In 2004, the MAA’s Committee on the Undergraduate Program in Mathematics (CUPM) advocated for a closer connection between mathematics and other disciplines, such as the sciences. In this talk, we will develop the rationale behind creating weekly activities focused on real-world problems from the major fields of study of our students. These activities connect the mathematical knowledge of the course directly to applications of interest to the students, thereby increasing the perceived relevancy of the mathematics. We will explain why and how this project is different from other projects we have seen. We will discuss the educational theories that support the addition of real-world problems based in each students major (yes, this means different activities for students planning to major in different majors), consider issues relating to the affective domain, offer suggestions for implementation issues, and consider preliminary results. (Received September 21, 2010)