



AFTER-SCHOOL MATH PLUS

*Children are natural mathematicians. From the first time they count using their fingers and toes or look at the shapes of blocks, to the time they save up their money, make a purchase, or follow the stats of games and athletes...
Math is about everyday experiences.*

The Educational Equity Center at the Academy for Educational Development (EEC/AED) was awarded a three-year grant from the National Science Foundation to develop ***After-School Math PLUS (ASM+)***, a program designed to find and learn the math in everyday experiences and create awareness about the importance of math skills for future career options.

ASM+ was developed in collaboration with the New York Hall of Science and the St. Louis Science Center, with participation and support from after-school centers in their communities. Activities help to strengthen math content in after-school programs by complementing—not duplicating—classroom math experiences and are appropriate for the informal learning environment. The result is a standards-based national model and materials for after-school programs and museum partnerships.

This effort has resulted in a step-by-step guide that provides the information needed to implement the ***ASM+*** activities. The activities are fun, inquiry-based, and build essential math skills and concepts. Based on the NCTM standards, ***ASM+*** activities use "real world" math. They are grouped into four thematic units: Jump Rope Math, the Built Environment, ArtMath and MusicMath.

In each theme students participate in a series of hands-on activities at their afterschool program. As a culminating activity, in collaboration with a local science museum, students create an exhibit that displays the math skills and content they have learned. The opening event for the display (at the local science museum, afterschool center, or community site) brings families and community members together to celebrate students' work.

After-school programs that specifically address mathematics have been shown to be effective in improving students' attitudes about and understanding of the subject, as well as improving math outcomes. ***ASM+*** incorporates the best practices of these programs while adding its own innovative elements: collaborations between science museums and local after-school centers; utilization of teenage museum explainers as role models and mentors; student created math exhibits displayed in community-based public spaces; the integration of equity, literacy and career connections; ideas for including students with disabilities; and practical strategies for family involvement.

With funding from Toyota USA, ***ASM+*** is now being replicated at four sites nationally: Maine Discovery Center with the Indian Island School Afterschool Program in Bangor, Maine; the US Space & Rocket Center with the University Place School in Huntsville, Alabama; the Louisville Science Center with the Devers Youth Center at Fort Knox in Kentucky; and the Virginia Museum of Natural History with the Martinsville Henry County After 3 Collaborative in Martinsville, Virginia.



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