This talk will discuss writing assignments used in teaching Foundations of Advanced Mathematics (our proofs course), in Fall 2004. Along with the mathematics textbook, selected chapters in a book on scientific writing were used. The writing emphasis was on providing good transitions between sections, providing the appropriate level of detail, being precise, and being clear. The goal was to have the students pay attention to high quality scientific writing as they wrote about mathematical concepts and situations. Students were given three writing assignments, each one asking them to focus on a specific mathematical topic as well as on certain qualities of scientific writing. Assignments were designed with the hope that they would be varied and interesting enough to force the students to learn some new mathematics, without being so challenging as to prohibit students from focusing on the quality of their writing. Two of the assignments successfully achieved this. One of the most successful assignments even involved the freshmen Calculus I class.