1003-Q1-393   **June I Decker*** (`jdecker@trcc.commnet.edu`), Dept of Mathematics, Three Rivers Community College, 7 Mahan Dr, Norwich, CT 06360. *Analyzing fluid-flow to understand non-linear functions in developmental algebra.*

I will discuss why one should assign projects in developmental algebra and some attributes of a successful project. One such project that I use in intermediate algebra involves water draining from a 2 liter bottle. For this lab, students measure the height of water over time as the water drains from a hole punched in the bottom of the bottle. By calculating the slopes for every 20-second interval, students conclude that the data is nonlinear. After finding a quadratic regression equation using technology, students predict the time when the bottle will empty. How to use the vertex and roots to predict the drain time becomes a topic for discussion. Students write a report on their findings. (Received September 13, 2004)