

Mythbusters Major Unit

Duration: 9 Weeks



Learner Objectives:

Students will:

- Develop an understanding of scientific inquiry and scientific skills.
- Identify distinct, specific, and relevant details that characterize an object or event
- Make inferences and predictions based on reasoning from prior knowledge
- Test a hypothesis through experimental design
- Draw logical conclusions from premises
- Analyze and interpret graphs by explaining how the manipulated variable affects the responding variable
- Assess whether given information is believable, valid, and worthy to be considered
- Identify, research and plan to solve problems that require novel systematic solutions
- Share their findings, clearly discussing the problem/solution, hypothesis, results, and conclusions

Show-Me Standards:

Knowledge Standards:

Students in Missouri public schools will acquire a solid foundation which includes knowledge of and proficiency in

CA 1	speaking and writing standard English (including grammar, usage, punctuation, spelling, capitalization)
CA 3	reading and evaluating nonfiction works and material (such as biographies, newspapers, technical manuals)
CA 4	writing formally (such as reports, narratives, essays) and informally such as outlines and notes)
CA 6	participating in formal and informal presentations and discussions of issues and ideas
M 3	data analysis, probability and statistics
M 4	patterns and relationships within and among functions and algebraic, geometric and trigonometric concepts
M6	discrete mathematics (such as graph theory, counting techniques, matrices)
S 1	properties and principles of matter and energy
S 2	properties and principles of force and motion
S 7	processes of scientific inquiry (such as formulating and testing hypotheses)

Performance Standards:

Students will demonstrate within and integrate across all content areas the ability to

Goal 1.1	develop questions and ideas to initiate and refine research
Goal 1.2	conduct research to answer questions and evaluate information and ideas
Goal 1.3	design and conduct field and laboratory investigations to study nature and society
Goal 1.4	use technological tools and other resources to locate, select and organize information
Goal 1.5	comprehend and evaluate written, visual and oral presentations and works
Goal 1.7	evaluate the accuracy of information and the reliability of its sources
Goal 1.8	organize data, information and ideas into useful forms (including charts, graphs, outlines) for analysis or presentation
Goal 2.2	review and revise communications to improve accuracy and clarity

Goal 2.3	exchange information, questions and ideas while recognizing the perspectives of others
Goal 2.7	use technological tools to exchange information and ideas
Goal 3.1	identify problems and define their scope and elements
Goal 3.2	develop and apply strategies based on ways others have prevented or solved problems
Goal 3.4	evaluate the processes used in recognizing and solving problems
Goal 3.5	reason inductively from a set of specific facts and deductively from general premises
Goal 4.1	explain reasoning and identify information used to support decisions
Goal 4.6	identify tasks that require a coordinated effort and work with others to complete those tasks

Resources:

Mythbusters Science Fair Book 2 by Samantha Margles

Mythbusters: The Explosive Exhibition

<http://www.mythbusterstheexhibition.com/educators/>

National Geographic Kids Myth Busted and Busted 2 by Emily Krieger