

1014-H1-1027      **Joe T. Harris\*** (harrisjt@sapc.edu), c/o SAPC, 1700 Dogwood Mile, Laurinburg, NC 28352.  
*Introducing Students to Difference Quotients via a Writing Assignment Involving Experimental Data.* Preliminary report.

A laboratory project for beginning calculus students is presented, the purpose of which is to introduce difference quotients, slope as a rate of change, and the limit definition of the derivative. Students gather experimental data from a ball rolling down an inclined plane and then transfer this data to a CAS. Students graph position and velocity data, model it, and experiment with the idea of difference quotients and their limits representing both velocity and the slopes of tangent and secant lines. Students are expected to write up a report on their findings in the form of a well-written paper of about four pages, including diagrams and tables of data. I am using this project this semester and I will present student work. (Received September 26, 2005)