



<b>List of Projects Invited to the 2010 DR K-12 PI Meeting (as of 9.8.10)</b>	
<b>Award #</b>	<b>Project Title</b>
0744486	A Comprehensive Modeling Approach to Cognitively Diagnostic Assessment: Methodological Developments and Practical Implementations
0918339	A Digital Resource for Developing Mathematics Teachers' TPCK."
0732217	A Longitudinal Examination of Children's Developing Knowledge of Measurement: Mathematical and Scientific Concept and Strategy Growth from Pre-K through Grade 5
0822153	A Longitudinal Trial Study of Middle School Science for English Language Learners (Project MSSELL) (Collaborative Research: Irby)
0822343	A Longitudinal Trial Study of Middle School Science for English Language Learners (Project MSSELL) (Collaborative Research: Lara-Alecio)
0554579	A Study of Professional Learning Communities Amongst Secondary Science & Mathematics Teachers: Changes, Support Systems, Student Learning
0918060	A Study of the Struggling Learner's Knowledge and Development for Number and Operation
0936706	ABI and CSTA Collaboration to Reach K-12 Teachers from Under-represented Communities at the 2009 Grace Hopper Celebration
0822039	Accessing Science Ideas: Enhancing Curriculum to Support Scientific Reasoning of Students with Learning Disabilities
1019866	Achievements and Challenges of Modeling-based Instruction (ACMI) in Science Education: from 1980 to 2009
0733268	Active Physics Teacher Community
1019503	Agency in Sustained Problem-based Inquiry: Learning Science Through and As Innovation
0960581	Algebra: A Challenge at the Crossroads of Policy and Practice
0918434	An Architecture of Intensification: Building a Comprehensive Program for Struggling Students in Double-period Algebra Classes
0732186	An Examination of the Impact of Teachers' Domain as a Professional Development Tool on Teacher Knowledge and Student Achievement in Biology
0917540	An Investigation of the Impact of Strengthening the "T" and "E" Components of STEM in High School Biology and Chemistry Courses
0733172	Application of Evidence-centered Design to State Large-scale Science Assessment
0949241	Assessing Instructional Quality in Mathematics: A Comparative Study of High and Low Value-added Teachers' Videotaped Lessons
0918126	Assessing Teachers' Pedagogical Design Capacity and Mathematics Curriculum Use (Collaborative Research: Kim)
0918141	Assessing Teachers' Pedagogical Design Capacity and Mathematics Curriculum Use (Collaborative Research: Remillard)
0733590	Assessment for Learning Research Scholars: Capacity Building in



	Mathematics and Science Education
0733286	ASSISTments Meets Inquiry
0733188	Astrobiology in the Secondary Classroom Project: An Interdisciplinary Curriculum Developed by a Collaboration of Scientists and Educators from Three Different Minority Communities
0918409	AutoMentor: Virtual Mentoring and Assessment in Computer Games for STEM Learning
0733024	Beyond Penguins and Polar Bears: Integrating Literacy and IPY in the K-5 Classroom
1020089	Biocomplexity: Transforming an Innovative High School Curriculum with UDL Scaffolds and Multimedia Resources
0733255	Bioinformatics: Learning by Doing
1020385	Bridging the Gap Between High School and College Physics: An Exploratory Study
0821988	Building BLOCKS for Science -- What Young Children Should Know and Be Able to Do When They Enter Kindergarten
0733345	CalipersII: Using Simulations to Assess Complex Science Learning
0711264	Capacity Building Conference Series: Supporting an Emerging Community of Science Education Researchers
0733379	Capacity Building in Computer Science
0844556	CAREER: A Study of Strategies and Social Processes that Facilitate the Participation of Latino English Language Learners in Elementary Mathematics Classroom Communities
0952460	CAREER: Changing the Landscape: Towards the Development of a Physics Identity in High School
0952160	CAREER: Creating Effective, Sustainable Inquiry-Based Instruction in Middle School Science Classrooms
0844445	CAREER: Examining the Role of Context in the Mathematical Learning of Young Children
0953987	CAREER: Exploring the Role of Variability as an Organizing Concept for the Teaching and Learning of Statistical Reasoning in Middle School
0845632	CAREER: Learning About Complex Causality in the Classroom
0954222	CAREER: Learning to Make Mathematical Connections
0953046	CAREER: Supporting Middle School Students' Construction of Evidence-based Arguments
0952415	CAREER: Supporting Students' Proof Practices Through Quantitative Reasoning in Algebra
0953448	CAREER: Teaching and Learning Social Science Inquiry and Spatial Reasoning with GIS
0952661	CAREER: Teaching Practices That Support Fraction-Based Algorithmic Thinking
0732798	Cases of Reasoning and Proving in Secondary Mathematics (CORP)
0954114	CBMS Forum on the Content and Assessment of School Mathematics
0918590	Change Thinking for Global Science: Fostering and Evaluating Inquiry



