Rockets Away!

The Science of Motion for 3rd Grade Classrooms

Blast off for an action-packed adventure in math, engineering, aerospace, and physics with *Rockets Away!*, a three-unit study of rocketry science. Lessons in motion, gravity, and aerodynamics send students' interest soaring. All lead up to the ultimate thrill—building and launching their own rockets. Among the activities:

- understanding and applying Newton's three Laws of Motion
- observing the relationship between force and mass
- testing turbulence
- exploring stability and motion
- constructing and launching a 2-liter bottle rocket

The teacher manual comes complete with lesson plans.

Rockets Away! *was developed by professional staff at The Ohio State University as part of the Science Alive 4-H School Enrichment program. For information on the availability of this unit in your classroom, contact your county's OSU Extension office.*

Visit us on the web at www.ohio4h.org/sciencealive

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Grade 3—Ohio Academic Content Standards and Indicators, 2007

Physical Sciences

Forces and Motion	1. Describe an object's position by locating it relative to another object or the background.	X
	2. Describe an object's motion by tracing and measuring its position over time.	X
	3. Identify contact/non-contact forces that affect motion of an object (e.g., gravity, magnetism and collision).	X
Abilities To Do Technological Design	4. Predict the changes when an object experiences a force (e.g., a push or pull, weight and friction).	X

Science and Technology

Understanding Technology	1. Describe how technology can extend human abilities (e.g., to move things and to extend senses).	X
	2. Describe ways that using technology can have helpful and/or harmful results.	X
	3. Investigate ways that the results of technology may affect the individual, family and community.	
Abilities To Do Technological Design	4. Use a simple design process to solve a problem (e.g., identify a problem, identify possible solutions and design a solution).	X
	5. Describe possible solutions to a design problem (e.g., how to hold down paper in the wind).	X

Scientific Inquiry

Doing Scientific Inquiry	1. Select the appropriate tools and use relevant safety procedures to measure and record length and weight in metric and English units.	X
	2. Discuss observations and measurements made by other people.	X
	3. Read and interpret simple tables and graphs produced by self/others.	X
	4. Identify and apply science safety procedures.	X
	5. Record and organize observations (e.g., journals, charts and tables).	X
	6. Communicate scientific findings to others through a variety of methods (e.g., pictures, written oral and recorded observations).	X