Mississippi University for Women received an MAA/Tensor Foundation grant to hold a Math Camp in June 2000, for 20 rising high school freshman girls. Bonnie Oppenheimer, Jane Wenstrom, and Dorothy Kerzel from Mississippi University for Women, LeRoy Wenstrom from the Mississippi School for Mathematics and Science, and National Board Certified Presidential Award Winner Carol Wright from Weir Attendance Center were the staff of the camp. We would like to share what we learned from this experience. Discussion will begin with publicity for the all-girl camp, and then go to the application process for participants. We will discuss some of the surprising issues encountered in setting up the Math Camp. The activities, both in and out of the classroom, will be discussed. These ranged from work with computers or graphing calculators, work with manipulatives (such as geoboards, tangrams, and zomes), to artistic work with tessellations and critical thinking activities. Outside activities included a tour of the Engineering Research Center’s Virtual Reality Lab and a regular summer activity at the W. Follow up letters were sent to the participants’ high schools to track how long they stay in mathematics, and which mathematics courses they take. (Received September 03, 2000)