1125-G1-256   **Zoë Misiewicz*** (`zoe.misiewicz@oneonta.edu`). *Inquiry-Based Learning and the History of Mathematics: Discovering the Geometric Procedure for Completing the Square through an Ancient Mesopotamian Text.* Preliminary report.

Ancient Mesopotamian numerical tablets provide an accessible approach to the earliest history of mathematics; students can look at a drawing of a cuneiform text and immediately begin to discover for themselves certain characteristics of the Babylonian number system, such as its sexagesimal nature. Mesopotamian texts that describe mathematical procedures in words are less familiar and less accessible, but are ultimately even more rewarding when approached from an inquiry-based perspective.

An excerpt from one such text, BM 13901, is presented in literal translation and initially appears incomprehensible. Yet with some guidance, pre-service mathematics teachers are ultimately able to work step-by-step through the instructions provided in this text to discover the geometric procedure for completing the square. Once they have discovered the process for themselves using this ancient text, students often report that they understand it much better than the familiar algebraic formulation and are eager to apply it in their own teaching. They have simultaneously gained insight into the mathematics of ancient Mesopotamia and attained a deeper understanding of a standard modern procedure that they will be teaching regularly in secondary schools. (Received August 19, 2016)