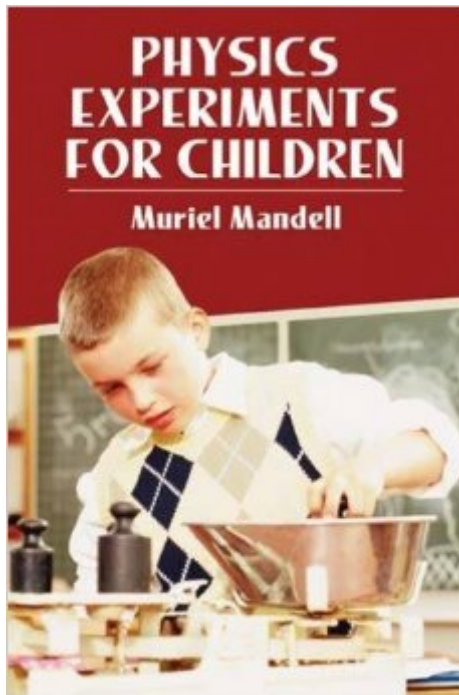


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# Physics Experiments For Children (Dover Children's Science Books)



## Synopsis

What better way is there to learn than by doing? This unusual book enables children to carry out more than 103 different experiments and demonstrations, carefully planned to illustrate principles of modern science. Clear step-by-step instructions, frequent diagrams, and clear statements of conclusions all enable the young student to carry through these experiments with minimal supervision, yet full success. The science projects included demonstrate what things are made of and how substances are affected by the different forms of energy, heat, light, sound, mechanical energy, electricity, and magnetism. The experiments show how a thermometer measures temperature, how an electric bulb gives light, how shadows are formed, how a stethoscope works, how to make a periscope, how to make a rainbow, how straws work, how water changes size, and many other fascinating facts. Little is required in the way of equipment other than simple materials found at home, such as bottles, cardboard, wire, nails, cork, paper, and magnets. This volume offers upper grade school, junior high school, and high school students a very entertaining way to enrich their background in science and its applications. It is also a very valuable aid to parents, teachers, and others who wish to make clear, forceful demonstrations to children.

## Book Information

Series: Dover Children's Science Books

Paperback: 96 pages

Publisher: Dover Publications (June 1, 1968)

Language: English

ISBN-10: 0486220338

ISBN-13: 978-0486220338

Product Dimensions: 6 x 0.2 x 9.1 inches

Shipping Weight: 4.8 ounces (View shipping rates and policies)

Average Customer Review: 3.3 out of 5 stars [See all reviews](#) (7 customer reviews)

Best Sellers Rank: #89,100 in Books (See Top 100 in Books) #64 in [Books > Children's Books >](#)

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Age Range: 8 - 14 years

Grade Level: 3 - 8

## Customer Reviews

This small paperback is an excellent book for teaching Physics to young children. Filled with simple

experiments that exemplify the principles of Physics, it is an easy guide for parents and children through the physical world. I highly recommend it as a very complete course for elementary children who are home schooled or for those who enjoy learning through experimentation.

Too often, physics students learn to rely on mathematical formulae without really understanding what is happening. Muriel Mandell's little gem offers a set of deceptively simple experiments for helping young students build basic skills and intuition which are so necessary for later studies. You'll need only household items to do all the experimentation described here. Use this book as a starting point for discussions of Newton's Laws of Motion; the relationship between pressure, temperature, and volume; states of matter; and more. Highly recommended.

I wish I hadn't bought this book. It was written in 1959 and, of course, uses 1959 household materials. When was the last time you had a glass baby bottle or even a glass soda bottle lying around? How about that screw top can of floor wax? This needs updating badly. One of the first experiments is titled, "Which is Heavier, Hot Air or Cold?" The explanation just concludes hot air weighs less without explaining that, with applied heat, some of the warmed air expanded out of the bottle. There's less air in the bottle to weigh!! I can not recommend this book. If you use it as is, you will find yourself constantly searching for substitute materials. You will also be teaching incorrect or incomplete concepts.

I used this book for homeschooling and of the many science books I used, it was one of my favorites. It is an older book, first published in 1959, and thin, but don't let that fool you. There are 103 experiments that are simple, use easy-to-find materials, and illustrate principles with elegance and clarity. I was consistently pleased with these lessons and demonstrations. There are seven chapters: Air, Water, Mechanical Energy and Machines, Heat, Sound, Light, and Magnetism & Electricity. Each chapter contains 15-20 experiments, and each experiment includes instructions, a line drawing, the predicted observation and an explanation. There is an index at the back. Brilliant, compact and invaluable. Appropriate for middle school through high school. The paper quality is good, the binding is strong and the book lies flat for easy reference by busy scientists. Highest recommendation.

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