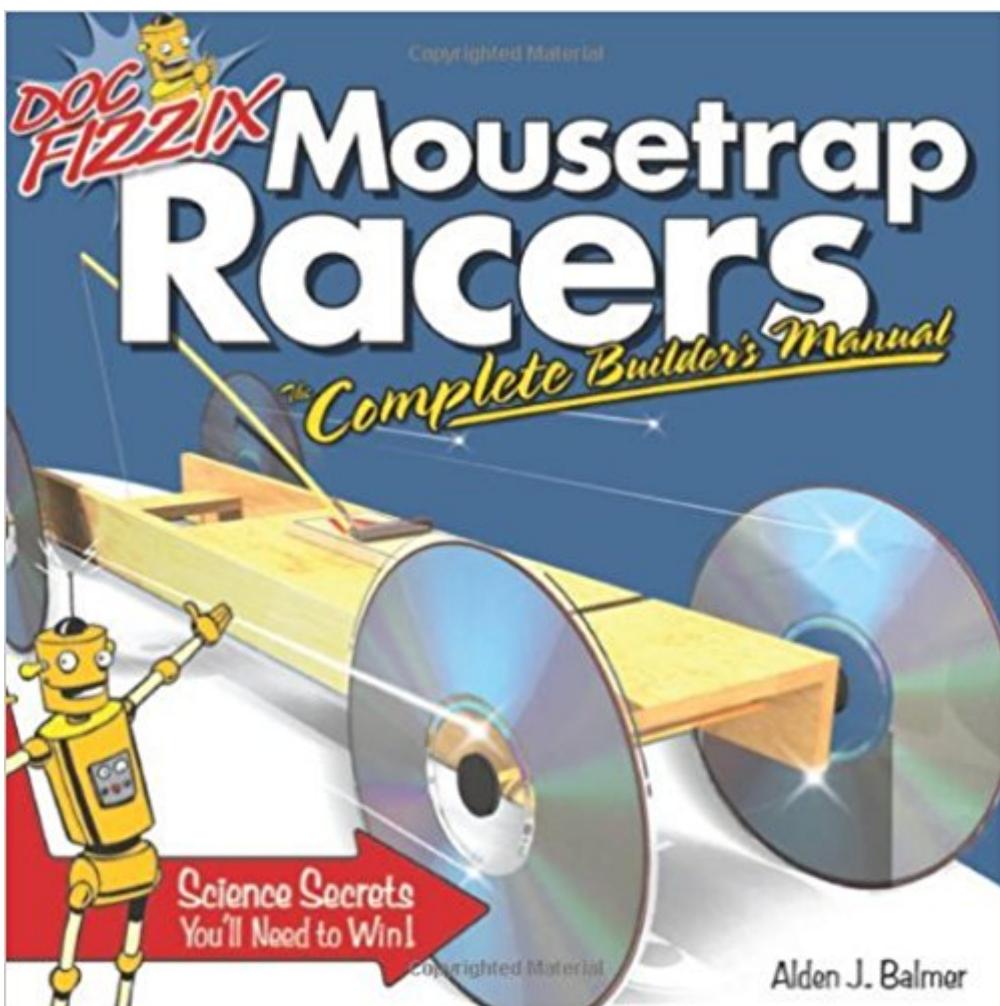


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# Doc Fizzix Mousetrap Racers: The Complete Builder's Manual



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## Synopsis

In this guide written by a Teacher-of-the-Year winner, your kids will learn how to construct race cars from ordinary, affordable household materials, while learning the science behind how they work, in language easy enough for a 7th grader to understand.

