Bonnie S Moon* (moonb@byui.edu) and Paul Cox (coxp@byui.edu). Using Modeling in Introductory Differential Equations to Motivate Relevance, Positive Attitudes Toward Mathematics and the Transfer of Knowledge to Other Courses. Preliminary report.

We have redesigned our introduction to ordinary differential equations course using modeling scenarios to provide context for the content. We have incorporated a Modeling, then Visualizing and finally Solving pattern in all elements of the course. The course has been divided into smaller modules which begin with students studying a modeling scenario. They work on modeling the scenario both individually and in groups. After the groups determine a model, they then apply visualizing and solving techniques in the context of the scenario. We are studying the impact this redesign has on student attitudes toward mathematics and on their ability to transfer understanding to courses in other disciplines. (Received September 16, 2019)