GENERAL POSTER HALL

LISTED BY PROJECT TITLE, PRINCIPAL INVESTIGATOR

FRIDAY, JUNE 30, 2023

Table	Project Title	PI Name	Co-PI Name(s)	STEM Content Area	Grade Band
1	Practice-Driven Professional Development for Algebra Teachers	Zandra de Araujo		M	M, H
2	TBD				
3	Investigating Impact of Different Types of Professional Development on What Aspects Mathematics Teachers Take Up and Use in Their Classroom	Karen Koellner		M	M, H
4	CAREER: Cultivating Teachers' Epistemic Empathy to Promote Responsive Teaching	Lama Jaber		S, M	E, M, H
5	Developing a Place-based STEM Education Model for Cultural Connections to Alaska Science	Lynda McGilvary	Lori Schoening, Charles Topkok	S	E, M, H
6	Building Professional Capital in Elementary Science Teaching Through a District-Wide Networked Improvement Community Model	Jessica Thompson	Elizabeth Sanders, MaryMargaret Welch	S	E
7	Improving Multi-dimensional Assessment and Instruction: Building and Sustaining Elementary Science Teachers' Capacity Through Learning Communities (Collaborative	Carla Strickland	Debbie Leslie	S	E

	Research: Strickland)				
8	Supporting Teachers in Responsive Instruction for Developing Expertise in Science (Collaborative Research: Linn)	Marcia Linn	Elizabeth Gerard	E	M, H
9	Supporting Science Learning and Teaching in Middle School Classrooms Through Automated Analysis of Students' Writing (Collaborative Research: Puntambekar)	Sadhana Puntambekar		S, T	M
10	TBD				
11	TBD				
12	TBD				
13	Building a Teacher Knowledge Base for the Implementation of High-Quality Instructional Resources Through the Collaborative Investigation of Video Cases (Collaborative Research: Wilson)	David C Wilson		M	M, H
14	Synchronous Online Video-based Development for Rural Mathematics Coaches (Collaborative Research: Amador)	Julie M. Amador		M	M
15	Adapted Measure of Math Engagement: Designing Self-Report Measures of Mathematics Engagement for Black and Latina/o Middle School Students (Collaborative Research: Holquist)	Samantha E Holquist	Mark Vincent Yu, Ta-yang Hsieh, Marisa Crowder	M	M, H
16	Culturally Responsive, Affective-focused Teaching of Science and Mathematics	Julie C. Brown	Anne Manley, Catherine Paolucci, Chonika Coleman-King	S, M	E, M, H
17	Supporting Teacher Understanding of Emergent Computational Thinking in Early Elementary Students	Katherine Culp	Heather Sherwood, Anthony Negron, Julie Keane	T	Pre-K, E
18	Developing and Validating Assessments to Measure and Build Elementary Teachers' Content Knowledge for Teaching About Matter and Its Interactions Within Teacher Education Settings (Collab: Hanuscin)	Deborah Hanuscin	Emily Borda, Daniel Hanley, Daniel Hanley	S	E, Post-Sec
19	Evaluating Effects of Automatic Feedback Aligned to a Learning Progression to Promote Knowledge-In-Use	Kevin Haudek	Joseph Krajcik, Leonora Kaldaras	S	H
20	Developing and Testing a Learning Progression for Middle School Physical Science Incorporating Disciplinary Core Ideas, Science and Engineering Practices, and Crosscutting Concepts	Peng He	Namsoo Shin	S	M
21	Developing Learning Environments that Support Molecular-Level Sensemaking	Ryan Stowe		S	H
22	Supporting Teacher Customizations of Curriculum Materials for Equitable Student Sensemaking in	Katherine McNeill	Renee Affolter	S	M

	Secondary Science (Collaborative Research: McNeill)				
23	Spanning Boundaries: A Statewide Network to Support Science Teacher Leaders to Implement Science Standards	Julie Yu	Sara Heredia	S, E	E, M, H
24	Reasoning Language for Teaching Secondary Algebra	Cody Patterson		M	M, H
25	CAREER: Investigating Changes in Students' Prior Mathematical Reasoning: An Exploration of Backward Transfer Effects in School Algebra	Charles Hohensee		M	H
26	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		M	M
27	Supporting Teachers to Teach Mathematics through Problem Posing	Jinfa Cai	Faith Muirhead, Michelle Cirillo	M	M
28	Accessible Computational Thinking in Elementary Science Classes within and across Culturally and Linguistically Diverse Contexts (Collaborative Research: Nelson)	Brian Nelson		S	E
29	Exploring Changes in Teachers' Engineering Design Self-efficacy and Practice Through Collaborative and Culturally Relevant Professional Development	Frank Bowman	Bethany Klemetsrud, Julie Robinson, Erin Lacina	E	E, M
30	AI-based Assessment in STEM Education Conference	Xiaoming Zhai	Joseph Krajcik	S	Pre-K
31	Empowering Teachers to See and Support Student Use of Crosscutting Concepts in the Life Sciences	Chad Gotch	Sarah Fick, Kira Carbonneau	S	H
32	Reducing Racially-Biased Beliefs by Fostering a Complex Understanding of Human Genetics Research in High-School Biology Students (Collaborative Research: Golan Duncan)	Ravit Golan Duncan		S	M, H
33	Building Middle School Students' Understanding of Heredity and Evolution	Louisa A Stark	Kristin Bass, Kevin Pompei	S	M
34	Implementation and Efficacy Study of Preschool Math Activities for Numeracy	Anna Shusterman		M	Pre-K
35	Examining Potential Causal Connections and Mechanisms Between Children's Block Play and Mathematics Learning	Sara Schmitt		M	Pre-K
36	CAREER: Designing and Enacting Mathematically Captivating Learning Experiences for High School Mathematics	Leslie Dietiker		M	H
37	Understanding STEM Teaching Through Integrated Contexts in Everyday Life (Collaborative Research: Macalalag)	Augusto Macalalag		S, M	M, H