	Thinking About the Ecological Impacts of Climate Change
0733642	Chemistry Education Research Doctoral Scholars Program
0733169	Chemistry Facets: Formative Assessment to Improve Student Understanding in Chemistry
0903441	Closing the Math Achievement Gap for English Language Learners: Technology Resources for Pre-algebra
0554262	CLUSTER: Investigating a New Model Partnership for Teacher Preparation (Collaborative Research: Gupta)
0554269	CLUSTER: Investigating a New Model Partnership for Teacher Preparation (Collaborative Research: Steinberg)
0918109	Coherent Implementation of Mathematics Instructional Materials: A Study of the Variations and Effects of District Supports for Implementation
0747536	Collaborative Learning with Classroom Networks: Integrating Technological and Pedagogical Innovations
0918832	Collaborative Online Projects for ELL Students (COPELLS)
0822241	Community for Advancing Discovery Research in Education (CADRE)
0918836	Community Oriented Science Education
0946433	Conference on Research on the Enacted Mathematics Curriculum
0922410	Conference Series for Recent Graduates and Advanced Doctoral Students in Mathematics Education
0918295	Connected Chemistry as Formative Assessment
0958058	Considering the Future of K-12 STEM Curricula and Instructional Materials: Stimulating and Supporting New Developments
0554441	Content Mentoring and Its Impact on Middle Grades Mathematics and Science Teacher Effectiveness
0822388	Cumulative Learning using Embedded Assessment Results (CLEAR)
0731739	Current Climate Changes over Eastern Siberia and Interior Alaska and their Impact on Permafrost Landscapes, Ecosystem Dynamics, and Hydrological Regime
0822189	Cyber-enabled Design Research to Enhance Teachers' Critical Thinking Using a Major Video Collection on Children's Mathematical Reasoning (Collaborative Research: Derry)
0822204	Cyber-enabled Design Research to Enhance Teachers' Critical Thinking Using a Major Video Collection on Children's Mathematical Reasoning (Collaborative Research: Maher)
0918683	Cyber-enabled Earth Exploration: Development of Materials for Middle School Earth Science Instruction
1020186	Data Explorations in Ecology Project (DEEP)
0918735	Data Games -- Tools and Materials for Learning Data Modeling (Collaborative Research: Finzer)
0918653	Data Games -- Tools and Materials for Learning Data Modeling (Collaborative Research: Konold)
0822362	Design and Use of Illustrations in Test Items as a Form of Accommodation for English Language Learners in Science and Mathematics Assessment



