A new course "Problem Solving for Teachers" has been created at the University of Wisconsin Whitewater to foster mathematical habits of mind. We will discuss the successful (and unsuccessful) pedagogical methods that have been tried, and share some evidence of students thinking differently by the end of the course. Although the course has only been taught for two semesters, some preliminary results indicate that taking it improves future teachers’ success rates in other mathematics courses. (Received September 25, 2012)