

1067-X1-2221      **Brynja R. Kohler\*** (Brynja.Kohler@usu.edu), Department of Mathematics and Statistics, 3900 Old Main Hill, Logan, UT 84322, and **Janice Bodily, Jessica Munns Davis, James Haefner** and **James Powell**. *Teaching Mathematical Modeling: Challenging Torricelli's Law*.

In this paper, we describe a laboratory modeling exercise and the teaching strategies we employ to successfully implement the project in our Applied Mathematics in Biology course. The laboratory is called the Leaky Bucket Lab and allows students to parameterize and test Toricelli's law and develop and compare their own alternative models to describe the dynamics of water draining from ordinary household containers with holes in the bottom. This project also serves as an introduction to the epistemology and philosophy of science. (Received September 22, 2010)