PROJECTILES, PHYSICS, AND PUNKIN' CHUNKIN'
JERRY KNOX, ACADEMY OF RICHMOND COUNTY

GRADE LEVEL AND CONTENT: 10th – 12th Grade Physics and Mathematics

OVERVIEW

In this project-based unit, medieval times provide a platform for students to learn about projectile motion and practice advanced algebra skills. Students learn about motion, velocity, acceleration, and parabolic equations to design and build catapults. Students then compete in a "Punkin' Chunkin'"[1] competition and see the results of their catapult designs. The unit concludes with students collecting and analyzing data from the catapult launches and reflecting on the unit.

STANDARDS ADDRESSED

Physics: S.P.1 a,c, e, f; S.P.3 c, e, g

Mathematics: M.9-12.F.IF.4; M.9-12.F.IF.5; M.9-12.F.IF.6

AVAILABLE MATERIALS

- Video of Unit
- Unit Plan
- Catapult Model Guide
- Test and Revise Questions
- Punkin' Chunkin' Safety Rules and Procedures

ABOUT THE TEACHER

Jerry Knox is currently a 10th through 12th grade physics and mathematics teacher at the Academy of Richmond County in Augusta, GA. Mr. Knox received his Bachelor of Science in Aerospace Engineering from the University of Florida and his Master of Education in Secondary Physics Education from Georgia Southern University. His best piece of teaching advice is that lessons need to be interesting to be effective – good teaching stems from relationships, so you need to know your students to keep lessons interesting.

[1] The World Championship Punkin' Chunkin' Association. *http://punkinchunkin.com/*