In this talk we will discuss our efforts to redesign the traditional calculus experience by using 21st century technology to remove lectures from the classroom and replace them with an active learning experience. This entails students watching lectures outside of class at www.youtube/user/drprice765, and then working problems in class at a whiteboard and in small groups, while the instructor facilitates learning. Our classroom and instructional design draws upon elements from the laboratory sciences, studio arts, and other humanities courses. The main result is a course that offers an active learning experience that encourages students to engage in discovery, compare and contrast of ideas, and work together to solve problems. (Received September 21, 2015)