

## **MATH: Getting It**

### **Mathematics and Science (MSP) Partnership Project Proposal**

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#### ***Project Abstract***

The Math: Getting It Project addresses a troubling problem in mathematics education: Students frequently do not ‘get it’ when they progress beyond 4th grade into fraction concepts, and later when they reach pre-algebra and higher mathematics courses. Why do students stop ‘getting it?’ Compelling research points to the persistent absence of instructional strategies designed to deeply embed core mathematical structures in student thinking, primarily when students first learn fractions but also throughout K-12 math learning programs. These strategies, however, are crucial to the improvement of student mathematics achievement at every level. To address the Getting It problem, three Pierce County school districts, a Pierce County pre-service university program, and the Pierce County Staff Development Consortium will work together to establish an integrated, multifaceted network of professional development, building-based teacher learning, and administrative support. The overarching goal of this project, which is to improve student achievement in mathematics, will be met when we address the Getting It problem by:

- improving teacher content knowledge
- implementing instructional strategies designed to deeply embed core
- mathematical structures in student thinking
- improving teacher and principal understanding of how students learn mathematics, including awareness of vertical alignment of standards and mathematical structure improving teachers’ understanding of how students think about mathematics, specifically students from diverse economic, cultural, and experiential backgrounds
- increasing productive principal-teacher and teacher-teacher dialogue about mathematical content and effective instructional strategies

The Getting It Project action plan consists of five components:

- Intensive Summer Institutes, serving up to 260 K-12 math teachers and preservice teachers over three years
- Pierce County Staff Development Consortium courses, serving up to 320 K-12 teachers and preservice teachers over three years
- Building-based professional learning communities led by trained teacher cadre leaders, serving up to 150 K-12 math teachers and involving up to 20 K-12 cadre leaders over three years
- Administrator observation training to increase principals’ knowledge and use of evidence of math content and effective strategies in observations, involving up to 60 building K-12 administrators
- Preservice teachers’ participation in Institutes, Consortium courses, and student teaching in partner districts

#### ***School Districts***

University Place School District will be the Getting It lead partner and will manage all facets of the project. UPSD K-12 teachers and principals will participate in summer institutes, teacher leader training, professional learning communities and Pierce County Staff Development Consortium mathematics courses. Peninsula School District K-12 teachers and principals will participate in summer math institutes, teacher leader training, professional learning communities, and Pierce County Staff Development Consortium mathematics courses. Fife School District K-12 teachers will participate in summer institutes, teacher training, teacher and professional learning communities, and Pierce County Staff Development Consortium mathematics courses.