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Science

**The Ultimate Book of Saturday Science: The Very Best Backyard Science Experiments You Can Do Yourself**

Neil A. Downie
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Packed with over seventy experiments, *The Ultimate Book of Saturday Science* explores "principles and phenomena … in engineering, physics, and chemistry." With eye-catching titles that range from "Blunderspuds and Carrot Cannons—Artillery and Boyle's Law" to "The Touchy-Feely Sensor—Putting a Number to Hotfeelingness and Coldfeelingness," this ample resource encourages readers to consider everyday occurrences and enlivens complex ideas with lessons designed to inspire curiosity.

The author of *Ink Sandwiches, Electric Worms, and 37 Other Experiments for Saturday Science*, among other titles, Neil Downie is an English lead scientist at Air Products and Chemicals, and a science teacher who regularly works with children and teenagers. His concise style is especially suited for readers that appreciate a direct approach with relatively minimal guidance. Although the subtitle suggests otherwise, this book is not intended for novices, who may prefer a more visually oriented guide with numbered, detailed procedures. The black-and-white diagrams and photographs here demonstrate the project's overall setup rather than each major step, and the experiments also assume basic skills with tools and some prior knowledge of terminology, and occasionally call for additional preparation: one experiment, for example, includes the suggestion to make carbon dioxide from acid and limestone.

Each experiment is presented in a similar format, beginning with an introduction (sometimes preceded by an apt literary quotation); next comes What You Need, a list of materials often comprised of household resources, wood, simple objects that require assembly, and a few specialty items such as an ocarina or a 50-ohm resistor; What You Do follows, a series of instructions presented in paragraphs; then How it Works; and, And Finally, which further expounds on the former concept. Some experiments offer variations to try. Hazard warnings and sidebars with additional trivia round out the text.

Recommended as a follow-up to the author's previous collections in the series, and as a valuable treasury of projects for teachers, coordinators of science clubs, parents of advanced, older homeschoolers, and adult enthusiasts who have experience in the field and are seeking enjoyable activities to practice or share with others.

*Karen Rigby*