportunities for math educators in the NYC adult education system. [More »](#)

- [NYC District 79 GED](#) —

Principal Investigator: [Martha Merson](#) and [Mary Jane Schmitt](#)

Funders: NYC Department of Education

Website: <http://adultnumeracy.terc.edu/>

TERC's Adult Numeracy Center is piloting a customized EMPOWER curricular guide, accompanying teacher professional development, and online support for a rigorous, scalable, and Common-Core aligned mathematics pathway. [More »](#)

- [On Being Explicit: Toward A New Pedagogical Synthesis in Science](#) —

Principal Investigator: [Ann S Rosebery](#) and [Beth Warren](#)

Funders: [National Science Foundation](#) and the [Spencer Foundation](#)

Website: <http://chechekonnen.terc.edu/>

In "On Being Explicit" the [Chèche Konnen Center](#) is intensifying its focus on documenting the intellectual power of the ideas and sense-making practices that children from diverse ethnic and linguistic communities bring to the study of science. [More »](#)

- [Pathways to Certification](#) —

Principal Investigator: [Martha Merson](#) and [Donna Curry](#)

Funders: [Massachusetts Department of Elementary and Secondary Education](#)

Website: <http://adultnumeracy.terc.edu/>

TERC's Adult Numeracy Center has contracted with the Massachusetts Department of Elementary and Secondary Education (DESE) to delineate features of a system that could certify the proficiency of adult education math teachers. [More »](#)

- [Save the Redwoods League Evaluation](#) —

Principal Investigator: [Martha Merson](#)

Funders: [Save the Redwoods League](#)

Website: [Save the Redwoods League Education Program](#)

The [Save the Redwoods League Education Program](#) seeks to encourage more people of diverse backgrounds to protect our unique redwood forest ecosystems. [More »](#)

- [Scaling Up TRIAD](#) —

Principal Investigator: [Judith \(Judy\) Storeygard](#)

Funders: [National Science Foundation](#), [US Department of Education](#), and the [State University of New York, Buffalo](#)

The goal of the TRIAD (Technology-enhanced, Research-based, Instruction, Assessment, and Professional Development) project is to increase math achievement in preschool children, by providing a sustainable model for successful, systemic, scaled up implementation of the Building Blocks math curriculum through professional development for teachers and on-site support by mentors. [More »](#)

- [Spanish Mixing in Math \(MiM\) IBM](#) —

Principal Investigator: [Marlene Kliman](#)

Funders: [IBM/Work Family Directions](#)

The Mixing in Math Group at TERC proposes to develop a set of Spanish-language webinars to support the implementation of Jugar y crear con las matemáticas. [More »](#)

- [Statistics for Action](#) —

Principal Investigator: Mary Jane Schmitt and [Martha Merson](#)

Funders: [National Science Foundation](#)

Website: <http://sfa.terc.edu/>

TERC partnered with environmental action groups in twelve states to advance the quantitative literacy skills needed to understand and solve pressing environmental problems. [More »](#)

- [Teachers for a New Era](#) —

Principal Investigator: Myriam Steinback

Funders: Carnegie Corporation

TERC is collaborating with Bank Street College of Education's Teachers for a New Era project. [More »](#)

- [Teaching to the Big Ideas of Early Algebra](#) —

Principal Investigator: Deborah Schifter, Susan Jo Russell, and Virginia Bastable

Funders: [National Science Foundation](#)

This project is designing, producing, and testing two professional development modules to help teachers learn about mathematics content and development of student thinking in early algebra. [More »](#)

- [TIAN: Teachers Investigating Adult Numeracy](#) —

Principal Investigator: [Mary Jane Schmitt](#)

Funders: [National Science Foundation](#)

Website: <http://adultnumeracy.terc.edu/>



TERC, in partnership with the Center for Learning Studies at the University of Tennessee, will develop, pilot and field-test an approach to standards-based mathematics in-service professional development, using recently developed standards and curriculum for the Adult Basic Education system. [More »](#)

- [Time to Enhance Math in After-School](#) —

Principal Investigator: Jan Mokros, Marlene Kliman and Hollee Freeman

Funders: [Massachusetts 2020 Foundation](#)

Website: Download the Report [PDF](#)

Commissioned by [Mass2020](#) and co-published by [Boston Centers for Youth and Families](#), "Time to Enhance Math in After-School" examines the ways Boston after-school programs address mathematics and identifies the potential for after-school programs to support elementary and middle school children's mathematical learning. [More »](#)

- [VISOR: Visualizing Statistical Relationships](#) —

Principal Investigator: [Andee Rubin](#)

Funders: [National Science Foundation](#)

TERC will work with a group of middle and high school teachers over a three year period, investigating their understanding of associations between variables and how their thinking changes when data analysis tools are introduced. [More »](#)