

1125-G1-1505 **Thomas J Clark*** (tom.clark@dordt.edu), 498 4th Ave. NE, Sioux Center, IA 51250. *Weighing Fog: Hands on Modeling for Day 1 of Differential Equations.*

The first day of many mathematics classes contains formalities and very little mathematics. Here an alternative is presented where modeling is placed as the centerpiece to orient students to the real work of differential equations. Namely, to capture as beautifully and compactly as possible through the process of conjecture and investigation, the deep and interesting aspects of the physical world. A demonstration of the sublimation of dry ice sits at the center of the lesson. Students collaborate in groups to design an experiment that could measure the change in mass of a piece of dry ice that is dropped into water, the experiment is then carried out, and finally the students (with some guidance) build and solve a model for the phenomenon. I will also present my reflections on the lesson as well as guidance and resources for use in the differential equations classroom. (Received September 17, 2016)