
BRETT SMITH, Yale University

Exploring calculus with stories

Calculus students frequently criticize introductory classes for being disconnected from their experience in the real world, and this disconnect can create barriers to learning.

In an attempt to combat the misconception that math is not connected to work in the real world, my colleagues and I are creating Calculus Stories: interviews with experts in applied fields who use calculus in their work. These stories highlight diverse math experiences and perspectives, focusing on who uses calculus in addition to how it is used. We ask our subjects how they came to do the work they do, what it is like to work in their field and collaborate in teams, and how they deal with frustration and failure.

By integrating our interviews into a large, coordinated calculus 2 class, we hope to affect students' motivation and mindset, encouraging exploration and redefining "success" in the course. In this talk, we will present details and examples from our Calculus Stories, as well as feedback from students and instructors who have used these materials.