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This study explored the effectiveness of a flipped pedagogy structure vs. a lecture-based structure in a Liberal Arts mathematics course. While flipped learning is partially defined as a pedagogical approach in which direct instruction moves from the group space to the individual (typically, but not necessarily, through the use of videos), this study focused on the effects of implementing the second aspect of the flipped learning definition—turning the group space into a more dynamic, interactive environment than is typically found in a lecture-based classroom. Students in four sections of the course were asked to read a portion of the text prior to class, with the only difference being that the two experimental sections used class time almost exclusively for problem solving and the two control sections used class time almost exclusively for lecture. The experimenters hypothesize that even this modest change in the course structure would show significant benefits both in student achievement and student attitudes about the course. Data sources include common assessment questions in Formal Logic and Probability, responses to the university-wide Student Response Survey, pre- and post-course responses on the Student Assessment of Learning Gains (SALG), and peer observation. (Received September 16, 2014)