

A Fruitful Pre-K Math Intervention

Aurora Head Start

Aurora, CO



COLORADO
Department of Education

In August 2017 staff at Aurora Head Start began to implement a 2-year initiative to improve children’s math outcomes that was partially funded by the Rose Community Foundation. Aurora Head Start’s leadership strives towards an inclusive and collaborative learning environment where student achievement initiatives include three components: the children, their families, and staff.



The first component of the initiative was to ensure all Pre-K children participated in series of 100 powerful math activities. The activities were facilitated in small groups of 1-1 and embedded in play with storytelling and problem-solving aspects. Dual language, language, and English as a Second Language strategies were an essential part of the approach. Children readily joined and enjoyed these math activities.

The second component of the initiative was for staff to help families become aware of activities to conduct at home to help their children meet targets of the [Early Learning Outcomes Framework](#). To accomplish this goal, Aurora Head Start held five family math events in both English and Spanish. Over 110 families participated in these events. Family Coaches, School Readiness Coaches, and Site Supervisors facilitated the family math events. During the family math events, children and their families engaged in math play and math talk using common household items. Families became more aware of the importance of math play with their children.



The third component of the initiative was to engage staff in intensive, long term, job-embedded professional development related to math. Pre-K teachers, mentor teachers, coaches, supervisors, and education directors participated in professional development related to how young children learn math, developmental paths of mathematical thinking, math talk, and best practices for fostering math development in 3-5 year olds. Rubrics that defined the method and reflective analysis of videotaped lessons were part of the professional learning opportunities.

In the two years of implementation, Aurora Head Start documented huge gains in student achievement, as evidenced in the Teaching Strategies Gold data in the chart below.

All Children in Head Start/Early Head Start Who Met or Exceeded Expectations for Math		
The year prior to the intervention	Fall 2016 - 25%	Spring 2017 - 42%
The 1 st year of the intervention	Fall 2017 - 33%	Spring 2018 - 85%