

Meeting: 1003, Atlanta, Georgia, MAA CP A1, MAA Session on Getting Students To Discuss and To Write About Mathematics, I

1003-A1-426 **Barbara Edwards*** (edwards@math.oregonstate.edu), Department of Mathematics, Oregon State University, Corvallis, OR 97331, and **Tevian Dray** (tevian@math.oregonstate.edu), Department of Mathematics, Oregon State University, Corvallis, OR 97331. *Talking about Vector Calculus*. Preliminary report.

For the last 5 years, vector calculus recitations at OSU have been turned into “labs”, in which groups of 3–4 students work together on activities designed to foster geometric reasoning. Students are expected to discuss the problems amongst themselves, present and defend their work to the class as a whole, and submit a written report.

We believe (and are attempting to document) that our students wind up with a better grasp than traditional students of the often difficult concepts of vector calculus. If nothing else, the labs provide an environment in which students communicate about mathematics, with each other and with the instructor, providing an essential opportunity for everyone to understand what the students are learning, and what they aren’t.

This work forms part of the Vector Calculus Bridge Project (<http://www.math.oregonstate.edu/bridge>), and has been partially supported by NSF grants DUE–9653250, DUE–0088901, and DUE–021032. (Received September 14, 2004)