

# 2022-23 DRK–12 New Awards

*This list contains grants awarded winter 2022 – summer 2023.*

**NEW!** *Denotes awards made since CADRE's August 2023 newsletter.*

| Award # | Project Title  | PI                      | Institution                                |
|---------|--|-------------------------|--|
| 2300743 | A Professional Development Model for High School Teachers to Adapt Curricula Toward Students' Knowledges and Resources         | Christina Krist         | University of Illinois at Urbana-Champaign |
| 2247435 | A Team-based Model for Co-adapting Existing Middle School Science Curricula for Culturally and Linguistically Diverse Learners | Jie Zhang               | University of Houston                      |
| 2300665 | Advancing Mentor Teachers' Practices Through Collaborative Pedagogical Reasoning (Collaborative Research: Ghouseini)           | Hala Ghouseini          | University of Wisconsin-Madison            |
| 2300667 | Advancing Mentor Teachers' Practices Through Collaborative Pedagogical Reasoning (Collaborative Research: Remillard)           | Janine Remillard        | University of Pennsylvania                 |
| 2300666 | Advancing Mentor Teachers' Practices Through Collaborative Pedagogical Reasoning (Collaborative Research: Shaughnessy)         | Meghan Shaughnessy      | Boston University                          |
| 2300444 | Assessing the Efficacy and Implementation of a Technology-based Mathematics Intervention for Middle School Students            | Jessica Mislevy         | SRI International                          |
| 2300433 | Biomimicry as an Authentic Anchor: Giving Teachers the Tools to Adapt an Interdisciplinary Middle School Curriculum            | Debra Bernstein         | TERC                                       |
| 2237986 | CAREER: Affirming Bilingual Children's Participation in Mathematics  | José Martínez Hinstroza | Texas State University                     |
| 2239152 | CAREER: Creatively Reimagining Engagements with Data in Biology Learning Environments  | Joshua Rosenberg        | University of Tennessee, Knoxville         |
| 2237739 | CAREER: Developing a Participatory Model for Elementary Science for Community Change   | Terrance Burgess        | Michigan State University                  |
| 2333959 | CAREER: Equity Focused Elementary Mathematics: Creating Virtual Mathematics Communities in Rural Georgia                       | Susan Cannon            | University of Georgia                      |

| Award # | Project Title   | PI                        | Institution                     |
|---------|---|---------------------------|---------------------------------|
| 2237902 | CAREER: Investigating Young Children's Opportunities to Learn Mathematics in Early Childhood Classrooms   | Nicholas Johnson          | San Diego State University      |
| 2237053 | CAREER: Knowledge Exchange for Supporting Youth With or At Risk for Mathematics Difficulty  | Jessica Rodrigues         | University of Missouri          |
| 2237151 | CAREER: Preparing Middle and High School Pre-service Teachers for Critical Mathematics Education  | Zareen Aga                | James Madison University        |
| 2239316 | CAREER: Reframing Students' Graph Literacy with a Focus on Students' Thinking   | Hwa Young Lee             | Texas State University          |
| 2326811 | <b>NEW!</b> Co-developing a Community-based Science Education Curriculum Framework for Disaster Justice and Resilience: A Response to the 2022 Buffalo Blizzard | Noemi Waight              | University at Buffalo           |
| 2247546 | Conversations Across Boundaries: Bringing PreK-2 Mathematics Experts Together   | Paola Sztajn              | North Carolina State University |
| 2300558 | Culturally Responsive Elementary Science Teaching   | Deborah Hanuscin          | Western Washington University   |
| 2300118 | <b>NEW!</b> Developing a Multi-disciplinary STEM Education Model for Multilingual Learners that Meets Societal Challenges                                       | Okhee Lee                 | New York University             |
| 2300233 | Developing an Early Mathematics Intervention for Children with Disabilities in the Home Learning Environment  | Gena Nelson               | University of Oregon            |
| 2300404 | Developing Concept of Variable Among Students with Mathematics Difficulties in Preparation for Algebra 1  | Sarah Krowka              | RG Research Group               |
| 2247128 | Developing Mathematics Teachers Responsive Pedagogies for Linguistically Marginalized Students  | Samantha Marshall<br>Pham | North Carolina State University |
| 2300766 | Elementary Teacher Professional Learning of Equitable Engineering Pedagogies for Multilingual Students  | Mary McVee                | University at Buffalo           |
| 2300832 | Engaging Students in Discourse About Criteria for Judging Scientific Models (Collaborative Research: Danish)  | Joshua Danish             | Indiana University              |

