Logic Model: Math and Science Partnership

**Resources / Inputs**

- **Inputs that support**
  - NSF funding
  - PDE funding
  - MSP staff and coordinators
  - Intermediate Units

- **Inputs that guide**
  - Leadership Action Teams
  - Student achievement data
  - District development matrix
  - Strategic action plans
  - Project Teams
  - MSP Cabinet
  - Evaluation processes

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**Intervention Strategies / MSP Activities**

- Professional Development for Content & Leadership
  - Leadership Action Academies
  - Teacher Leadership Academies
  - On-site Academies
  - Content-deepening Seminars
  - Lenses on Learning
- Curriculum Alignment & Pedagogical and Course Refinement
  - Curriculum Frameworks
  - Teacher Fellows Program
- Dissemination and Support for the Use of Research-based Resources & Tools
  - Network Connections
  - Educator Networks
  - Journal and Coordi-net
- Interactions
  - Connections within and among schools, districts, IUs, and IHEs

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**Outputs**

- **Instructional Leaders**
  - Teacher Leaders
  - Principal Leaders
  - Teacher Fellows Program participants
  - "MSP-Involved" IHE STEM & Education Faculty & Administrators
- Curricular and Planning Materials
  - Refined math curriculum framework; science curriculum framework
  - Access to inquiry-based instructional materials
  - Refined IHE courses
  - District action plans

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**Short-term Outcomes** (Increases in knowledge, skills, and awareness)

- Increased awareness and knowledge of research-based instructional practices & materials
- Increase in teacher content knowledge
- Increased leadership skills
- Increased awareness of the importance of using the math and science curriculum frameworks
- Increased collaborations among different partners
- Increased awareness of cultural differences

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**Mid-term Outcomes** (changes in behavior, policy or implementation of practice)

- Changes in classroom instructional practices at both IHE and K-12 levels
- Changes in district and school-level policies and practices
- Use of data in decision-making
- Adoption of inquiry-based instructional materials
- Alignment of curriculum with PD and state standards
- Strategic allocation of district resources
- Implementation of challenging courses
- Implementation of on-site PD led by teacher leaders
- Improved administrative leadership
- Development of partnerships
- Creation of professional learning communities

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**Long-term Outcomes** (project goals)

- Increased K-12 students’ knowledge of mathematics and science
- Increased quality of the K-16 educator workforce
- Sustainable coordination of partnerships in the IUs, feedback loops between K-12 districts and IHEs, improved math and science learning experiences for all undergraduates

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**Increased capacity for change within K-16**