

2021-22 DRK–12 New Awards

This list contains grants awarded winter 2021 – summer 2022.

NEW! *Denotes awards made since CADRE's July 2022 newsletter*

Award #	Project Title	PI	Institution
2200883	A Systematic Review and Meta-Analysis on the Effectiveness of Remote Education in Math and Science	Sarah Sahni	American Institutes for Research
2200438	NEW! Adapted Measure of Math Engagement: Designing Self-Report Measures of Mathematics Engagement for Black and Latina/o Middle School Students (Collaborative Research: Gordon)	Rachel Gordon	University of Louisiana at Lafayette
2200437	NEW! Adapted Measure of Math Engagement: Designing Self-Report Measures of Mathematics Engagement for Black and Latina/o Middle School Students (Collaborative Research: Holquist)	Samantha Holquist	Child Trends
2201295	NEW! Advancing Earth Science Instruction across High School Life and Physical Science	Alan Berkowitz	Cary Institute of Ecosystem Studies
2201127	Applying and Refining a Model for Dynamic, Discussion-based Professional Development for Middle School Teachers about Fractions, Ratios, and Proportions (Collaborative Research: Brown)	Rachael Brown	Pennsylvania State University
2201126	Applying and Refining a Model for Dynamic, Discussion-based Professional Development for Middle School Teachers about Fractions, Ratios, and Proportions (Collaborative Research: Cohen)	Allan Cohen	University of Georgia
2201125	Applying and Refining a Model for Dynamic, Discussion-based Professional Development for Middle School Teachers about Fractions, Ratios, and Proportions (Collaborative Research: Orrill)	Chandra Orrill	University of Massachusetts Dartmouth
2200990	Attributions of Mathematical Excellence in Teaching and Learning	Erik Jacobson	Indiana University
2201673	Bridging Preschool and Kindergarten Science: Exploring Play-based Engagement with Scientific and Engineering Practices in Early Learning Environments (Collaborative Research: Miller)	Alison Miller	Bowdoin College

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2201674	Bridging Preschool and Kindergarten Science: Exploring Play-based Engagement with Scientific and Engineering Practices in Early Learning Environments (Collaborative Research: Whitt)	Katahdin Cook Whitt	Maine Mathematics and Science Alliance
2201204	Build it Green!: Enhancing Middle School Science Education through an Energy Efficient Building Design Curriculum	Laura Zangori	University of Missouri
2145517	CAREER: A Transformative Approach for Teaching and Learning Geometry by Representing and Interacting with Three-Dimensional Figures	Justin Dimmel	University of Maine
2144506	CAREER: Advancing Equity in Middle School Mathematics by Engaging Students and Families of Color in Participatory Design Research	Nicole Louie	University of Wisconsin-Madison
2142000	CAREER: Covariational and Algebraic Reasoning: A New Path to Algebra	Teo Paoletti	University of Delaware
2143816	CAREER: Designing Meaningful Learning Experiences for Statistical Literacy in Secondary Mathematics	Travis Weiland	University of Houston
2143993	CAREER: Designing Teacher Professional Development to Leverage the Brilliance of Learners of Color	Sherice Clarke	University of California, San Diego
2142908	CAREER: Developing Elementary Teachers' Self-Efficacy to Teach about Climate Change Using Community-based Practices	Amal Ibourk	Florida State University
2144618	CAREER: Fostering Early STEM Exploration with Gifted and High Ability Black Girls and Their Elementary Teachers through Culturally Relevant Experiential Learning Activities	Brittany Anderson	University of North Carolina at Charlotte
2142659	CAREER: From Research to Meta-Research to Practice – The Development of an Educational Learning Environment Framework for School Algebra	Sheree Sharpe	University of New Hampshire
2145478	NEW! CAREER: Promoting Science Motivation and Learning through Instructional Support of Curiosity	Jamie Jirout	University of Virginia
2145260	CAREER: Teacher Learning through Expansive Sensemaking in Science	Jessica Watkins	Vanderbilt University

