If we want students and educators to be life-long learners and doers of mathematics, we need to provide them the opportunity to pose and pursue their own mathematical questions. This was the goal of a course for graduate students in math education at the University of Maryland in which participants engaged in both communal investigations and individual projects. We describe the course structure and experience, with a focus on how to best support the transition to inquiry.

We also discuss a case study of a first-year graduate student in mathematics enrolled in the course. This data suggests the potential such a course has to enrich the early years of the graduate math program for students with dual interests in math and teaching, as well as to foster interaction between graduate students in both disciplines which may be of use in their professional futures. (Received September 16, 2008)