1035-I1-1544 **Becky J. Krakowski*** (Rebecca.Krakowski@notes.udayton.edu), 300 College Park Drive, Dayton, OH 454692316. *Use of Geometer's Sketchpad and Guided Inquiry to Foster Conceptual Understanding of Precalculus Topics.*

Interactive geometry software such as Geometer's Sketchpad, need not be limited to use in geometry classrooms. There is a wide variety of other applications for which Sketchpad is a useful tool in developing deep student understanding in both higher and lower level mathematics courses. This paper will focus on precalculus activities developed with Sketchpad that use a guided inquiry approach. These activities have been used in a capstone content course for preservice middle childhood mathematics teachers. In this course, students explore topics from precalculus and calculus that are directly related to topics taught in the middle school mathematics curriculum. A technology demonstration will illustrate how Sketchpad is used to help students explore three precalculus concepts – basic right triangle trigonometric ratios, using radians to measure angles, and connecting right triangle trigonometry to the circular trigonometric functions over the real numbers. Examples of student work will also be shared, as well as a discussion of "lessons learned" by the instructor. (Received September 20, 2007)