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2148014	CAREER: Transforming Science Teaching and Learning through Empowering Teachers and Students as Climate Justice Action Researchers and Change Agents	Tammie Visintainer	San Jose State University
2144027	CAREER: Understanding the Routinization of Mathematics Language Routines in Middle and High Schools	Sarah Roberts	University of California, Santa Barbara
2200887	Contextualizing Data Education via Project-based Learning	Chad Dorsey	Concord Consortium
2201148	Cultivating Relationships: Partnering with Teachers and Tribes to Integrate Indigenous and School STEM Knowledge	Vanessa Anthony-Stevens	University of Idaho
2201255	Culturally Responsive Engineering Experience Design and Development through Teacher-Undergraduate Engineering Student Partnerships	Darryl Dickerson	Florida International University
2200918	NEW! Designing Computational Modeling Curricula across Science Subjects to Study How Repeated Engagement Impacts Student Learning throughout High School (Collaborative Research: Conlin)	Luke Conlin	Salem State University
2200919	NEW! Designing Computational Modeling Curricula across Science Subjects to Study How Repeated Engagement Impacts Student Learning throughout High School (Collaborative Research: Kantzer)	Madison Kantzer	District of Columbia Public Schools
2200917	NEW! Designing Computational Modeling Curricula across Science Subjects to Study How Repeated Engagement Impacts Student Learning throughout High School (Collaborative Research: Klopfer)	Eric Klopfer	Massachusetts Institute of Technology
2201324	NEW! Developing a Place-based STEM Education Model for Cultural Connections to Alaska Science	Lynda McGilvary	University of Alaska Fairbanks
2201068	NEW! Developing and Testing a Learning Progression for Middle School Physical Science Incorporating Disciplinary Core Ideas, Science and Engineering Practices, and Crosscutting Concepts	Peng He	Michigan State University
2201305	Developing Neural and Behavioral Measures to Predict Long-Term STEM Learning Outcomes from a High School Spatial Learning Course (Collaborative Research: Green)	Adam Green	Georgetown University

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2201051	Developing Science Assessments for Language Diversity in Early Elementary Classrooms	Daisy Rutstein	SRI International
2200830	Empowering Changemakers: Urban Biodiversity Initiative for Teachers and Youth	Ashley Iveland	WestEd
2201313	Empowering Educators to Create Customized, Culturally Responsive Instructional Materials from Scratch Encore Harmonized with the Interest of Students (Collaborative Research: Franklin)	Diana Franklin	University of Chicago
2201312	Empowering Educators to Create Customized, Culturally Responsive Instructional Materials from Scratch Encore Harmonized with the Interest of Students (Collaborative Research: Weintrop)	David Weintrop	University of Maryland
2200928	Empowering Students with Choice through Equitable and Interactive Mathematical Modeling (EIM2)	Hyunyi Jung	University of Florida
2201407	Engineering for Students with Extensive Support Needs	Bree Jimenez	University of Texas at Arlington
2200757	Evaluating Effects of Automatic Feedback Aligned to a Learning Progression to Promote Knowledge-In-Use	Kevin Haudek	Michigan State University
2201087	Examining an Online, International Exchange Professional Development Program for High School Teachers	Amanda Brown	University of Michigan
2200634	Experiments in Teacher Professional Learning: Testing Design Features that Accelerate Instructional Improvement in Mathematics	John Papay	Brown University
2201095	Exploring K-2 Children Understandings of Visual Representations in Algebraic Reasoning	Bárbara Brizuela	Tufts University
2200815	Exploring the Integration of Systems Thinking in Biology in Participatory Professional Development	Michael Cassidy	TERC
2201394	Fostering Virtual Learning of Data Science Foundations with Mathematical Logic for Rural High School Students (Collaborative Research: Xing)	Wanli Xing	University of Florida

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2201393	Fostering Virtual Learning of Data Science Foundations with Mathematical Logic for Rural High School Students (Collaborative Research: Zhang)	Yuanlin Zhang	Texas Tech University
2200781	How Multi-digit Number Names Guide Attention, Memory, and Place Value Learning in Early Elementary Mathematics	Lei Yuan	University of Colorado Boulder
2201121	Integrating the Statistical Investigation Process, Data Visualization, and Simulation into High School Statistics	Soma Roy	California Polytechnic State University
2201249	Investigating How Combining Intensive Professional Development and Modest Support Affects Rural Elementary Teachers' Science and Engineering Practice	Ryan Summers	University of North Dakota
2201253	Learning in Places: PK-5+ Field-based Science Education Across Schools, Families, and Communities (Collaborative Research: Bang)	Megan Bang	Northwestern University
2201254	Learning in Places: PK-5+ Field-based Science Education Across Schools, Families, and Communities (Collaborative Research: Tzou)	Carrie Tzou	University of Washington
2201424	NEW! Learning Probability Through AI Problem-Solving in a Game-based Environment (Collaborative Research: Greenwald)	Eric Greenwald	University of California, Berkeley
2201423	NEW! Learning Probability Through AI Problem-Solving in a Game-based Environment (Collaborative Research: Wang)	Ning Wang	University of Southern California
2222148	NEW! Mentoring a Diverse Cohort of Postdoctoral Scholars in Data Science Education Research	Rachel Levy	North Carolina State University
2200778	Middle School Students Graphing from the Ground Up (Collaborative Research: Lee)	Hwa Young Lee	Texas State University
2200777	Middle School Students Graphing from the Ground Up (Collaborative Research: Paoletti)	Teo Paoletti	University of Delaware
2200915	Preparing Mentors to Support Novices in Eliciting Student Thinking during Mathematics Discussions: Developing and Testing a Simulation-based PD Program	Julie Cohen	University of Virginia