0554535	Designing Learning Organizations for Instructional Improvement in Mathematics
0554651	Designing Professional Development Resources that Lead to Effective Science and Expository Writing Instruction
0918239	Developing Algebra-ready Students for Middle School: Exploring the Impact of Early Algebra
0822038	Developing an Empirically-tested Learning Progression for the Transformation of Matter to Inform Curriculum, Instruction and Assessment Design
0554416	Developing an Integrated Assessment and Support System for Elementary Teacher Education
0822314	Developing Contingent Pedagogies: Integrating Technology-enhanced Feedback into a Middle School Science Curriculum to Improve Conceptual Teaching and Learning
0822200	Developing Science Problem-solving Skills and Engagement Through Intelligent Game-based Learning Environments
0918522	Developing, Researching, and Scaling Up SmartGraphs
0903411	Diagnosing Teachers' Multiplicative Reasoning
0733272	Diagnostic E-learning Trajectories Approach (DELTA) Applied to Rational Number Reasoning for Grades 3-8
1020163	Differentiated Professional Development: Building Mathematics Knowledge for Teaching Struggling Learners
1019672	Discovery Research K-12
1019228	DRK12-Biograph: Graphical Programming for Constructing Complex Systems Understanding in Biology
0918744	Dynamic Geometry in Classrooms
0918583	Ecology Disrupted: Using Real Scientific Data about Daily Life to Link Environmental Issues to Ecological Processes in Secondary School Science Classrooms (Collaborative Research: Gano)
0918629	Ecology Disrupted: Using Real Scientific Data about Daily Life to Link Environmental Issues to Ecological Processes in Secondary School Science Classrooms (Collaborative Research: Wyner)
0918610	Ecosystems and Evidence Project (Collaborative Research: Berkowitz)
0918648	Ecosystems and Evidence Project (Collaborative Research: DeLisi)
0918589	Ecosystems and Evidence Project (Collaborative Research: Jordan)
0822178	Educating about Statistical Issues in Large Scientific Data Sets
1019306	Effective Programs for Elementary Science: A Best-evidence Synthesis
0822402	Effective Science Teaching for English Language Learners (ESTELL): A Pre-service Teacher Professional Development Research Project Across Three Universities in California
1020407	Efficacy Study of Project-based Inquiry Science
0918702	Electronic Teacher Guide: Its Development and Use in Supporting Educative Curricula
0733329	Elicitory Test Design: A New Model for Understanding the Relationship



	Between Test Item Features and Student Performance on Large-scale Assessments
1020367	Embodied STEM Learning Across Technology-based Learning Environments
1020101	Enabling Modeling and Simulation-based Science in the Classroom: Integrating Agent-based Models, Real World Sensing and Collaborative Networks
0918474	Engaging Secondary Students and Teachers Through a Proficiency-based Assessment and Reassessment of Learning Outcomes (PARLO) System in Mathematics
0918769	Engaging Youth in Engineering Module Study
0733303	Enhanced Earth System Teaching Through Real and Local (RealL) Earth Inquiry
0918449	Enhancing Engineering Education with Computational Thinking
0830029	Equity and Access to High-quality Instruction in Middle School Mathematics
1019769	Evaluating the Developing Mathematical Ideas Professional Development Program: Researching its Impact on Teaching and Student Learning
0732090	Evaluation of the Cognitive, Psychometric, and Instructional Affordances of Curriculum-embedded Assessments: A Comprehensive Validity-based Approach
0822213	Evolution Readiness: A Modeling Approach
0918326	Examining Coaching in Elementary (K-8) Mathematics Classrooms
0901311	Examining Different Curricular Approaches and Their Impact on High-school Students' Understanding of Algebra: Phase 1 - Studying the Intended Curriculum
0822223	Examining Teacher Discourse and Whole-class Interaction: A Social Semiotics Model for Mathematics Lesson Study Groups
0841757	Expanding and Sustaining Understanding Evolution
1020362	Expanding PhET Interactive Science Simulations to Grades 4-8: A Research-based Approach
0733584	Exploring Content Standards for Engineering Education in K-12
0918621	Exploring Engineering Design Knowing and Thinking as an Innovation in STEM Learning
0553769	Exploring the Effects of Teacher Research Experiences on Classroom Inquiry
0733252	Exploring the Frontiers of Science with Online Telescopes
0733334	Formative Assessment Delivery System (FADS)
1020393	Formative Assessment in Mathematics: Current Status and Guidelines for Future Developments
0918438	Formative Assessment in the Mathematics' Classroom: Engaging Teachers and Students
0733223	Fossil Finders: Using Fossils to Teach about Evolution, Inquiry and Nature of Science



