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Designing Water Rockets as a Multi-disciplinary Project for Physics, Calculus, and Engineering Courses PAUL FISHER, DAVID CRAIG, EMILY HUNT, PAMELA LOCKWOOD, West Texas A&M University — We report the development of a cross-disciplinary activity for strengthening and relating student understanding of concepts from introductory physics, calculus, and engineering courses. Students, most simultaneously enrolled in all three classes, used material from physics and calculus to design rockets built from soda water bottles. They then constructed these rockets and a launcher in their engineering class and concluded the project with a public launch. Topics addressed include kinematics, dynamics, and fluid dynamics.

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