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2200371	NEW! Project AIM-NEXT: All Included in Mathematics New Extensions - Professional Development for K-2 Mathematics Teachers, Leaders, and Coaches (Collaborative Research: Heck)	Daniel Heck	Horizon Research, Inc.
2200370	NEW! Project AIM-NEXT: All Included in Mathematics New Extensions - Professional Development for K-2 Mathematics Teachers, Leaders, and Coaches (Collaborative Research: Sztajn)	Paola Sztajn	North Carolina State University
2201165	NEW! Quantifying Curricular Reasoning as a Critical Practice in Teaching Mathematics (Collaborative Research: Bostic)	Jonathan Bostic	Bowling Green State University
2201169	NEW! Quantifying Curricular Reasoning as a Critical Practice in Teaching Mathematics (Collaborative Research: Dingman)	Shannon Dingman	University of Arkansas
2201166	NEW! Quantifying Curricular Reasoning as a Critical Practice in Teaching Mathematics (Collaborative Research: May-Sondergeld)	Toni May-Sondergeld	Drexel University
2201167	NEW! Quantifying Curricular Reasoning as a Critical Practice in Teaching Mathematics (Collaborative Research: Roth-McDuffie)	Amy Roth-McDuffie	Washington State University
2201164	NEW! Quantifying Curricular Reasoning as a Critical Practice in Teaching Mathematics (Collaborative Research: Teuscher)	Dawn Teuscher	Brigham Young University
2201192	Restructuring Middle School Science around Grand Challenges	Troy Sadler	University of North Carolina at Chapel Hill
2201015	Scaffolding Middle and High School Students' Scientific Evaluations of Sources and Alternative Claims in Earth and Environmental Sciences (Collaborative Research: Bailey)	Janelle Bailey	Temple University
2201016	Scaffolding Middle and High School Students' Scientific Evaluations of Sources and Alternative Claims in Earth and Environmental Sciences (Collaborative Research: Buxner)	Sanlyn Buxner	Planetary Science Institute
2201017	Scaffolding Middle and High School Students' Scientific Evaluations of Sources and Alternative Claims in Earth and Environmental Sciences (Collaborative Research: Governor)	Donna Governor	University of North Georgia

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2201012	Scaffolding Middle and High School Students' Scientific Evaluations of Sources and Alternative Claims in Earth and Environmental Sciences (Collaborative Research: Lombardi)	Doug Lombardi	University of Maryland
2201013	Scaffolding Middle and High School Students' Scientific Evaluations of Sources and Alternative Claims in Earth and Environmental Sciences (Collaborative Research: McAuliffe)	Carla McAuliffe	TERC
2201018	Scaffolding Middle and High School Students' Scientific Evaluations of Sources and Alternative Claims in Earth and Environmental Sciences (Collaborative Research: Sinatra)	Gale Sinatra	University of Southern California
2204901	Science Teachers as Public Health Educators: How Has the COVID-19 Pandemic Reshaped the Roles and Experiences of K-12 Science Teachers?	Peggy Trygstad	Horizon Research, Inc.
2201083	NEW! Supporting Consequential Learning in Middle School STEM through Rightful Familial Presence	Angela Calabrese Barton	University of Michigan
2200753	NEW! Supporting School Administrators in Leading Towards Racially Just and Ambitious Mathematics Instruction	Jessica Rigby	University of Washington
2201215	Supporting Secondary Students' Earth Science Knowledge and Engineering Design Skills with Mobile Design Studios	Corey Schimpf	University at Buffalo - SUNY
2214168	The Impact of COVID on Children's Well-being in 2022: Continued Evidence from the Understanding America Study	Anna Saavedra	University of Southern California
2201196	Using Integrated, Place-based Watershed Curriculum to Increase Teacher Self-Efficacy with Culturally Relevant STEM	Julie Robinson	University of North Dakota
2200763	NEW! Using Problem-based Learning Analytics to Investigate Individual and Collaborative Mathematics Learning in a Digital Environment Over Time	Elizabeth Phillips	Michigan State University