0821950	Fostering Mathematics Success in English Language Learners
	Foundations of Algebra in the Elementary and Middle Grades: Supporting Students to Make, Represent and Justify General Claims about Operations
0550176	
1014671	GeoGebra 2010 Conference in North America
0821967	Geometry Assessments for Secondary Teachers (GAST)
	Helping Teachers Become Cultural Relevant Teachers: Developing New Tools for a New Generation
0929816	
0929774	High Adventure Science
	Honing Diagnostic Practice: Toward a New Model of Teacher Professional Preparation and Development
0822342	
	How Do Induction and Continuing Professional Development Affect Beginning Middle School Math Teachers' Instruction and Student Achievement?
0554434	
0732074	Identifying & Evaluating Adaptive Expertise in Teachers
	Identifying Critical Characteristics of Effective Feedback Practices in Science and Mathematics Education
0822373	
	Improving Science Learning in Inquiry-based Programs (Collaborative Research: Van Vuuren)
0733322	
	Improving Science Learning in Inquiry-based Programs (Collaborative Research: Ward)
0733323	
	Improving Teacher Preparation and Student Learning through Physics Education Research
0733276	
	INK-12: Teaching and Learning Using Interactive Ink Inscriptions in K-12 (Collaborative Research: Koile)
1020152	
	INK-12: Teaching and Learning Using Interactive Ink Inscriptions in K-12 (Collaborative Research: Rubin)
1019841	
0554652	Inquiry into Practice
	Inquiry-based Laboratories for Engaging Students of Creative and Performing Arts in STEM
0733284	
	Integrated Study of Natural Resources, Human Impact, and Environmental Policy: Making Complex Systems Accessible for Secondary Learners
1020065	
	Integrating Computing Across the Curriculum (ICAC): Incorporating Technology into STEM Education Using XO Laptops
0918216	
1020243	Integrating Engineering & Literacy
	Integrating Science and Mathematics Education Research into Teaching IV: Resources and Tool for Improved Learning
0736967	
	Interactive Ink Inscriptions in K-12 (INK-12) (Collaborative Research: Koile)
0822278	
	Interactive Ink Inscriptions in K-12 (INK-12) (Collaborative Research: Rubin)
0822055	
	International Congress on Mathematics Education Travel Grant Proposal (ICME-11)
0714890	
0732945	International Polar Year (IPY) STEM Polar Connections



0918733	Introducing Dynamic Number as a Transformative Technology for Number and Early Algebra
0918383	Investigating the Effect of Professional Development, Mathematical Knowledge for Teaching, and Instruction on Student Outcomes
1020392	Investigating the Relationship Between Teacher-level and Student-level Factors and NAEP Mathematics Test Performance by American Indian and Alaska Native Students
0918340	Investigations in Cyber-enabled Education (ICE)
0732143	Iterative Model Building (IMB): A Program for Training Quality Teachers and Measuring Teacher Quality
0822013	Knowledge Synthesis on STEM Teachers in Professional Learning Communities
1019236	Language-rich Inquiry Science with English Language Learners (LISELL)
0732757	Learning and Teaching Geometry: VideoCases for Mathematics Professional Development
0554616	Learning Assistant Model of Teacher Education in Science and Technology
0732233	Learning Progressions for Scientific Inquiry: A Model Implementation in the Context of Energy
0918560	Learning Science as Inquiry with the Urban Advantage: Formal-Informal Collaborations to Increase Science Literacy and Student Learning
0733015	Linear Algebra and Geometry: Advanced Mathematics for More Students
0554486	Linking Teacher Preparation to Student Learning in Mathematics and Science
0733299	Logging Opportunities in Online Programs for Science (LOOPS): Student and Teacher Learning
0733233	Making Sciences: Data Modeling and Argumentation in Elementary Science
0822181	Making Sense of Global Warming and Climate Change: Model of Student Learning via Collaborative Research
0918780	Mapping Developmental Trajectories of Students' Conceptions of Integers
0918834	Math Pathways & Pitfalls: Capturing What Works for Anytime Anyplace Professional Development
0918794	Math Snacks: Addressing Gaps in Conceptual Mathematics Understanding with Innovative Media
0918309	Mathematics and Culture in Micronesia: Integrating Societal Experiences (Macimise)
0907896	Mathematics Attainment and African-American Students: Discourse from Multiple Perspectives (Collaborative Research: Leonard)
0910672	Mathematics Attainment and African-American Students: Discourse from Multiple Perspectives (Collaborative Research: Stinson)
0918117	Mathematics Discourse in Secondary Classrooms: A Case-based Professional Development Curriculum
0554309	Mathematics for Teaching: A Problem-based Resource for Teachers



