1163-B1-1337James Morrow* (jmorrow@mtholyoke.edu) and Charlene Morrow
(cmorrow@mtholyoke.edu). Empowering Young Women to Love Mathematics.

We will present a set of principles and practices designed to empower young women in mathematics. These ideas are based on research about making the learning environment responsive to preferred ways that women learn and strategies that help them feel supported as they encounter mathematics and build understanding.

Over a period of 30 years, the authors have applied and refined this research and put it into practice in the realm of mathematics classes at both the secondary and post-secondary levels. We will describe how we apply our methods to learning, problem solving, problem posing, and appreciating mathematics.

We will describe how to help students become active learners and independent, but not isolated, learners by explaining ways of listening to, responding to, and guiding them, and how to introduce them to a broader picture of the world of mathematics. We will also describe some outcomes for students who have experienced such methods, including how our methods have helped students develop problem-solving strategies and increased their ability to pose problems. Finally, we will give examples of how such methods have changed the teaching practices of several teachers who have worked with us. (Received September 15, 2020)