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Katrina Morgan* (katri@live.unc.edu) and **Francesca Bernardi** (bernardi@live.unc.edu). *Inquiry-Based Learning Problem Sets in an Outreach Program for High School Girls: Increasing Confidence and Strengthening Interest Among Underrepresented Groups*. Preliminary report.

Inquiry-based learning is implemented in Girls Talk Math, a free summer day camp for high schoolers who identify as girls and are interested in math held at the University of North Carolina at Chapel Hill. IBL helps accomplish two program goals: increasing confidence and strengthening interest in taking college math courses. In IBL students feel ownership of their work, which increases confidence. IBL's emphasis on creative problem solving tends to be more engaging and interesting than the algorithmic approach often taken in high school courses. Increased engagement and interest is expected to improve the likelihood of participants pursuing further math. During camp, participants break into 8 groups of 4-5 campers to complete a lengthy problem set on a math topic usually not encountered until college or graduate school. Problem set topics include: Elliptic Curve Cryptography, Special Relativity, Scientific Computing, Fluid Dynamics, and Knot Theory. Team Leaders provide guidance, but campers decide how to spend their time and are responsible for their learning. Each group writes a blog post about the math they learn, allowing participants to assimilate new knowledge through reflection and communication. Analysis of pre- and post- survey data will be presented. (Received September 26, 2017)