0733137	Mathematics Instruction Using Decision Science and Engineering Tools
1020154	Measurement Approach to Rational Number (MARN)
1019934	Models of Professional Development for Mathematics Teachers
0733217	Multimodal Science: Supporting Elementary Science Education through Graphic-enhanced Communication
0822128	NanoTeach: Professional Development in Nanoscale Science
0736491	National Conference on Benchmarking Student Evaluation Practices
0848681	National Forum for Action on the Report of the National Math Panel
0935879	National Symposium on K-12 Engineering Education
0426328	NCLT: A Center to Develop Nanoscale Science and Engineering Educators with Leadership Capabilities
0822296	Nurturing Multiplicative Reasoning in Students with Learning Disabilities in a Computerized Conceptual-modeling Environment (NMRSD-CCME)
1020002	Oceans of Data -- What is Needed to Support Students' Learning with Large Scientific Databases? (Collaborative Research: Foster)
1019644	Oceans of Data -- What is Needed to Support Students' Learning with Large Scientific Databases? (Collaborative Research: Peach)
0918697	Persistent, Enthusiastic, Relentless: Study of Induction Science Teachers (PERSIST)
0733209	Physical Science Comes Alive: Exploring Things that Go
0733280	Planting Science Research in Education
1020207	Pre-K Early Algebra through Quantitative Reasoning (PreKEA)
1019431	Professional Development for Culturally Relevant Teaching and Learning in Pre-K Mathematics
1020177	Project AIM: All Included in Mathematics
0822034	Project Delta: Digital Environments for the Learning and Teaching of Algebra
0733189	Project M2: Maturing Mathematicians -- Advanced Curriculum for Primary Level Students
0733140	PUM (PhysicsUnionMathematics) Exploration
0822261	Quality Cyber-enabled, Engineering Education Professional Development to Support Teacher Change and Student Achievement (E2PD)
0822302	Radford Outdoor Augmented Reality (ROAR) Project: Immersive Participatory Augmented Reality Simulations for Teaching and Learning Science
0946582	RAPID: The Science of Atoms and Molecules Project
1020176	Reasoning Tools for Understanding Water Systems
0732161	Reform Math Students' Transition from High School to College
0554186	Researching Mathematics Leader Learning
0553929	Researching Science and Mathematics Teacher Learning in Alternative Certification Models
0918223	Researching the Expansion of K-5 Mathematics Specialist Program into Rural School Systems



1020013	Rethinking How to Teach Energy: Laying The Foundations in Elementary School (Collaborative Research: Lacy)
1020020	Rethinking How to Teach Energy: Laying The Foundations in Elementary School (Collaborative Research: Wiser)
0822308	SAVE Science: Situated Assessment Using Virtual Environments for Science Content and Inquiry
0733143	Scaffolding Teacher Learning in Support of Student Inquiry
0822370	Scaffolding Understanding by Redesigning Games for Education (SURGE)
1019170	Scaffolding Understanding by Redesigning Games for Education (SURGE)
0935816	Scale Up of Math and Science K-12 Education Reform in a Large Urban District
0733690	Scaling Up Mathematics Achievement (SUMA)
0918505	Science & Mathematics Integration for Literacy Enhancement (Project SMILE)
0918618	Science Learning: Integrating Design, Engineering and Robotics (SLIDER)
0822354	Science Literacy through Science Journalism
0918277	Science Teachers Learning from Lesson Analysis (STeLLA) Professional Development Program: Scaling for Effectiveness
1019396	ScratchEd: Working with Teachers to Develop Design-based Approaches to the Cultivation of Computational Thinking
0733218	Semiotic Pivots and Activity Spaces for Elementary Science
0738247	Shifting Mindsets: A Study of a First-year Implementation of "New Technology High School"
0733228	Silicon Prairie Initiative for Robotics in Information Technology 2.0 (SPIRIT 2.0)
0821965	Simulation and Modeling in Technology Education (SMTE)
0948165	Southeast Regional Technical Assistance and Information Workshop for Minority-serving Institutions To Broadening Participation in the National Science Foundation's Division of Research on Learning in Formal and Informal Settings (DRL)
0733198	STEM Fusion
0732793	Student Polar Research with IPY National (and International) Teacher Training (SPRINTT)
1019645	Studying Topography, Orographic Rainfall, and Ecosystems (STORE) with Geospatial Information Technology
0836099	Supporting Grade 5-8 Students in Writing Scientific Explanations
0822313	Supporting Staff Developers in the Implementation of Professional Development Programs to Improve Mathematics Education for Students with Disabilities
0918425	Supports for Learning to Manage Classroom Discussions: Exploring the Role of Practical Rationality and Mathematical Knowledge for Teaching
1019576	Supports for Science and Mathematics Learning in Pre-Kindergarten Dual



