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Teresa D Magnus* (tmagnus@rivier.edu), Dept. of Mathematics and Computer Science, Rivier University, 420 S. Main Street, Nashua, NH 03060. *Introducing IBL to Future Elementary Teachers and Others in a Geometrical Explorations Course*. Preliminary report.

In Geometrical Explorations, my goal was to break the cycle of rote learning that takes place in so many classrooms and help future teachers embrace the idea of IBL. At the same time, I wanted to develop a deeper understanding of the concepts of geometry and the connections with other areas of mathematics. The course had no textbook and lecture was rare. Instead, the students worked in groups to explore the area model of multiplication through pentominos, the Pythagorean theorem through puzzles, angle measure through tiling, and many other geometric concepts through hands-on exploration, observation of patterns, and guided questioning. Students were also encouraged to develop their ability to write mathematical explanations and informal proofs as they summarized their discoveries. This presentation will give an overview of the course with some sample lessons along with a summary of plans for enhancing the course further. (Received September 22, 2015)