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Joanne C Caniglia* (jcanig11@kent.edu), Kent State University, 401 White Hall, 150 Terrace Rd., Kent, OH 44242. *Mathematical Modeling in Service of Community or Teaching Without Answers in the Back of the Book.*

By incorporating service-learning within a finite mathematics class, students seek out and solve real world problems. Projects are inspired by some of the challenges faced by non-profit organizations, government agencies, small businesses, or within schools. The addition of a service-learning component can deepen students' mathematical understanding by examining a problem and creating solutions that are both reasonable and implementable. Students also have an incentive to improve their written and oral skills for their final presentations to community members. In this presentation, modeling problems involving graph theory, optimization, probability, and simulations will be described within the context of service-learning projects. Two such examples include finding the expected values of wins/losses for local schools' Family Math Nights and optimizing transportation routes for Meals on Wheels. (Received June 07, 2015)