1003-J1-1082 **Lora Billings*** (`billingsl@mail.montclair.edu`), Dept. of Mathematical Sciences, Montclair State University, Montclair, NJ 07043. *Projects in population dynamics.* Preliminary report.

Population dynamics models provide an interesting variety of dynamical behavior. In this talk, I will step through several forms of the SIR differential equations model as an example of how to design models of disease spread, analyze long term behavior, and identify bifurcations. The results can be easily visualized on a computer or graphing calculator, and students can interpret them as a written report. It is a great way to encourage students to pursue further study in applied mathematics. (Received October 03, 2004)