	Language Learners: Designing a Professional Development System
0554566	System-wide Change: An Experimental Study of Teacher Development and Student Achievement in Elementary Science
0918435	Talk Science: Scalable, Web-based Professional Learning to Improve Science Achievement
0553215	Target Inquiry: Investigating the Teacher and Student Effects of a New Model in Chemistry Teacher Professional Development
0733195	Teacher Helping Teachers Teach Science Inquiry: The "Just ASK" Project
0742614	Teacher Learning Communities: Centering the Teaching of Mathematics on Urban Youth
1005652	Teacher Learning of Technology-enhanced Formative Assessment
0732184	Teachers' Use of Standards-based Instructional Materials
0840039	The African Diaspora: Developing Black Scholars in Science Education for the 21st Century in the United States
0628091	The Bio-Math Connection
1020166	The Challenge of Interdisciplinary Education: Math-Bio
0732495	The Coaching Cycle: An Interactive Online Course for Mathematics Coaches
0822175	The Development of Student Cohorts for the Enhancement of Mathematical Literacy in Under Served Populations
1019842	The Evidence Games: Collaborative Games Engaging Middle School Students in the Evaluation of Scientific Evidence
0808817	The Future of High School Mathematics
0733264	The GENIQUEST (GENomics Inquiry through QUantitative Trait Loci Exploration with SAIL Technology): Bringing STEM Data to High School Classrooms
1020019	The Influence of MESA Activities on Underrepresented Students
0822286	The INSPIRES Curriculum for Engineering and Technology Education
1020229	The Leonardo Project: An Intelligent Cyberlearning System for Interactive Scientific Modeling in Elementary Science Education
0918642	The NextBio Project: A Student Collaboratory for Biology Cyberlearning
0353377	The Professional Learning Community Model for Alternative Pathways in Teaching Science and Mathematics (PLC-MAP)
0822119	The Role of Educative Curriculum Materials in Supporting Science Teaching Practices with English Language Learners
0918533	The Scientific Thinker Project: A Study of Teaching and Learning Concepts of Evidence and Nature of Scientific Evidence in Elementary School
1020201	The Value of Computational Thinking Across Grade Levels
0822016	Tool Systems to Support Progress Toward Expert-like Teaching by Early Career Science Educators
0732212	Toward a Scalable Model of Mathematics Professional Development: A Field Study of Preparing Facilitators to Implement the Problem-solving Cycle



0917958	Transition to Algebra: A Habits of Mind Approach
0638656	U.S. National Commission for Mathematics Instruction -- A Conference Grant
0554594	Undergraduate Science Course Reform Serving Pre-service Teachers: Evaluation of a Faculty Professional Development Model
0733180	Universal BEATS: Universal BioMusic Education Achievement Tier in Science
0730603	Universal Design of Inquiry-based Middle and High School Science Curricula (Collaborative Research: Foster)
0730260	Universal Design of Inquiry-based Middle and High School Science Curricula (Collaborative Research: Rose)
0730348	Universal Design of Inquiry-based Middle and High School Science Curricula (Collaborative Research: Sutherland)
0821996	Untangling Mathematical KnotTSS (Knowledge for Teaching Secondary School): An Investigation of Collaborations Between Mathematicians and Mathematics Educators
1019513	Using PISA to Develop Activities for Teacher Education (UPDATE)
0946875	Using Research to Target Title I Needs in Mathematics
1019482	Using Routines as an Instructional Tool for Developing Students' Conceptions of Proof
0733350	Validation and Refinement of a Model for Teacher Professional Development that Leverages a Major Applied Research Laboratory
0957996	Video Analysis of Science Teaching: Developing a Shared Words-to-images Analytical Tool
1020083	Virtual Learning Communities: An Online Professional Development Resource for STEM Teachers
0918743	Visualizing to Integrate Science Understanding for All Learners (VISUAL)
0746936	Work Contexts, Teacher Learning Opportunities, and Mathematics Achievement of Middle School Students
0956223	Workshop on Assessment of 21st Century Skills
1020027	Zydeco: A Mobile "Nomadic Inquiry" System to Support and Bridge Science Inquiry Between Classroom and Museum Contexts