

1046-C1-1878

**Paula Shorter\*** (paula.shorter@rockhurst.edu), Math and Physics Dept., Rockhurst University, 1100 Rockhurst Road, Kansas City, MO 64110, and **Mairead Greene** and **Zdenka Guadarrama**. *Engaging Precalculus Students in the Complete Process of Mathematical Modeling*.

From the initial development of well-formed questions in the context of a larger investigation, to finding real data, building mathematical models and making predictions, students in our precalculus course build a deep understanding of the purpose and process of mathematical modeling through a multi-stage, semester-long modeling project. Students choose their own topic to investigate and locate their own real data. We use our university first-year theme (this year it was "Stewardship of the Earth") to focus their choice of topics and to strengthen their connection with the project by making it a more integral part of their first year learning experience. Students gradually build independence in modeling via relevant course activities that provide less and less guidance as the semester progresses. Also included in this presentation will be preliminary results of ongoing studies in our department over multiple sections of precalculus on student learning and performance, student attitudes, and student population data. (Received September 16, 2008)