
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
- 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, which is then followed by increased student achievement
- Uses adopted curricula as a basis for the professional development
- 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

MSA, a program of the Los Alamos National Laboratory Education & Postdoc Office and the Los Alamos National Laboratory Foundation, is supported by:

- Chama, Española, Pojoaque, Mora, and Taos School Districts
- Northern New Mexico Council for Excellence in Education
- New Mexico Legislature
- New Mexico Public Education Department
- New Mexico State University
- Northern New Mexico College
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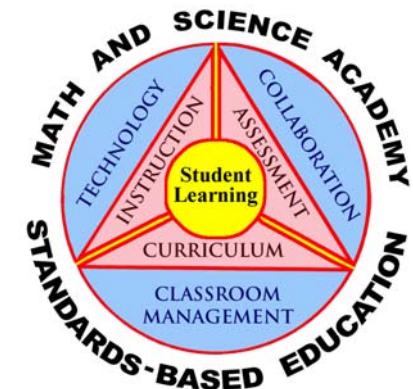


MSA Staff:

Carol Halberg Brown
chbrown@lanl.gov
505-699-3688
Lorenzo Gonzales
snlogonz@hotmail.com
505-699-4050
Zachary Leonard
zleonard@lanl.gov
505-699-4053



Northern New Mexico Math and Science Academy



Tel: 505-747-7883
Fax: 505-747-7880
505-699-3688, 505-699-4053
505-699-4050
710B N. Riverside Dr.
Española, NM

Northern New Mexico Math and Science Academy ~~~ Espanola, New Mexico

What is 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.

The learning commences in the summer with an intense, three week training session:

The Summer Institute.

Teachers may enter a Masters of Arts in Teaching Math and Science 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, book studies, sharing best practices, and looking at student work are some areas of focus of the weekly meetings.

MSA staff and coaches are in the classrooms regularly for informal observations and coaching, especially in math.

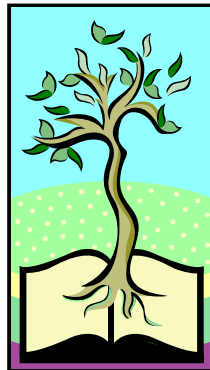
MSA teachers from all sites collaborate online and use technology as a way to enhance learning.



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

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
 - ~ collecting, organizing, and analyzing data to inform practice and decisions
- Math and Science content
- Brain-based learning



*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 weekly for the purpose of collaboration 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 reflective portfolio of their work to show growth in their thinking and practice
- MSA staff visit teachers in their classrooms for informal observations in addition to math coaching
- Teachers at each site coordinate a Celebration of Learning event every semester for students to showcase their learning for parents and community members
- All teachers meet twice a year at MSA Day which is devoted to sharing portfolios, best practices, and a graduation ceremony for the third year participants at the May meeting



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