## Book Information

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Age Range: 12 - 14 years

Grade Level: 7 - 9

## Customer Reviews

Grade 6 Up •Building a mousetrap-powered model racer is more complex than it first appears, and Balmer uses this project as a springboard for teaching principles of physics such as energy, forces, torque, friction, and traction. Given the recommended tools and potential hazards (mousetrap springs, superglue, a drill press), it's clear that this activity is not intended for young or unsupervised children. The author's enthusiasm for the topic and for teaching are apparent throughout, and his focus on safety is consistent. The thorough instructions are complemented by clear, captioned, full-color photos and line drawings and diagrams that illustrate each step of the construction process. The book contains directions for four racers, with possible variations and modifications added in a section on advanced techniques. Principles of mousetrap racing are presented along with related lab experiments, formulae, tables, and calculations suitable for science fairs. An attractive introduction to a challenging, educational hobby. •Jeffrey A. French, formerly at Willoughby-Eastlake Public Library, Willowick, OH Copyright © Reed Business

Winners of a mousetrap racer competition know that physics is their friend! The design and function of a winning mousetrap car must utilize Newton's Laws of Motion, and this guide reviews both the science and engineering processes needed for a great project. Starting with a simple but effective mousetrap, this book guides readers through the steps necessary for acquiring the proper building materials, planning the design, developing knowledge of why and how the racer may run, and what must be done to construct the device. Readers will learn the skills necessary to analyze the task and work with the design until a racer can be completed to specifications for a defined task. The racer might be required to travel the greatest distance, travel fastest, navigate a track, or perform a designed function to go to a point, stop, and return. Once the decision is made on what the racer is to do, the designer must apply the principles of motion to achieve the goal. Diagrams and photographs provide clarification for the detailed printed instructions on building various types of racers for speed, distance, or performance goals. The energy of the mousetrap spring delivers the power to propel the racer, and the design is tweaked to improve performance to the championship level using various hints on how to reduce drag, increase traction, control direction, and other factors. Included in the book are definitions of the scientific terms and understandings necessary for success in this activity, ideas for types of contests, lab activities, and illustrations of supplies, assembly, and designing. Tips are provided for safety during assembly as the procedures are explained and illustrated. This book will capture the interest of both students and teachers who want to find fun in learning and achieve recognition that is not refutable. Once the goal is set, the racer either meets or exceeds the standard by completing the task. There can be no mistake that the knowledge was understood and applied as demonstrated by the path of the racer. Time spent in perfecting the design is reward in itself, but when there is a competition and recognitions are attached, students have greater motivation. The author use this activity as a final assessment that replaced an exam. Students, parents, and teachers who read this book will become engaged in both mastery of content and engineering skills as they exercise their need for competitive activities and mastery in their learning environment. The paperbound book, whether used as a lesson plan or provided as a source for hobbyist, is a good size, colorful, and written in an interesting manner. It might not last long in a library setting, but it would be a good addition to the classroom and home shelf for the students who are visual or tactile learners. See the original review at [here](#).Doc Fizzix Mousetrap Racers, by Alden J. Balmer, has almost nothing to do with woodworking, but just might produce a future woodworker. The book teaches children how to build race cars from ordinary

contraptions, such as a mousetrap. It not only gives them the basic construction secrets to design and build a vehicle, but also unearths the science behind how they work, in a language easy enough for a seventh-grader to understand. Using clear instructions, color photography, diagrams and numerous illustrations, Dox Fizzix, and his Jetson-like team of robots, walk children through four complete projects for building different vehicles. Hey, it's not always about making sawdust. Image of a Mousetrap Racer and title of Doc Fizzix made the cover of Model Retailer Magazine. Gr 6 Up-Building a mousetrap-powered model racer is more complex than it first appears, and Balmer uses this project as a springboard for teaching principles of physics such as energy, forces, torque, friction, and traction. Given the recommended tools and potential hazards (mousetrap springs, superglue, a drill press), it's clear that this activity is not intended for young or unsupervised children. The author's enthusiasm for the topic and for teaching are apparent throughout, and his focus on safety is consistent. The thorough instructions are complemented by clear, captioned, full-color photos and line drawings and diagrams that illustrate each step of the construction process. The book contains directions for four racers, with possible variations and modifications added in a section on advanced techniques. Principles of mousetrap racing are presented along with related lab experiments, formulae, tables, and calculations suitable for science fairs. An attractive introduction to a challenging, educational hobby.-Jeffrey A. French, formerly at Willoughby-Eastlake Public Library, Willowick, OH

This complete manual will guarantee your success in building the fastest and most aerodynamic mousetrap racer yet! Divided into great sections like: Tools and Supplies You May Need, Understanding Mousetrap Racers, and Mousetrap Racer Projects like Little Moe, Basic Racer, and Big Wheel Racer, this book will help you along each step of the construction process. This new book for teachers and families wanting to encourage education while having fun, provides a step-by-step guide that introduces physics concepts while facilitating the construction of a champion mouse-trap racer.

