HANDS-ON APPLICATIONS OF MODELING GEOMETRY
DR. BRIAN SWANAGAN, FLOYD COUNT COLLEGE AND CAREER ACADEMY

GRADE LEVEL AND CONTENT AREA: 9th to 12th Grade Mathematics

OVERVIEW

This unit goes along with Unit 6, Modeling Geometry, of the Analytic Geometry Course. Throughout the unit, students will compare and contrast linear and quadratic equations, solve systems involving both equations by hand, make connections between right triangles and circles, and participate in hands on activities – such as heating up a broom with a giant paraboloid – that make mathematical concepts come to life. At the end of the unit, students will apply what they have learned to construct their own hot dog cookers and celebrate their new knowledge by cooking hot dogs.

STANDARDS ADDRESSED

M.9-12.A.REI.7; M.9-12.G.GPE.1; M.9-12.G.GPE.2; M.9-12.G.GPE.4

AVAILABLE MATERIALS

- Video of Unit
- Daily Lesson Plans
- Parabolas Day One Activity Sheet and Homework
- Parabolas Day Two Station Questions
- Parabolas Gallery Walk

ABOUT THE TEACHER

Dr. Brian Swanagan is currently a 9th-12th grade Mathematics teacher at the Floyd County College and Career Academy in Rome, GA. He holds a B.S. in Applied Mathematics from the Georgia Institute of Technology. He also has a Masters, an Education Specialist degree, and a Ph. D. in Mathematics Education, all from the University of Georgia. His best piece of teaching advice comes from his dad who said that you needed to "Touch the heart to teach the mind."