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Aubrey Kemp* (akemp9@student.gsu.edu) and **Draga Vidakovic**. *The Use of Groupwork and Geometer's Sketchpad in Learning Taxicab Geometry: A Preliminary Report*. Preliminary report.

The Activities, Class Discussions, and Exercises (ACE) Teaching Cycle was implemented in a class of 18 students in Fall 2016 in a college geometry course. Students worked in groups to explore concepts and complete activities on a dynamic geometry software, Geometer's Sketchpad (GSP). During these activities, students were guided to construct certain figures and observe properties and relationships in geometry. Students then participated in class discussions guided by the instructor to reinforce certain concepts. During these discussions, concepts were formalized, including the proofs of theorems that were explored in the previously completed activities. In addition, students were given exercises to complete to help support the development of mental constructions. For this preliminary report, we are focusing on the dynamics of group participation in relationship to GSP within two selected groups from the teaching experiment during a Taxicab Geometry lesson. The first activity was an explorative activity to allow students to get an idea of how the Taxicab metric is measured. The second activity allowed students to use GSP to explore Taxi-circles, and create their own conjectures about Taxicab Geometry and some of its interesting properties. (Received January 10, 2017)