The Appalachian State University Vertically Integrated Workshop for Women in Mathematics is a project supported by the Tensor Foundation through the MAA that strives to build a vertically integrated network of communication and social support among women at all levels of the educational process through mathematically rich experiences. It was patterned philosophically by combining current research on women in mathematics and other diversity programs with the vertical integration model that has been popularized in VIGRE grants. The program is designed so that students will network with each other, faculty will share their experiences working in and pursuing degrees in the mathematical sciences, and students will work on mathematically rich problems in vertically integrated teams. By bringing together high school girls with women at the bachelor’s, master’s, and doctoral levels, we foster mathematical confidence and reinforce the validity of the study of and availability of career options in science and mathematics. We will report on the rationale, structure, and evaluation of two separate trials of the program. (Received September 11, 2006)