
The MSA Program...

- Supports K-12 teachers as they work to make standards-based learning a daily experience for their students
- Creates and sustains professional learning communities and builds on strengths
- Develops teachers cognitively: the more cognitively developed the teacher, the higher the student achievement; when there is a shift in teacher thinking, a shift in instructional practice follows
- Instructs teachers to analyze student work, and use the data to inform their practice
- Ensures that this professional development is coherent with other aspects of teachers' professional lives, including school and district expectations, as well as state academic standards and assessments
- Believes that school reform must be systemic, thus provides professional development to teachers and administrators



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- Northern New Mexico Council for Excellence in Education
- Los Alamos National Laboratory Foundation
- Northern Network for Rural Education
- New Mexico Legislature
- Northern New Mexico Community College
- University of California
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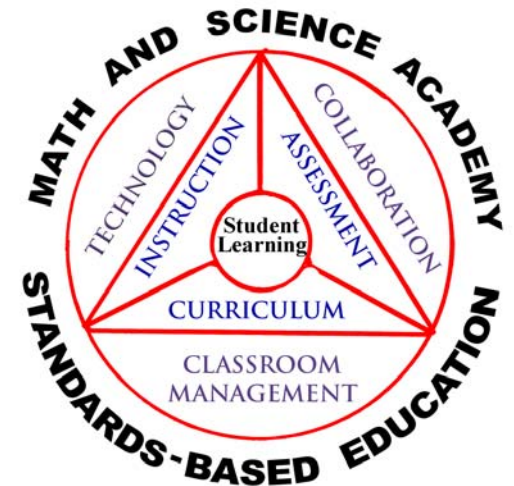


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Northern New Mexico Math and Science Academy



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What is the Math and Science Academy?

MSA is a virtual academy that operates in a school as a school-approved professional development program.

Teachers involved in MSA invest 200 hours of collaboration and training time each school year. Teachers receive a stipend for the hours they spend learning and working together.



Change is the end result of all true learning.
Leo Buscaglia

The learning commences in the summer with an intense, three week training session: *The Summer Institute*. Teachers may enter a Masters of Teaching program through New Mexico State University, a 36 hour program, in conjunction with MSA.

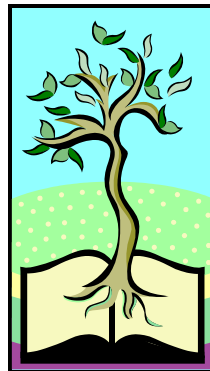
During the school year teachers meet after school for collaboration and planning. Defining concepts and learning goals, developing common assessments, and looking at student work are focuses of the biweekly meetings.

MSA staff and coaches are in the classrooms regularly for a three part cognitive coaching (Costa and Garmston, 1994) protocol that fosters standards-based teaching and learning.

MSA teachers from all sites collaborate online and use technology as a way to enhance learning.

SUMMER INSTITUTE TOPICS

- Standards-Based Education
 - Curriculum
 - Assessment
 - Instruction
- Classroom Management
 - School-wide Discipline
 - Procedures
- Collaboration
 - Team norms, vision, mission, goals, values, timelines
- Technology as a tool for
 - thinking, learning, knowing, and creating
 - for collecting, organizing, and analyzing data to inform practice and decisions
- Math and Science content
- Cognitive Coaching



Students do not learn by doing activities; they learn by thinking about what they are doing.
Jean Piaget

PROGRAM COMPONENTS:

- Teachers participate in an intensive three-week summer institute
- Teacher teams meet biweekly, for the purpose of developing common assessments and looking at student work
- Teachers participate in on-line groups to think about and discuss issues on teaching and student learning
- Teachers develop a portfolio of their work over the course of the academic year to help them reflect on their practice
- Cognitive coaches meet with individual teachers a minimum of four times per year, on site, for the three part coaching protocol
- MSA staff visit teachers in their classrooms for informal observations in addition to coaching
- Teachers at each site coordinate a Celebration of Learning event every semester for students to showcase their learning for parents and community members



Touching the Future— One Teacher, One Student at a Time