Most Creative Solution to the Fuel Crisis: Doc Fizzix Mousetrap Racers by Alden J. Balmer, a guide to constructing mousetrap-powered vehicles. (Fox Chapel Publishing)

Mousetrap Racers: The Complete Builder's Manual (\$14.95) may be the one book you add to your homeschool curriculum collection that gets dad more involved in your homeschool. It is not curriculum in the sense of a textbook or a unit study guide. However, Mousetrap Racers is definitely a great learning tool. Written by Alden J. Balmer, also known as "Doc Fizzix", this book goes beyond the how-to-build-it instructions the title implies; it explains the physics behind mousetrap cars as it gives both details and easy-to-follow directions for building. Reading through the text and studying the many detailed illustrations, it is easy to forget you're learning about principles like friction (fluid and surface), motion, traction, and energy. While

most of the "academics" are snugly hidden in Chapter 2, the principles are reinforced throughout the text. Some of the illustrations are humorous, and all of them are clear. More advanced racers and building techniques are presented later in the book. Included in these are Doc Fizzix's super-secret tips for improving distance racers. Of course, we won't spoil the fun by revealing these. Suffice it to say, both dad and child will probably want to move on to more advanced methods of building better and faster cars. For those who do get hooked, there is a chapter devoted to "just in case techniques" and a chapter on advanced science labs. Do these and give your student credit for having a good time learning important physics concepts. Any home center has an ample supply of mousetraps, but what about the guy who just wants a kit? We went out and bought parts at the home center and acquired several PSA discs from a local radio station to serve as wheels. That's probably the most economical way to get the goods you need to build a racer. For those who would prefer a kit, Doc Fizzix has a website devoted to all things mousetrap racing at [www.docfizzix.com](http://www.docfizzix.com). There are kits, science labs, and building guides for all types of racers--balloon, rubber band, and, of course, mousetraps. The first step is to get your hands on a copy of *Mousetrap Racers: The Complete Builder's Manual*, the definitive guide for the dad who wants a fun way to get his feet wet as a homeschool teacher. Turn everyday household items into an afternoon of fun with *"Mousetrap Racers: The Complete Builder's Manual*. Build racecars while learning the science behind how they work. Certainly a fun project for kids of Middle School age. Kids are naturally curious. They love to build stuff and projects that involve cars will entertain children for hours. In this guide written by a Teacher-of-the-Year winner, your kids will learn how to construct race cars from ordinary, affordable household materials, while learning the science behind how they work, in language easy enough for a 7th grader to understand. With color photos, diagrams, fun illustrations, and four complete projects, your family will be racing vehicles that go the distance and go for the gold!

Doc Fizzix *Mousetrap Racers* is a wonderful, informative book for anyone of any age who wants to build mousetrap racers. The only feature that would have been better about this book was to have supply lists all in one place rather than scattered throughout the book. The physics of a successful build are explained, illustrated and inclusive of calculations. I purchased two copies of this book so that my grandchildren can invite their friends to build and race with them.

I am a high school science teacher and find this book fun and very informative. I wish all of my reference lab books were this good. I used to build balloon cars with my students to demonstrate Newton's Laws but there are so many students with latex allergies so I started looking for another

project for my students. This is the one. If I were to write a book this is how I would write it.

I wish I had bought this before I helped my grand-daughter build her car. We got most of the stuff right, but this book would have saved a lot of our trial-and-error time. Anyway, I truly recommend this book if you have a physics project to build a car powered by a standard mouse trap. The hints and details in this book are easily worth the cost of the book!

This book is the gold standard for teaching Mousetrap vehicle design, as well as the physics behind it.

good starter project book for young minds.

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