Elementary Calculus is a one-semester course designed for students majoring in business, economics, and biology. We present evidence that a problem/project based learning approach as a successful strategy to present the material in an interdisciplinary manner with real-life applications. The courses in our study were regularly structured in a “collaborative lecture” style; class time was segmented by short lectures followed by small group activities. The first term of the study (Fall 2014, three sections, N=180) involved the use of three mini-projects, each of which required students to apply course concepts to a real-world problem and work outside of class in teams of two or three. The second term of the study (Fall 2015, two sections, N=120) involved the use of increasingly open-ended projects. In addition, one section also completed writing assignments intended to support the development of positive mathematics learner identity. Lesson plans, projects, and sample writing assignments will be discussed. Student performance results and impact on attitude and confidence will also be presented. (Received September 21, 2015)