1023-Z1-359 **Aimee J Ellington*** (ajellington@vcu.edu), P O Box 842014, 1001 W Main Street, Richmond, VA 23284, and **Joy W Whitenack** (jwwhitenack@vcu.edu), 1015 W Main Street, Richmond, VA 23284. *K-5 teachers explore the nature of rational numbers: A case for inquiry in a mathematics specialist program.*

In this presentation, we will analyze strategies that K-5 teachers used as they explored the density property for rational numbers. We highlight their methods to illustrate the range of ideas that the teachers considered as they explored this property. Our example is taken from a lesson from one of five mathematics courses that comprise an endorsement program for preparing K-5 mathematics specialists. In this lesson, teachers developed and used their own solution strategies to find fractions between two unit fractions, 1/10 and 1/11. During the presentation, we flesh out the mathematical ideas that surfaced during the whole class discussion. We consider the instructor's role in encouraging the ensuing class discussion. We also highlight the potential that this type of lesson had in supporting possible learning opportunities for teachers. We will outline three mathematically different solution methods that the teachers developed to find fractions between 1/10 and 1/11. We also highlight the instructor's critical role in facilitating a discussion about these various methods. We argue that these types of experiences were important opportunities for teachers to explore the density property and more generally to develop a deeper understanding of rational numbers. (Received September 08, 2006)