1067-Z1-1484 **Trent C Kull*** (kullt@winthrop.edu), Mathematics Department, Winthrop University, Rock Hill, SC 29733. *Demystifying the Dirac Delta "Function"*. Preliminary report.

The Dirac Delta function is often presented to undergraduates in an introductory differential equations course in a manner that may disguise its defining characteristics. Having students explore various approximations to the delta during Laplace transform solution methods may assist students in their efforts to gain a deeper understanding of this strange "function." We will look at several related student exercises that emphasize the nature of limits, continuity, differentiability, solutions to initial value problems, and the use of impulses in mathematical modeling. (Received September 21, 2010)