

“Big-screen” technology for little hands: incorporating graphing calculators in the elementary/middle school mathematics curriculum (Workshop)

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Abstract

There is still much controversy over calculator use in the K-6 curriculum. Calculator activities are typically not embedded within curricula but are optional tasks or homework problems with calculator icons next to them. Such activities can be easily overlooked or ignored, however, research has shown that implementing appropriate use of calculators allows students to explore more mathematics and come to deeper understandings.

In our elementary/middle school preservice mathematics courses, we have designed, modified, and incorporated many activities that utilize graphing calculators. In this workshop, we will focus on activities used in both our geometry and probability and statistics courses. These activities are appropriate for the preservice and inservice K-8 teacher audience, as well as teacher educators. We will use the TI-73 calculator and its many features such as lists, its varied graphs, and downloadable applications. Sample activities include using the Geoboard and Explorer Draw applications to explore shapes and their properties, the SmileMath application to explore angle and angle measure, lists and graphs to explore statistical measures of center and variability as well as geometric transformations, and programming to explore probability simulations.