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3 [Hands-On Assessment: A Cupcake Quiz!](#)

Tena L. Golding, Southeastern Louisiana University

In this article, students in a secondary mathematics methods course take a hands-on quiz to review basic geometric ideas and to experience an assessment technique that is both fun and informative.

7 [Mathematicians Are Interesting People!](#)

Carmen M. Latterell, University of Minnesota Duluth

Mathematicians are interesting people. This article tells historical stories about some mathematicians with the purpose of showing their humanness. That is, mathematicians have regular lives. Ten mathematicians, including three women, are featured with some information about their lives and their mathematics. Through these stories, a picture is given of how and why these individuals enjoyed mathematics.

11 [Investigating Students' Thinking: Going Beyond Skin-Deep](#)

P. Mark Taylor, University of Tennessee

J. Jeremy Winters, Middle Tennessee State University

The Skin Problem is an example of a problem that takes a realistic open-ended situation and examines students' abilities to transfer knowledge. The problem transfers the topic of surface area to an applied setting that students can relate to themselves. This investigation addresses important mathematics that NCTM calls for, "An understanding of the concepts of perimeter, area, and volume is initiated in lower grades and extended and deepened in grades 6–8." Moreover, during this activity students were exposed to a new problem that required mathematical concepts and tools that had previously been learned. They were challenged to come up with a response to a series of questions through dynamic investigation.

16 [Simulating Basketball Free Throws Using Fathom](#)

Todd O. Moyer, Towson University

The article describes a simulation of shooting free throws using the dynamic software program Fathom. The activity is suitable for grades 6 through 12, and is flexible to be adapted to the appropriate level of students. Topics for discussion can be simple proportions, expected value, the Law of Large Numbers, Bernoulli trials and the binomial distribution.

The story is based in a real-world context that is familiar to most students. A player who is a typically good free throw shooter misses two shots at the end of the game for a loss. The question is asked as to whether or not the player choked. The simulation provides students with the opportunity to gather information. A classroom debate can center on interpretations of the data. For example, an

alternate scenario could be presented: Given some more information, who should be fouled in order to try to win the game?

27 [Making Mathematics Meaningful: Motivating Students to Learn Mathematics by Connecting Mathematics to Their Interests](#)

Ann Hanson, Columbia College Chicago

As math teachers, it is hard for us to understand why so many students find mathematics uninteresting or boring. In this article, the author gives an example of an activity, which, hopefully, can show students the applicability of mathematics to something fun and interesting. In this class activity, the students will make a hexa-flexa-gon and prove why the folding process works to make congruent isosceles triangles.

33 [Jelly Beans and Hair Bands: Areas of Triangles with the Same Base and Same Height](#)

Jeong Oak Yun, Arizona State University

Alfinio Flores, University of Delaware

A dynamical model made with a box, a hair band, clips, and jelly beans is used to explore the areas of triangles with the same base and the same height; compare areas of triangles with the same base but different height; compare areas of triangles with the same height but different base; and compare the area of a triangle to that of a rectangle with the same height but half the base.

38 [When Students Can't Comprehend the Math Text: What Middle School Teachers Can Do](#)

Tracy Snyder Latta, Shawnee Middle School

Nancy W. Fordham, Bowling Green State University

This article discusses the difficulties students may face with the readability of math texts, and suggests several instructional strategies that ameliorate some of these challenges. Additionally, trade books are recommended as a supplement to the math text. A list of literature suitable for middle grade students is included.

46 [Data Analysis and Technology Deliver a New Beginning for Ohio Math Students](#)

James Pukys, Canton City Schools

The author presents the process by which Canton City Schools rewrote its middle school curriculum, provided opportunities to analyze student data, and added interactive technology to the classroom. These factors have improved the efficiency of teachers' instruction and contributed to improved test scores.

49 [Success at Mathematics Contests and Relational Understanding in Mathematics: A Way to Enhance Problem Solving Skills \(Column: Mathematics Contest Corner\)](#)

Debora Kuchey & T. Michael Flick, Xavier University

- 53 A Numeration Game in Base 3 (Activity)
Michael Krach, Towson University
- 55 Using Pattern Building to Generate Symbolic Form (Activity)
Ed Laughbaum, The Ohio State University