

1125-G1-2820 **Joel T. Patterson*** (jpatterson@cpsd.us), 459 Broadway, Cambridge, MA 02138. *Constructing Inquiry Lessons in High School Geometry.*

Take the instructions out of constructions so the compass and ruler become tools students choose to answer problems. The presenter will offer a few simple examples of activities that high school geometry teachers can use to begin to explore incorporating inquiry and active learning into their curriculum on constructions. The first of these is an activity that leaves students asking and figuring out “What happened here?”: what transformations could have been applied to cause one figure to be changed into another, and how can we learn as much as possible about those transformations? The second is an activity asking “Is this polygon cyclic...or not?”: can a circle intersect all vertices? Based on work to study how and why other high school geometry teachers begin to experiment with inquiry and activity-based learning in their classrooms, the presenter will describe his experience with the activities, and offer a few guidelines to encourage other instructors to consider incorporating inquiry and activity-based learning. (Received September 20, 2016)