Provides spontaneous and community-based support to individual and families

Organizes and supports tribal events to support building community

Interactions with individuals and families establishes trusting relationship

With cultural, and spiritual knowledge, able to address family crises using informal network within an extended families

Natural family networks grow stronger as individuals and families connect to services

Provides a "non threatening" partner and support for the ICW/CPS worker

Organizes tribal services network to improve communication & coordination

Coordination of training to create capacity within network (parent education and other training)

Increased Family and Community Health
Fewer CPS referrals, Tribal programs communicate and coordinate services, celebrations and events strengthen Tribal community

Network develops capacity to provide case management by coordinating services to a family

Spiritual and cultural guidance enhances trusting relationship

With professional knowledge, understands how to refer and connect families to Tribal and other services

Network provides parent education,, develops joint projects, collaborates on training opportunities – works as a group

Tribal programs better integrated, capable of supporting a network of services, and strengthen their support to at risk families

Figure 1 Trail to the Tribes -- Theory of Change

Strengthening Families Program
(Cultural and Family Specialist and support staff)
Figure 1 – Conceptual Map of Program

**Activities**
- Fellows recruited who have active science projects in GYE
- Training provided to Fellows prior to partnering
- Fellows partner with classroom teachers
- Classroom curriculum incorporates Fellows lessons
- Institute and seminars support Fellows/School/Teacher Partnerships

**Short Term Outcomes**
- Fellows succeed in communicating with students
- Students learn from Fellows lessons
- Teachers learn content and pedagogy skills
- Environmental sciences advisors value Fellows experience

**Long Term Outcomes**
- Fellows improve general communication skills
- Students develop increased interest in science
- Teachers and School benefit from lasting project and partnership
- Environmental sciences dept. increase student outreach opportunities

- MSU Environmental Science graduates incorporate community/school outreach into their practice
- Teachers build stronger science content knowledge and inquiry-based pedagogy skills
- Teachers and students understand role of science in controversial environmental issues
- Use of place based science strengthens school curriculums
- MSU has strong and sustaining programs of outreach to schools and the community
- The GYE citizens are informed of science’s role in sorting through environmental issues.
Figure 1: CEMELA Program Map

CEMELA Objectives
- Develop leaders in math education by recruiting and supporting doctoral students and post-doctoral fellows to participate in research and teacher education related to learning and teaching in working class Latino settings
- Strengthen pre-and in-service teachers’ ability to promote Latinos’ achievement by expanding their knowledge of mathematics and linguistically and culturally responsive learning environments
- Conduct collaborative research that engages CEMELA fellows, faculty in projects addressing learning and teaching mathematics for Latino students

CEMELA Campus Based Activities
- Recruit and support Fellows engaged in mathematics or teacher education who aspire to CEMELA’s goals
- Campus based seminars engage fellows in literature on language, literacy and mathematics education
- Partnerships with schools to provide in-service professional development through courses, lesson planning and study groups
- CEMELA Modules incorporating language and culture integrated into mathematics and pedagogy courses for pre-service teachers
- Pre-service teachers gain field experience in CEMELA after school programs for Latino students and parents

CEMELA Center Based Activities
- Periodic center-wide telecommunication meetings
- Summer Institute of short center-wide courses for Fellows and teachers
- Center-wide Research Forum to connect research work and themes
- Collaborative research projects within and across campuses connect to CEMELA research focus
- Campus based seminars and projects engage Fellows and Faculty in research

CEMELA Center based Activities
- Doctoral graduates in mathematics education who understand the interconnections between academic language, culture and literacy in Latino contexts
- Established school based teacher communities engaged in action research and reflective practice in their teaching of Latino students
- Increased numbers of teachers who understand the interconnections between academic language, culture and literacy and who are effective teachers of Latino students
- Doctorates and Post Doctorates who aspire to conduct research on the interconnections between academic language, culture and literacy and to change the mathematics achievement of Latinos
- Publications and presentations based on CEMELA research collaborations

Program Outcomes
- Increased numbers of mathematics educators with integrated knowledge that leads to improved mathematics education of working class Latinos
- An integrated model that connects mathematics teaching and learning to cultural, social and linguistic contexts of Latino students

CEMELA Goals