

Project Abstract Form Dated 1/30/2013

- 1. Applicant Organization (fiscal agent partner):** Eastern Washington University
- 2. Address:** 526 5th Street, Cheney WA 99004
- 3. Title of Project:** Riverpoint Advanced Mathematics Partnership - Algebra
- 4. Project Director Contact Information (if there are co-directors, list information for all):**

Name: Jacqueline Coomes, PhD
Title: Associate Professor of Mathematics Education
Academic Unit: Department of Mathematics
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Name: Janet Frost, Ph.D
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Name: Kristine Lindeblad, M.A.
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5. **Project Duration (start and end dates, e.g. 7/1/12-6/30/15):** 8/1/2012- 6/30/15
6. **Primary Project Focus (mathematics, science, mathematics and science):** Mathematics
7. **Is there also an English Language Arts focus (yes or no)?** No
8. **Educators Served (must be consistent with numbers in Partnership Summary):**
 - a. Number of high-need school districts served: 2
 - b. Number of other school districts served: 4 public school districts and 1 nonprofit high school
 - c. Number of teacher participants served by project (and grade levels taught): 38 high school and 17 middle school, for 55 total.
 - d. Hours of face-to-face professional development provided per year to each teacher participant: 75 (7.5 hrs per day for 9 days, 6 hours of PLC meetings, and 1.5 hours of observations and coaching)
 - e. Hours of online professional development provided per year to each teacher participant: 6
 - f. Number of principal/assistant principal participants served by project: 19
 - g. Hours of face-to-face professional development provided per year to each principal/assistant principal participant: 13.5 (although they are only required to attend 3 hours per year)
 - h. Hours of online professional development provided per year to each principal/assistant principal participant: 3
 - i. Number of students impacted by project¹:
Math students: 5688 (This number is estimated: 48 teachers responded to tell me exactly how many students were in their classes in the fall of 2012, although the number fluctuated for some teachers, and in that case, I took the mean of their low and high numbers of students. I estimated for the other 7 teachers based on what I know about their schools and the classes they teach. This also only includes students of teachers who are still in the project as of Dec. 31, 2012.)
Science students: 0
English Language Arts students: 0

9. Total Budget: \$839,914

10. Project Summary (1,000 words or less):

Include a summary of project objectives, project activities, and what content and concepts, including Common Core State Standards concepts as well as Framework concepts (if applicable), will be addressed. When summarizing project activities, include the professional development interventions or models implemented (summer institutes, online, distance learning, university courses, follow-up activities, and others).

The Riverpoint Advanced Mathematics Partnership-Algebra (RAMP-A) is a collaboration by the Eastern Washington University Mathematics Department, Washington State University-Spokane Department of Teaching and Learning, NEWESD 101, six school districts, and one private nonprofit school. The goals and objectives of this project are to: 1) increase Algebra 1

¹ This is the sum of students who were taught in participating teacher's mathematics, science, or English Language Arts classes. Sum the students across all teachers. For example, if a math-only project serves 10 participating mathematics teachers who teach 48, 43, 57, 52, 49, 47, 53, 45, 51, and 46 students in their respective mathematics classes; the number of math students reported in item 8i would be 491.

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teachers' content knowledge in algebra and functions in the Common Core State Standards in Mathematics (CCSS-M), 2) improve teachers' instructional strategies in Algebra 1, 3) improve teachers' understanding of and ability to teach the Standards for Mathematical Practice (SMP), 4) use the Teacher and Principal Evaluation (TPEP) system to increase principals'/assistant principals' knowledge of and ability to support improved mathematics instruction, and 5) improve student achievement and interest in math.

To meet these objectives, teachers will attend six one-day workshops during the school year and a three-day summer institute each year, engage in professional learning communities (PLCs) within their schools, receive coaching from project coaches, and contribute to the larger community through a Moodle. In each three-day summer institute, teachers will engage in and reflect on challenging algebra tasks and mathematical practices to improve their content knowledge and ability to apply the SMP. Algebra content will focus on the CCSS-M domains of seeing structure in expressions, creating equations, and building functions. Years 2 and 3 will include linear, quadratic, and exponential functions, and modeling with functions, respectively. SMP include the practices of reasoning abstractly and quantitatively in Year 1, modeling with mathematics in Year 2, and looking for and making use of structure in Year 3.

The school year workshops will focus on improving teachers' content knowledge, pedagogical content knowledge, mathematical practices, and instructional strategies specific to algebra in the CCSS-M through an Adaptive Practice model of engaging in content, planning lessons, implementing lessons, collecting data, and reflecting. Approximately 15% of the time in each workshop will focus on understanding the TPEP as it relates to the instructional strategies learned in the workshop. NEWESD 101 instructors will provide this training to teachers and principals/assistant principals (P/APs) responsible for math in their schools. P/APs will also observe their teachers with project leaders serving as math instructional coaches and attend teachers' PLC meetings in their schools. Additionally, teachers will work in groups to identify and discuss how their teaching practices may motivate or inhibit students' motivation to learn mathematics with understanding. Some of these conversations will take place on the Moodle. Teachers are also asked to make 'Little Changes' in their teaching, and reflect on the impact of these changes on their students. They share their little changes both on the Moodle and in the workshops.

