

1023-G5-66

Gary Simundza* (simundzag@wit.edu), 19 Beach Avenue, Salem, MA 01970, and **Nancy Crisler**. *Engaging Developmental Mathematics Students with Activities: A First Look at Quadratics*.

Students in developmental mathematics courses frequently struggle because they don't see the relevance of the subject matter to the real world. Beginning the study of a topic like quadratic functions and equations with a concrete, hands-on experience that draws them into the mathematics can be a springboard for successful learning, allowing them to see a topic with which they may have previously struggled in a whole new way.

Students create a simple physical simulation of a suspension bridge and investigate its mathematical properties. The physical model provides a connection across three modes of representation. Direct measurements (numerical representation) provide a "bridge" between the geometry of the suspension cable (graphical representation) and an algebraic equation (analytical representation). A variety of different algebraic models for the same cable is then examined.

Classroom research that confirms the effectiveness of such methods for improving problem-solving abilities will be mentioned. (Received July 25, 2006)