1077-VI-1043 Barbara E. Reynolds (breynolds@stritch.edu), Dept. of Mathematics & Computer Science, Cardinal Stritch University, 6801 N. Yates Road, Milwaukee, WI 53217, and William E. Fenton* (wfenton@bellarmine.edu), College of Arts & Sciences, Bellarmine University, 2001 Newburg Road, Louisville, KY 40205. Exploratory Activities for College Geometry. Preliminary report.

This talk will demonstrate a sequence of related activities using dynamic geometry software that allows students to develop an intuitive foundation for the geometric concept of power of a point with respect to a circle and to discover alternative definitions for this concept. This leads naturally to the radical axis of two circles. We also will discuss our students' reactions to this style of learning.

These activities come from the newly revised edition of College Geometry Using The Geometer's Sketchpad, a textbook that emphasizes exploration and discovery. Each chapter begins with computer-based activities that introduce the concepts. Building on this foundation, the discussion presents terminology, notation, and important theorems. The chapter then closes with exercises to assess the students' understanding. (Received September 15, 2011)