In their school PLCs, teachers will plan lessons, collect and analyze student work, write assessments, and use the analysis to plan future lessons. They will share their results with other teachers in the project in order to support learning of others. The nature and intensity of this work, and the support offered by the project leaders and P/APs, will help teachers meet several criteria addressed in TPEP: Criteria 1 and 4 by creating a sequence of worthwhile tasks that are aligned with learning targets set by the CCSS-M; Criteria 2 and 3 by analyzing student work in consideration of content-specific pedagogical aspects of the tasks; Criteria 1, 2, 3, and 6 by examining student work to inform future lessons such as modifying tasks and instructional strategies, developing assessment items and tools, and utilizing student work to meet targeted individual needs and provide targeted support, and; Criterion 8 by actively engaging in the activities provided by this project.

Project products include the math tasks used in all workshops with detailed connections to CCSS-M and SMP, PLC and lesson planning protocols, examples of lesson plans, and connections to the use of TPEP to the plans, as well as facilitator notes that describe how to use the tasks and the rationale and research supporting each activity. Products will also include lessons learned.

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11. Partnership summary

Provide the partner information required in the table below (add rows as necessary) and put an asterix by the fiscal agent organization's name.

Category of partner (asterix the fiscal agent institution name)	Partner information
Category 1: Required teacher/principal preparation partner	
Institution name	Washington State University - Spokane
Academic unit name	Department of Teaching and Learning
Unit's role in project (provide at least 3 descriptive bullets)	<ol style="list-style-type: none"> 1. Design and implement professional development activities for teachers and principals/assistant principals. 2. Collect and/or provide data from activities for formative assessment (e.g. creating evaluation forms, taking notes during activities) 3. Analyze data and provide feedback to other project leaders
Faculty involved (list name and role of each, e.g. project director, instructor, etc.)	Janet Frost, Project Co-Director, plan and provide principal/assistant principal instruction, evaluation Kristine Lindeblad, Project Co-Director, provide mathematics education instruction, evaluation
Category 2. Required mathematics or science department partner	
Institution name	Eastern Washington University
Academic unit name	Department of Mathematics
Unit's role in project (provide at least 3 descriptive bullets)	<ol style="list-style-type: none"> 1. Design and implement professional development activities for teachers and principals/assistant principals 2. Project management and administration 3. Collect and provide data 4. Analyze data
Faculty involved (list name and role of each, e.g. project director, instructor, etc.)	Jacqueline Coomes: Project Director, provide math content and math education instruction during workshops, evaluation, online learning facilitator Hyung Sook Lee: Project Co-Director, design math education instruction, provide project evaluation Ronald Gentle: Design and provide math content instruction for workshops, design math content tasks
Category 3. High-need school district (add rows as necessary to accommodate multiple high-need school districts)	
District name	Spokane Public Schools
Role in project (at least 1 bullet)	Provide teachers to receive professional development Provide peer teachers to lead workshop activities
Number of teacher participants and grade level taught	14 high school 8 middle school
Number of principal and assistant principal participants	5
District name	Republic R-III School District
Role in project (at least 1 bullet)	Provide teachers to receive professional development
Number of teacher participants and grade level taught	1 high school 1 grade 8
Number of principal and assistant	1

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principal participants	
Category 4. Other school district or nonprofit private school (add rows as necessary to accommodate multiple non-high-need school districts and private schools)	
District or nonprofit private school name	West Valley School District
Role in project (at least 1 bullet)	Provide teachers to receive professional development
Number of teacher participants and grade level taught	4 high school
Number of principal and assistant principal participants	2
District or nonprofit private school name	Central Valley School District
Role in project (at least 1 bullet)	Provide teachers to receive professional development Provide peer teachers to lead workshop activities
Number of teacher participants and grade level taught	4 high school 2 middle school
Number of principal and assistant principal participants	2
District or nonprofit private school name	Gonzaga Preparatory School
Role in project (at least 1 bullet)	Provide teachers to receive professional development
Number of teacher participants and grade level taught	3 high school
Number of principal and assistant principal participants	1
District or nonprofit private school name	Cheney School District
Role in project (at least 1 bullet)	Provide teachers to receive professional development
Number of teacher participants and grade level taught	6 high school 2 middle school
Number of principal and assistant principal participants	5
District or nonprofit private school name	Mead School District
Role in project (at least 1 bullet)	Provide teachers to receive professional development
Number of teacher participants and grade level taught	6 high school 4 middle school
Number of principal and assistant principal participants	3
Category 5. Other partners (add rows as necessary to accommodate additional partners)	
Institution or organization name	NEWESD 101
Academic unit name if applicable	N/A
Role in project (provide at least 3 descriptive bullets)	Identify and recruit teachers for comparison group Design and implement professional development activities for principals/assistant principals Provide technical assistance to the project
Key personnel involved (list name and role of each)	Helene Paroff: Provide professional development for principals/assistant principals related to TPEP, help find comparison groups of teachers for evaluation Erik Wolfrum: Plan and provide professional development for teachers, design and maintain a Moodle for project activities such as document sharing and discussions, online learning

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	facilitator. Linda Smith: Provides technical assistance
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Possible unit/district/organization roles include: lead organization, project management and administration, design professional development, identify and recruit teachers for professional development and/or comparison group, provide professional development, participate in/receive professional development, provide mentors/coaches/teacher leaders, project evaluation, collect and/or provide data, analyze data, provide technical assistance to teachers and/or project, provide teacher support (e.g., substitute teachers, release time, planning time, teacher leaders), advise project, and other (please specify what “other” is).

Possible faculty roles include: project director or co-director, provide math education instruction for workshops, provide math content instruction for workshops, provide science education instruction for workshops, provide science content instruction for workshops, provide English Language Arts education instruction for workshops, provide English Language Arts content instruction for workshops, professional learning community facilitator, online learning facilitator, coach, conduct academic year site visits, provide professional development for principals/assistant principals, evaluation, and other (please specify what “other” is).