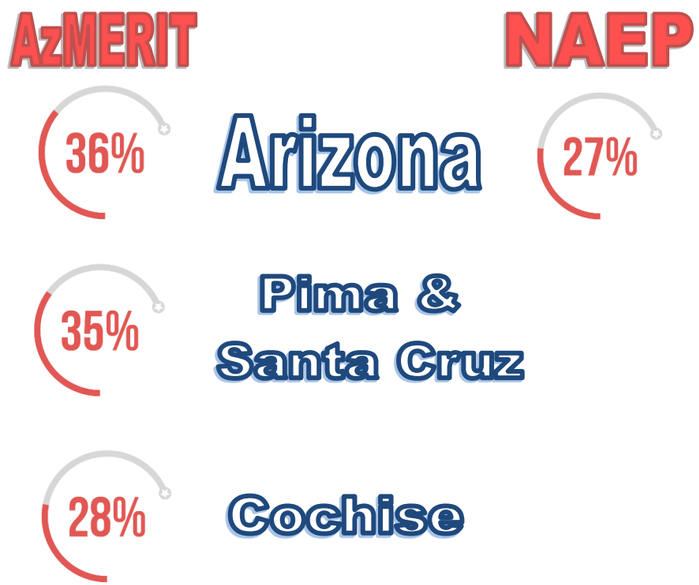
Why Middle School Mathematics?

This year only 36% of Arizona's 8th graders were prepared to be successful in High School Mathematics based on AzMERIT data. Only 27% of Arizona's 8th graders were proficient on the National Assessment of Educational Progress (NAEP).



Making an IMPACT in Elementary and Middle Schools

In three years time, 504 teachers were served by the **CRR IMPACTS program**. 11,658 students received high quality instruction. 168 schools were provided extra support

The difference between the AzMERIT scores of students of IMPACTS teachers and those of their peers was statistically significant ($p<0.01$).

IMPACTS-MS

CENTER FOR RECRUITMENT AND RETENTION OF MATHEMATICS TEACHERS

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IMPACTS—MS

Improving **M**athematical **P**roblem solving, **A**gency, & student-**C**entered instruction for 6-8 **T**eachers and **S**tudents—Middle School

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CRR Center for Recruitment & Retention of Mathematics Teachers

The University of Arizona | College of Science MATHEMATICS

IMPACTS-MS Goals

- Improve teachers' professional agency and confidence in conceptual mathematics instruction
- Improve students' mathematical agency and confidence
- Increase the use of student-centered instructional strategies

IMPACTS-MS is designed to generate teacher leaders in mathematics while deepening students' experiences in the mathematics classroom.

The **IMPACTS-MS** Program is a focused multi-tiered innovative approach to improving instruction, inspiring curiosity and encouraging creativity in the middle grades classroom for both teachers and students. The program is designed to bring about the greatest change in students' mathematical understanding and problem solving in order to improve student outcomes in middle grades mathematics and increase student readiness for and success in high school mathematics.

Elements of the IMPACTS-MS Program:

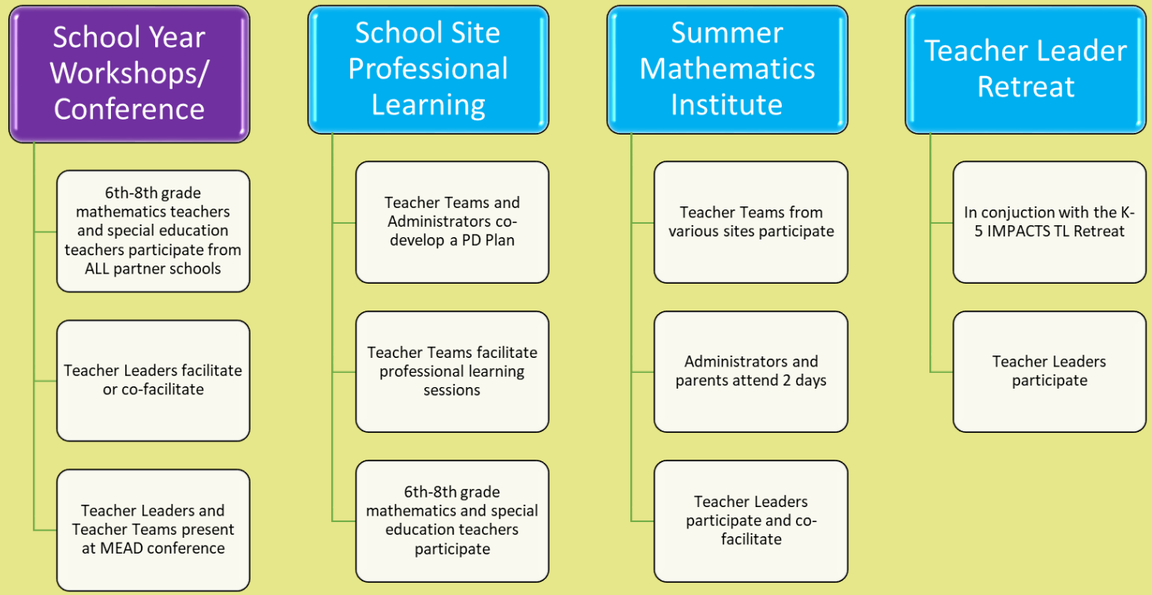
Teacher Teams

This program provides professional development opportunities for teams of teachers from grades 6-8 from the same school site. Teams will be recruited from the 50+ middle grades schools partnered with the CRR to encourage diversity. Important to this program is the work that teams will do with their site administrators to develop plans to disseminate content and pedagogy at their schools.

Professional Development Workshops

All middle grades teachers and 6-12 grade special education teachers from all partner schools will have the opportunity to participate in any of the school year workshops. Teacher Teams will participate in at least two of the workshops offered during the academic year. Workshops have a strong emphasis on ratio and proportional reasoning, as well as algebraic thinking and problem solving. Each workshop includes a job-embedded implementation component with evidence-based reflection. Workshop topics are determined by data from partner districts and schools, AzM2 scores, and professional development surveys. Through the workshops, facilitators will identify teachers with positive mathematics dispositions for subsequent year participation as Teacher Teams and/or Teacher Leaders.

IMPACTS-MS at a Glance



Elements of the IMPACTS-MS Program:

Summer Middle School Mathematics Institute

A one-week intensive summer institute is provided to the Teacher Teams who show productive mathematics dispositions, commitment to their schools, and the capacity to become school site mathematics facilitators. The content and pedagogy focus will be deep understanding in proportional reasoning and algebraic thinking.

Teacher Leaders & the Leadership Retreat

Teacher Leaders are teachers identified as having a positive disposition towards mathematics and teaching, and who are ready to lead at a district or regional level (beyond their school site). The Teacher Leader retreat will serve to continue professional growth in content and facilitation skills while reinvigorating the Teacher Leaders to take on greater leadership roles beyond their individual school sites, including the facilitation of CRR school year workshops, as well as at local, regional, and/or national conferences.

Mathematics Educator Appreciation Day

Teacher Teams and Teacher Leaders will present at CRR's Mathematics Educator Appreciation Day conference (MEAD), the largest K-12 mathematics education conference in Arizona.