

Meeting: 1003, Atlanta, Georgia, MAA CP N1, MAA Session on Teaching Visualization Skills

1003-N1-334 **William E. Fenton*** (wfenton@bellarmine.edu), Dept. of Mathematics, Bellarmine University, 2001 Newburg Road, Louisville, KY 40205, and **Barbara E. Reynolds** (breynolds@stritch.edu), Dept. of Mathematics & Computer Science, Cardinal Stritch University, 6801 North Yates Road, Milwaukee, WI 53217-3985. *Visualization Activities in College Geometry*. Preliminary report.

The presenters have written a textbook for college geometry that emphasizes exploratory activities using The Geometer's Sketchpad. The activities introduce the topics and provide a foundation for classroom discussions. Through these activities, students develop their own visualizations of the concepts. Further, the dynamic aspect of Sketchpad diagrams allows students to experiment with their images. A careful construction is a "visual proof", a first stage in developing a mathematical proof. Our project includes interactive versions of the diagrams from the text. Each diagram is available as a Sketchpad file, so that the students can experiment with these images. Some are presented as a sequence of steps that illustrate a proof in detail. We will demonstrate several of the exploratory activities and the interactive diagrams, and will discuss our students' results and reactions. (Received September 10, 2004)