| Award # | Project Title   | PI                       | Institution                                |
|---------|---|--------------------------|--|
| 2300831 | Engaging Students in Discourse About Criteria for Judging Scientific Models (Collaborative Research: Duncan)  | Ravit Golan Duncan       | Rutgers University–New Brunswick           |
| 2300689 | Engaging Teachers in Integrating Human-Centered Design for Geometry Problem-based Instruction   | Gloriana Gonzalez Rivera | University of Illinois at Urbana-Champaign |
| 2300676 | Enhancing Early Childhood Educators' Reflective Practice and Content Knowledge to Increase Children's Capacity for Science Talk   | Soo-Young Hong           | University of Nebraska-Lincoln             |
| 2300785 | Enhancing STEM Success: A Multi-modal Investigating of Spatial Reasoning and Training in Undergraduate Education  | Melissa Beck             | Louisiana State University                 |
| 2301273 | Examining Elementary Mathematics Teachers' Behaviors and Learning with an Online Professional Development Platform (Collaborative Research: Cimpian)                              | Joseph Cimpian           | New York University                        |
| 2301274 | Examining Elementary Mathematics Teachers' Behaviors and Learning with an Online Professional Development Platform (Collaborative Research: Moran)                                | Cheryl Moran             | University of Chicago                      |
| 2301272 | Examining Elementary Mathematics Teachers' Behaviors and Learning with an Online Professional Development Platform (Collaborative Research: Perry)                                | Michelle Perry           | University of Illinois at Urbana-Champaign |
| 2309657 | Examining Potential Causal Connections and Mechanisms Between Children's Block Play and Mathematics Learning  | Sara Schmitt             | University of Oregon                       |
| 2300544 | Examining Relationships Among Teacher Professional Learning and Associated Teacher and Student Outcomes in Math and Science: A Meta-analytic Approach to Mediation and Moderation | Ryan Williams            | American Institutes for Research           |
| 2301116 | Examining the Longitudinal Development of Pre-service Elementary Teachers' Equitable Noticing of Children's Mathematical Thinking (Collaborative Research: Jessup)                | Naomi Jessup             | Georgia State University                   |
| 2301115 | Examining the Longitudinal Development of Pre-service Elementary Teachers' Equitable Noticing of Children's Mathematical Thinking (Collaborative Research: Kalinec-Craig)         | Crystal Kalinec-Craig    | University of Texas at San Antonio         |

| Award # | Project Title  | PI                  | Institution                        |
|---------|--|---------------------|------------------------------------|
| 2301114 | Examining the Longitudinal Development of Pre-service Elementary Teachers' Equitable Noticing of Children's Mathematical Thinking (Collaborative Research: Thomas) | Jonathan Thomas     | University of Kentucky             |
| 2300726 | Expanding Sixth-Grade Youth's Understanding of Engineering Through Critical Multilingual Journalism  | Chelsea Andrews     | Tufts University                   |
| 2246989 | Exploring the Landscape of Rural Mathematics Education (Collaborative Research: Amador)  | Julie Amador        | University of Idaho                |
| 2246988 | Exploring the Landscape of Rural Mathematics Education (Collaborative Research: Choppin)   | Jeffrey Choppin     | University of Rochester            |
| 2246990 | Exploring the Landscape of Rural Mathematics Education (Collaborative Research: Heck)  | Daniel Heck         | Horizon Research, Inc.             |
| 2319933 | Facilitating Teacher Learning with Video Clips of Instruction in Science   | Miray Tekkumru Kisa | Rand Corporation                   |
| 2300556 | <b>NEW!</b> Fostering Systems Thinking in High School Environmental Engineering Through Engagement of Coastal Communities  | Rossella Santagata  | University of California, Irvine   |
| 2300619 | Hearing Each Other's Voices: Community Models for Professional Learning for Teachers, STEM Coaches, and Researchers (Collaborative Research: Fusco)                | Judith Fusco        | Digital Promise Global             |
| 2300618 | Hearing Each Other's Voices: Community Models for Professional Learning for Teachers, STEM Coaches, and Researchers (Collaborative Research: Hmelo-Silver)         | Cindy Hmelo-Silver  | Indiana University                 |
| 2300555 | High School Climate Education for a Resilient Future   | Jessica Bean        | University of California, Berkeley |
| 2300532 | Improving Rural Middle Grades Mathematics Instruction Through a Statewide Teacher-Researcher Alliance  | Joe Champion        | Boise State University             |
| 2300734 | Intelligent Science Stations: Developing Adaptive Mixed-Reality Technology to Enhance Inquiry-based STEM Learning in Schools                                       | Nesra Yannier       | Carnegie Mellon University         |

