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Blain Anthony Patterson* (bapatte3@ncsu.edu) and **Sarah Elizabeth Ritchey**. *From Startups to World Hunger: A Mathematical Perspective.*

Where is the best place to raise a child? Should the penny be discontinued? How long will it take the United States to completely switch to renewable energy? These are just some of the questions that can be answered using elementary mathematical modeling techniques such as regression, ranking, matrix models, and differential equations. In this presentation, the authors will discuss their experience teaching a two-week mathematical modeling course to academically gifted high school students. This project based course enabled students to explore mathematical careers in industry, learn modeling techniques, and solve meaningful open-ended problems. (Received August 03, 2017)