“Key Ideas” for Mathematics Enrichment in Afterschool

“Long division is impossible!” If your afterschool program offers mathematics enrichment, you have undoubtedly heard comments like this one. While enticing a student who dislikes math to devote another hour to the subject in afterschool is hardly a task any instructor would enjoy, an afterschool program can be an ideal setting to help students become math lovers. As we discuss math in this issue of AfterWords, we are focusing on what we call “key ideas” in math.¹ These are strategies in afterschool mathematics enrichment that can help your students become better at math and perhaps enjoy it more, too.

**Encourage problem solving.** One afterschool instructor we talked to realized that her students were frustrated spending their afterschool time struggling through worksheets as they tried to learn to multiply and divide fractions. Instead she put them to work in the kitchen, asking them to make a quadruple batch of cookies and reduce a brownie recipe by half. The students had to use their problem-solving skills to determine how they would multiply and divide fractions.

**Develop and Support Math Talk.** When they worked on their recipes, few of the students knew how to determine the correct measurements, they talked about it. By discussing the problems in their own words, students were able to build on what they already knew and better understand mathematical ideas like fractions.

**Emphasize Working Together.** Many of us who have prepared a meal with a friend or two can say that the company often makes the task more fun. The same is true for the students learning about math in the kitchen. As it turns out, research indicates that the students probably learned more about multiplying and dividing fractions by working in a group than they would have working alone.

¹ Key ideas in math are some of the resources provided in the online Afterschool Training Toolkit for Mathematics, whose contents were developed by the staff at the Mid-Continent Research in Education and Learning (McREL), a partner in the National Partnership.
PASS Afterschool Program
LAKE VIEW, SOUTH CAROLINA

Like many afterschool programs, the PASS afterschool program at Lake View Middle School aligns math activities with regular school-day instruction and the corresponding standards. In the afterschool setting, however, math enrichment comes in the form of an art project or another activity where students can create something. Carol Rogers, the Lake View afterschool program coordinator, cites an activity on scale and proportion as an example. Students and their parents made a scale drawing of the school’s mascot, a gator, and a mural for the school’s hallway. “This project included transference of the scale to a larger picture,” explains Rogers. “Students and parents worked from a 1-inch scale and transferred this to a 6-inch block. Parents and their children were responsible for completing a square and combining it with the other blocks to create a beautiful mural.”

The project can be considered a success in several ways. “I have had students tell me that they didn’t know doing scale drawings and interpreting data could be fun,” says Rogers. The activity also allowed students to contribute to their school. “It is vitally important that we help students with their schoolwork, but we must develop within students a pride in themselves and the work they do. When we accomplish this task, we can truly consider our program a great success,” Roger says.

Making Math Relevant
Math means more to students if they can study something that interests them. People don’t often think of math as a subject where you can study what interests you the way you can choose a book for language class or a report topic for social studies, but you can. If a student is interested in baseball, help him or her track a favorite player’s statistics. Students who profess a love of clothing can learn to find bargains by working with percentages. Talking to a day-school teacher can give you additional ideas for aligning these activities with curriculum.

Do you have a training tip you would like to share? E-mail us at afterwords@sedl.org with “training tip” in the subject line.