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Gregory D. Foley* (foleyg@ohio.edu), Ohio University, Athens, OH 45701-2979. *College Quantitative Reasoning: An Innovative Yearlong Course in Mathematics, Statistics, and Modeling*. Preliminary report.

College Quantitative Reasoning (CQR) is a yearlong course for college freshmen who have completed Algebra I, Geometry, and perhaps other mathematics courses in high school yet have placed into developmental mathematics. The CQR course develops mathematical proficiency, statistical capability, and quantitative literacy. Students use prior, but not fully internalized, mathematics in the service on new ideas. The first 10-week unit on Number and Quantity explicitly teaches problem-solving strategies while developing skills, concepts, and applications related to quantities, fractions, decimals, percent, recursion, financial literacy, proportional reasoning, averages, indices, codes, logarithms, and matrices. Following this developmental unit are 10-week units on probability and statistics and on modeling with algebra, functions, and trigonometry. The CQR course balances reasoning and sense making with communication and in-context problem solving. Motivating questions and challenging investigations are the heart of the course. These rich tasks engage students and leverage mathematical action technologies. They have been tested in technology-intensive classroom environments focused on language, thinking, and learning. (Received September 16, 2014)