

## Foundations of Math



PURPOSE: Develop the mathematical knowledge of special and general educators who work with low-performing students with a focus on The Components of Number Sense.

Evidence of Need	Description of Strategy/Program	Indicators of Success
<p>Students in your district/building are not achieving proficiency in mathematics.</p> <p>Certified K-12 special education teachers and K-6 general education teachers have similar mathematics methods training and are likely underprepared to address needs of students who struggle and students in secondary math courses.</p> <p>Student performance in mathematics has been linked to the mathematics knowledge of the teacher.</p> <p>Faulkner, V., &amp; Cain, C. (2013). Improving the Mathematical Content Knowledge of General and Special Educators: Evaluating a Professional Development Module That Focuses on Number Sense. <i>Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children</i>, 36(2), 115-131.</p>	<p><i>Foundations of Math</i> is designed to develop teachers' mathematical content knowledge and ability to deliver a coherent mathematical message through instruction.</p> <p>Teachers will</p> <ul style="list-style-type: none"> <li>• Make instructional choices that support communication and understanding of math in a consistent manner</li> <li>• Emphasize student mathematical thinking using number sense that is fluent, flexible, and guided by meaning</li> <li>• Connect related math concepts to procedures and real world examples</li> </ul> <p>Article: "<a href="#">The Components of Number Sense</a>" by Valerie Faulkner and Chris Cain</p>	<p>Increased teacher mathematical content knowledge based on pre/post content assessments*</p> <p>Increased teacher understanding of the adult role in improving students' mathematical thinking based on pre and post results on the Teacher Belief Survey</p> <p>Teacher, coach and administrator observations of practice consistent with the "Gold Standard" or Acceptable variations on practice profiles</p> <p>*as measured in the original research and which are consistent with initial data collected from Michigan course implementations</p>
Implementation Supports		
<ul style="list-style-type: none"> <li>• <b>5 days of professional learning (non-consecutive over a period of 8-12 weeks)</b></li> <li>• <b>Foundations of Math Instructor training</b></li> <li>• <b>Practice profiles:</b> to describe key activities for each core component of <i>Foundations of Math</i></li> <li>• <b>Sustaining support for Foundations of Math instructors, coaches and administrators</b> to provide program updates, ongoing progress, and collegial learning</li> <li>• <b>Implementation guidelines</b> to inform planning, implementation and evaluation of the program</li> </ul>		

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Accessible Learning Environments, encompassing Michigan's Integrated Technology Supports and Michigan's Integrated Mathematics Initiative, is an *Individuals with Disabilities Education Act* (IDEA) Grant Funded Initiative through the Michigan Department of Education, Office of Special Education.



Adapted from template by: Wayne RESA & Oakland Schools: MDE/AdvancED SI Conference, Making Program Evaluation "Visible" -April 2014.