

Boucher, Randy. 2010. Determining Dissolved Oxygen Levels. *PRIMUS: Problems, Resources, and Issues in Mathematics Undergraduate Studies*. 20(4): 362-368.

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ABSTRACT: This project was used in a mathematical modeling and introduction to differential equations course for first-year college students. The students worked in two-person groups and were given three weeks to complete the project. Students were given this project three weeks into the course, after basic first order linear differential equation and mathematical modeling concepts were covered. The mathematical prerequisites for the course include courses in single and multivariable calculus.

[Supplementary materials are available for this article. Go to the publisher's online edition of PRIMUS for the Sample Solution.]

This is a full module given to students and the article contains comments for instructors as well.

Keywords: Single and multivariable calculus, differential equations, environmental engineering, biochemical oxygen demand, model