Number Rockets Program Logic Model
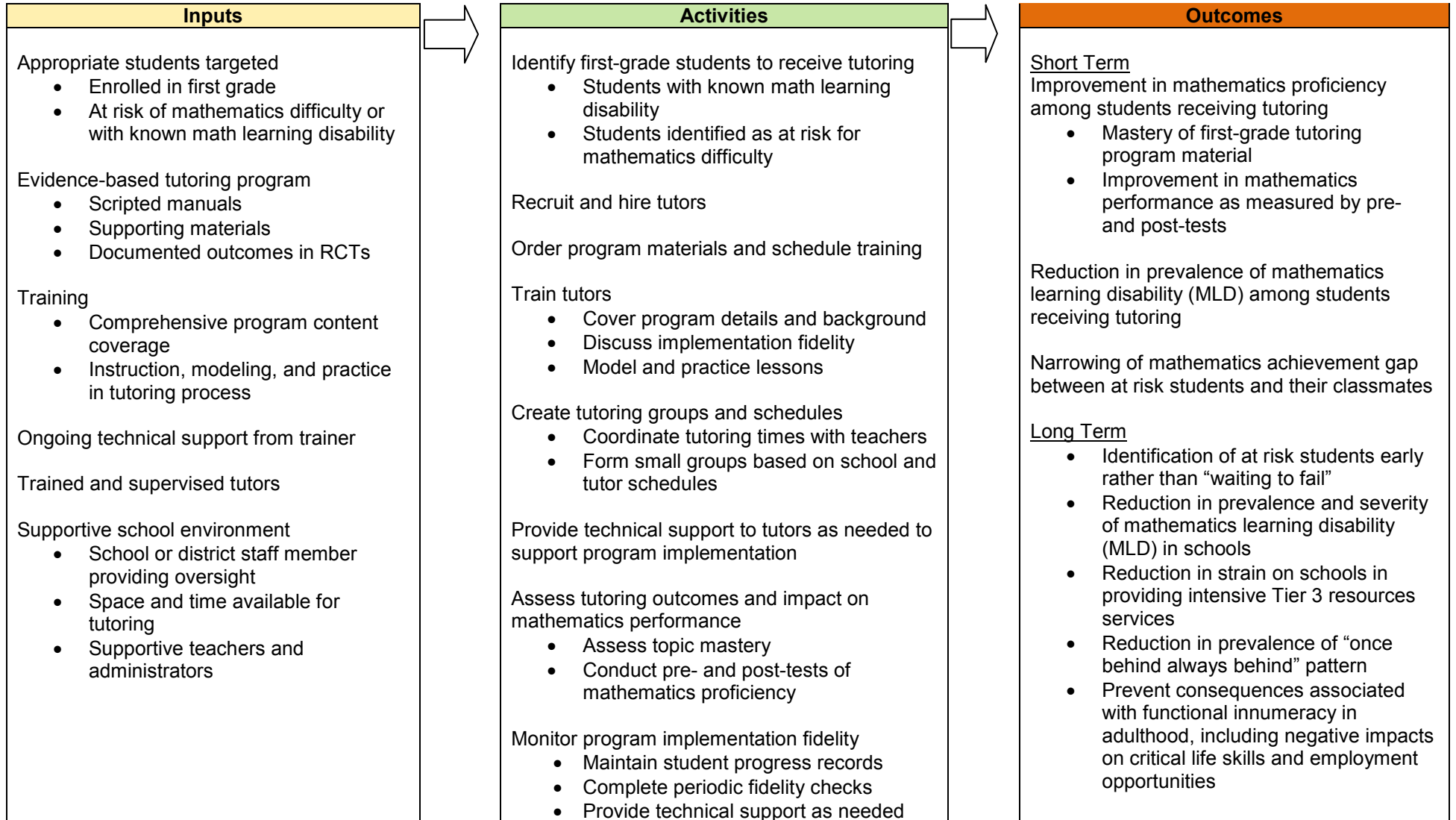
Mission: Improve Outcomes for First-Grade Students at Risk for Mathematics Difficulty

Inputs	Activities	Outcomes
Appropriate students targeted - Enrolled in first grade - At risk of mathematics difficulty or with known math learning disability **Evidence-based tutoring program** - Scripted manuals - Supporting materials - Documented outcomes in RCTs **Training** - Comprehensive program content coverage - Instruction, modeling, and practice in tutoring process **Ongoing technical support from trainer** **Trained and supervised tutors** **Supportive school environment** - School or district staff member providing oversight - Space and time available for tutoring - Supportive teachers and administrators	**Identify first-grade students to receive tutoring** - Students with known math learning disability - Students identified as at risk for mathematics difficulty **Recruit and hire tutors** **Order program materials and schedule training** **Train tutors** - Cover program details and background - Discuss implementation fidelity - Model and practice lessons **Create tutoring groups and schedules** - Coordinate tutoring times with teachers - Form small groups based on school and tutor schedules **Provide technical support to tutors as needed to support program implementation** **Assess tutoring outcomes and impact on mathematics performance** - Assess topic mastery - Conduct pre- and post-tests of mathematics proficiency **Monitor program implementation fidelity** - Maintain student progress records - Complete periodic fidelity checks - Provide technical support as needed	<u>Short Term</u> Improvement in mathematics proficiency among students receiving tutoring - Mastery of first-grade tutoring program material - Improvement in mathematics performance as measured by pre- and post-tests Reduction in prevalence of mathematics learning disability (MLD) among students receiving tutoring Narrowing of mathematics achievement gap between at risk students and their classmates <u>Long Term</u> - Identification of at risk students early rather than "waiting to fail" - Reduction in prevalence and severity of mathematics learning disability (MLD) in schools - Reduction in strain on schools in providing intensive Tier 3 resources services - Reduction in prevalence of "once behind always behind" pattern - Prevent consequences associated with functional innumeracy in adulthood, including negative impacts on critical life skills and employment opportunities

Assumptions
Children with poor quantitative knowledge early in school tend to remain behind throughout school. These students are at risk for long-term math learning disability (MLD), which affects 4-7% of the school-age population.