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The purpose of this paper is to present several examples that illustrate the use of a hand-held computer algebra system (TI-89) to enrich and enhance the teaching and learning of ordinary differential equations. These examples provide the opportunity for student active learning. Practical applications of first and second-order models will be examined from graphical, numerical and analytical points of view. Example problems include logistic growth, predator-prey, and spring-mass systems. (Received September 08, 2000)