Funded by a five-year, $5 million grant from the National Science Foundation, the Math in the Middle Institute Partnership is a partnership among educators at the University of Nebraska-Lincoln, Lincoln Public Schools and Nebraska’s Rural Educational Service Units. One focus of the project is to develop intellectual leaders in middle-level mathematics. During the 25-month institute, participants tackle a challenging math curriculum taught by mathematics and mathematics education faculty which are designed to deepen their mathematical knowledge for teaching, sharpen their pedagogy skills and develop leadership abilities. This presentation specifically addresses the expectations in three of the Institute courses for middle-level teachers: Number Theory & Cryptology, Concepts of Calculus, and Using Mathematics to Understand our World (a mathematical modeling course). (Received January 29, 2008)