

1096-VP-2519 **Vera Hu-Hyneman*** (huhynev@sunysuffolk.edu), Department of Mathematics, Suffolk County Community College, 533 College Road, Selden, NY 11784, and **Alexander G. Atwood** (atwooda@sunysuffolk.edu), Department of Mathematics, Suffolk County Community College, 533 College Road, Selden, NY 11784. *Innovative Student Projects on Exponential Growth and Decay in Pre-calculus.*

Students often say, “Why do we need to study exponential functions in pre-calculus?” We will describe a group project that will give students specific instructions: pretend that they are employees of the Department of Environmental Protection and the Center for Disease Control. They have been sent to investigate the findings of scientists on a specific environmental case of their choosing. In one example of a project, bacteria are rapidly growing in a river, and the President of the United States has called and requested a full report on the alarming increase in the population of the bacteria in the river, based on exponential growth. After a few years have passed, exposure of the bacteria to radioactive isotopes has caused the population of the bacteria to decay exponentially. The group of students has to model this growth and decay, and they have to write a follow-up report. (Received September 17, 2013)