Debbie Gochenaur* (d1gochenaur@ship.edu), 1871 Old Main, Dept. of Mathematics, MCT 250, Shippensburg, PA 17257. From Fred Flintstone to Ferraris, Driving Mathematical Content through Questioning.

In content courses for elementary preservice teachers, there is often a misconception that the mathematics will also be elementary, or easy; but, when faced with a short essay question asking students to describe their logic and reasoning, they often stumble especially when asked to respond without giving a numerical example. Writing rich questions to guide students in their development from procedural to conceptual understanding of mathematics, is an instructional journey to increase student achievement. This session will describe a model of questioning utilized to enrich students’ conceptual understanding through writing. Questions start at a basic level, gradually shift away from procedural descriptions towards explanation of concepts, and finally move to written comparisons of ideas and processes. Woven throughout is the progression of student work from proofreading prepared submissions to effectively answering logic and reasoning questions individually. Example questions and the results of pre-post tests on students’ perceptions of their ability to answer short essay questions which require logic and reasoning will be shared in addition to the course components which students identified as being most beneficial in helping them learn to write clear, concise responses. (Received September 22, 2011)