

# ARIZONA MATHEMATICS PARTNERSHIP

Scottsdale Community College  
NS-120  
9000 E Chaparral Rd  
Scottsdale, AZ 85256  
480.423.6272

amp@scottsdalecc.edu  
www.azmath.org

## Principal Investigator

Dr. April Strom  
april.strom@scottsdalecc.edu

## Directors of Institutes and Workshops

Dr. James Vicich  
james.vicich@scottsdalecc.edu

Dr. Ted Coe  
ted.coe@scottsdalecc.edu

## Directors of CCOLs

Dr. Trey Cox  
trey.cox@cgc.edu

Dr. Scott Adamson  
s.adamson@cgc.edu

## Project Director

Hillary Dockser Burns  
hillary.burns@scottsdalecc.edu

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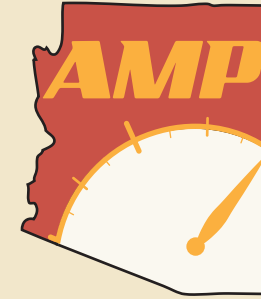
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# ARIZONA MATHEMATICS PARTNERSHIP



Promoting Excellence  
in Arizona Middle  
School Mathematics:  
Increasing Student  
Achievement through  
Systemic Instructional  
Change



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SCC is a Maricopa Community College, an EEO/AA institution

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## SUMMER INSTITUTES AND SATURDAY WORKSHOPS

### Summer Institute

Teachers attend a one-week Summer Institute during their first and second years of the project.

The Institutes consist of:

- Content-focused and research-based activities
- Connected to the Common Core State Standards curriculum
- Focused on problem solving, number sense, proportional reasoning, additive and multiplicative reasoning, geometry, patterns/algebra & probability and statistics

### Saturday Workshops

Teachers attend 4 all-day Saturday workshops during the school year as part of their first and second years of the project. The workshops connect and extend the content-based knowledge developed in the Summer Institutes.

### Goal of the Institutes and Workshops

As promoted by the CCSSM and Standards for Mathematical Practice, the Institutes/Workshops aim to deepen teachers' mathematical knowledge and skills by increasing:

- Understanding of student thinking, knowledge of students' misconceptions, and poorly-formed conceptions
- Fluency of content and pedagogical knowledge of mathematics
- Productive problem-solving behaviors
- Reasoning and sense-making behaviors
- Intellectual engagement in mathematical discourse that involves explanation and justification
- Enhanced knowledge and implementation of CCSSM and Standards for Mathematical Practice
- Development and implementation of curricular materials to provide effective mathematics learning experiences
- Focus on building classroom instruction around cohesive mathematical concepts with procedures emerging from ideas

## CCOL: COLLABORATIVE COMMUNITIES OF LEARNERS

Each group of teachers from a common school form a CCOL: a Collaborative Community of Learners. The CCOL is facilitated by a project-trained professional during its first two years, and will then continue to meet with one of its own teachers as they become the leader by the third year.

### CCOL activities include:

- Defining student learning goals
- Conducting student interviews
- Designing, implementing, and reflecting on classroom tasks
- Observing the CCOL facilitator teaching a lesson
- Opening classroom doors and making teaching practices public

## PARTICIPANT INCENTIVES

- Up to \$5000 stipend (up to \$2500 per year) for complete participation in Summer Institutes, Saturday Workshops (4 per year), and CCOLs (30 hours per year)
- Two-year membership to NCTM and AATM, including *Mathematics Teaching in the Middle School Journal*
- Option to earn graduate credit from Arizona State University through the Department of Mathematical Sciences - 3 credit hours per year
- Travel to conferences

## OTHER PROJECT ACTIVITIES

### Instructional Rounds

Each spring, your CCOL will invite your local administrators (Principals, math coaches, etc.) to observe your CCOL's work and contribute to your CCOL. This is a non-evaluative experience between teachers and administrators.

### Become a Teacher Leader

Each CCOL will have one of its teachers become a leader of the CCOL, getting additional support from the project in their third year of participation.

### Research Participation

As this project is funded by the National Science Foundation, we will conduct different research activities to capture the impact of the project on the teachers and their students.

### Community Events

Each CCOL will be supported in hosting a community-wide event at their school/district that invites students and their families to learn about our new perspectives on mathematics.

“The wealth of knowledge that we get from every session is just phenomenal. I think I have a pretty good grasp of the math content, and then it seems like within fifteen minutes there's something new that just floors me and I think, 'Oh my gosh, this is amazing.' A lot of it I can bring back to my students, and sometimes it's just something I can put in my pocket and say, 'Wow, that's really a neat lesson.' I can't say enough about what this means to me for middle school teaching because it's always seemed like a really tough hurdle to overcome, getting good content and explanations on how to get the transformation into Common Core, and this has really been very helpful with that.” – Steve Hughes