38	Fostering Computational Thinking Through Neural Engineering Activities in High School Biology Classes	Ido Davidesco	John Settlage, Christopher Rhoads, Aaron Kyle, Bianca Montrosse-Moorhead	S, T, E	H
39	Dimensions of Success: Transforming Quality Assessment in Middle School Science and Engineering	Gil G. Noam	Drew Gitomer, Patricia Allen	S, T, E	M, H
40	From Access to Sustainability: Investigating Ways to Foster Sustainable Use of Computational Modeling in K-12 Science Classrooms	Paulo Blikstein	Michelle Wilkerson, Aditi Wagh, Tamar Fuhrmann	S, T	M
41	Extending and Investigating the Impact of the High School Model-based Educational Resource (Collaborative Research: Wilson)	Christopher Wilson	Molly Stuhlsatz	S	H
42	GeoHazard: Modeling Natural Hazards and Assessing Risks	Amy Pallant	Carla McAuliffe, Scott McDonald, Hee-Sun Lee, Elaine Larson, Tyson Brown	S, T	M, H
43	Building Insights Through Observation: Researching Arts-based Methods for Teaching and Learning with Data	Kathryn Semmens	Amy Busey, Jessica Sickler, Keri Maxfield, Hilary Peddicord	S	M
44	Developing the Science Comprehensive Online Learning Platform for Rural School Science Teacher Development	Brooke Moore	Earl Legleiter	S	M
45	Science Coordinators Advancing a Framework For Outstanding Leadership Development	Julie Luft	Brooke Whitworth	S	Pre-K, E, M, H
46	Measuring Early Mathematical Reasoning Skills: Developing Tests of Numeric Relational Reasoning and Spatial Reasoning	Leanne Ketterlin Geller	Lindsey Perry	M	E
47	Young Mathematicians: Expanding an Innovative and Promising Model Across Learning Environments to Promote Preschoolers' Mathematics Knowledge	Jessica Young	Deborah Schifter, Kristen Reed	M	Pre-K
48	Middle School Students Graphing From the Ground Up (Collaborative Research: Paoletti)	Teo Paoletti		M	M
49	Improving Grades 6-8 Students' Mathematics Achievement in Modeling and Problem Solving Through Effective Sequencing of Instructional Practices	Joe Champion	Samuel Coskey, Michele Carney, Keith Thiede, Ya Mo, Michael Jarry-Shore	M	M
50	Using Problem-based Learning Analytics to Investigate Individual and Collaborative Mathematics Learning in a Digital Environment Over Time	Elizabeth Phillips	Nathan Kimball, Chad Dorsey, Kristen Bieda, Alden Edson	M	M
51	Developing a Suite of Standards-based Instructionally Supportive Tools for Middle School Computer Science	Satabdi Basu	Daisy Rutstein	Comp.	M
52	Science and Engineering Education for Infrastructure Transformation	Charles Xie	Senay Purzer, Chad Dorsey	S, T, E	M, H, Post-Sec
53	Measuring the Effectiveness of Middle School STEM-	Meltem Alemdar	Jeff Rosen, Roxanne Moore,	E	M

	Innovation and Engineering Design Curricula		Jessica Gale		
54	Learning by Evaluating: Engaging Students in Evaluation as a Pedagogical Strategy to Improve Design Thinking	Nathan Mentzer	Scott Bartholomew, Andrew Jackson, Ryan Novitski	T, E	H
55	Supporting Secondary Students' Earth Science Knowledge and Engineering Design Skills with Mobile Design Studios	Corey Schimpf	Shanna Daly	S, T, E	M, H
56	STEM Sea, Air, and Land Remotely Operated Vehicle Design Challenges for Rural, Middle School Youth	Guenter Maresch	Adrienne Smith, Jorge Monreal, Steven Turner, Christopher Bacot	S, T, E, M	M
57	Developing a Modeling Orientation to Science: Teaching and Learning Variability and Change in Ecosystems (Collaborative Research: Peake)	Leigh Peake	William Finzer, Daniel Damelin, Christine Voyer, Amanda Dickes	S, M	M
58	Precipitating Change in Alaskan and Hawaiian Schools: Modeling Mitigation of Coastal Erosion	Carolyn Staudt	Thomas Moher, Beth Covitt, Noelani Puniwai	S	M
59	Learning about Viral Epidemics through Engagement with Different Types of Models	Troy Sadler	Laura Zangori, Patricia Friedrichsen, Li Ke	S	M
60	How Deep Structural Modeling Supports Learning with Big Ideas in Biology	Daniel Capps		S	H
61	CAREER: Supporting Elementary Science Teaching and Learning by Integrating Uncertainty into Classroom Science Investigations	Eve Manz		S	E
62	MothEd - Authentic Science for Elementary and Middle School Students	Peter White	Frieda Reichsman, Chad Dorsey, David Stroupe	S	E, M
63	Teaching Students to Reason about Variation and Covariation in Data: What Do We Know and What Do We Need to Find Out?	Molly Stuhlsatz	Susan Kowalski	S, T, E, M	E, M, H, Post-Sec
64	TBD				
65	TBD				