Making Mathematics Meaningful

We have all heard the questions: Why do we have to learn this? When are we ever going to use this? And some of us struggle with the answers. In the classroom, we must look ahead to the way students will learn and use mathematics in the future. At the same time, we must realistically consider how mathematics fits into students' lives in a meaningful way. When students begin to value mathematics they are more likely to be motivated to learn, and their learning will lead to a deeper appreciation of the subject.

NCTM has recognized the importance of connections by making it one of its ten Standards of school mathematics for students from prekindergarten through grade 12 (NCTM 2000). When we ask students to describe what they think mathematics is, do we want them to talk about acquiring isolated skills and procedures through memorization, or do we want to hear that mathematics is connected to their interests and their goals, to the real world, or to other subject disciplines or within mathematics? Procedural and conceptual understandings go hand in hand.

When we selected the topic for this focus issue, we wanted to help teachers incorporate a variety of approaches to making mathematics relevant to students. Some of the articles in this issue will help address these questions. While David Buhl, Michael Morissette, and Jeffry Wolff explain how to determine whether a mattress will fit up a stairwell, Rebecca McGraw, David Romero, and Robert Krueger get their students out collecting data in the stadium bleachers and Lori Keleher tells how she uses a career file to show students how important and relevant the mathematics they learn in class will be in their future. Other articles will give examples of lessons that help students develop confidence and critical thinking skills by using real-life data and examples. For example, Henry Kranendonk used population data sets and pyramid graphs to motivate low-achieving mathematics students in a summer mathematics program, and Tom Santulli explores using Efron's dice to model World Series outcomes.

When students appreciate mathematics, they will value mathematics. We hope that you enjoy this issue and find ideas you can put to use in your own classrooms. We owe it to our students to make mathematics meaningful. There is probably no greater reward than to see our students' enjoyment of mathematics increase because they have connected with the discipline. As always, if you have your own ideas to share, please submit a manuscript to be considered for future inclusion in the *Mathematics Teacher.*

REFERENCE

National Council of Teachers of Mathematics (NCTM). *Principles and Standards for School Mathematics.* Reston, VA: NCTM, 2000. ∞

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