| Award # | Project Title   | PI                  | Institution                              |
|---------|---|---------------------|--|
| 2300357 | Investigating Early Elementary Students' Computational Thinking Development in Integrated Mathematics-Coding Instruction                                    | Jessica Shumway     | Utah State University                    |
| 2300606 | Making the Building Blocks of Early Math Scalable, Accessible, and Viable for All Young Children and Their Teachers   | Douglas Clements    | University of Denver                     |
| 2300738 | <b>NEW!</b> Meta-Analysis of the Instructional-Relational Model of Student Engagement and Math Achievement: A Moderation and Mediation Approach             | Yibing Li           | American Institutes for Research         |
| 2300609 | <b>NEW!</b> Mobilizing Physics Teachers to Promote Inclusive and Communal Classroom Cultures through Everyday Actions (Collaborative Research: Cunningham)  | Beth Cunningham     | American Association of Physics Teachers |
| 2300608 | <b>NEW!</b> Mobilizing Physics Teachers to Promote Inclusive and Communal Classroom Cultures Through Everyday Actions (Collaborative Research: Fracchiolla) | Claudia Fracchiolla | American Physical Society                |
| 2300607 | <b>NEW!</b> Mobilizing Physics Teachers to Promote Inclusive and Communal Classroom Cultures Through Everyday Actions (Collaborative Research: Hazari)      | Zahra Hazari        | Florida International University         |
| 2247807 | Over-Engaged Parenting and Science Achievement in Early Childhood   | Julia Leonard       | Yale University                          |
| 2300927 | Support Partnership for New Bilingual Science and Engineering Teachers  | Alberto Esquinca    | San Diego State University               |
| 2300747 | Supporting Rural STEM Middle School Teachers and Career Counselors in the Development of Effective STEM Content and Career Development Experiences          | Dodie Limberg       | University of South Carolina             |
| 2300490 | The Effects of Family Engagement on STEM Learning and Motivation: A Systematic Review and Meta-Analysis   | Tyler Smith         | University of Missouri                   |
| 2301248 | The Smart Playground: Computational Thinking Through Robotics in Early Childhood (Collaborative Research: Bers)   | Marina Bers         | Boston College                           |

| Award # | Project Title   | PI                | Institution                                |
|---------|---|-------------------|--|
| 2301247 | The Smart Playground: Computational Thinking Through Robotics in Early Childhood (Collaborative Research: Bustamante) | Andres Bustamante | University of California, Irvine           |
| 2301249 | The Smart Playground: Computational Thinking Through Robotics in Early Childhood (Collaborative Research: Rogers)     | Chris Rogers      | Tufts University                           |
| 2300322 | Unpacking Computational Thinking for Elementary Teachers and Learners (Collaborative Research: Albert)                | Jennifer Albert   | Citadel Military College of South Carolina |
| 2300323 | Unpacking Computational Thinking for Elementary Teachers and Learners (Collaborative Research: Jocius)                | Robin Jocius      | University of Texas at Arlington           |