Make: Paper Inventions: Machines That Move, Drawings That Light Up, And Wearables And Structures You Can Cut, Fold, And Roll
Synopsis

Paper is incredible stuff. It’s easy to cut, but incredibly strong. It’s disposable, but can last for centuries. It can stand as stiff as a board, pop up like a spring, or float like a leaf. And its invention changed the world forever. Perfect for kids, parents, and educators, Paper Inventions is a project-based book with full color illustrations, step-by-step instructions, supply lists, and templates that allow you to follow along with the book or devise something entirely new. Each chapter features new projects that will challenge and intrigue everyone, from beginning to experienced Makers. In this book, you’ll learn to make: A light-up paper cat that shows how switches and sensors workAn action origami robot wormEdible rice paper perfect for secret messagesA space rover that moves thanks to paper machineryA paper generator that creates electricity when you tap or rub it Heat-activated paper models that fold themselvesA geodesic dome big enough to crawl into--from newspaper!

Book Information

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Average Customer Review: 3.9 out of 5 stars Â· See all reviews (19 customer reviews)
Age Range: 11 - 17 years
Grade Level: 6 - 12

Customer Reviews

Three questions for Paper Inventions; author Kathy Ceceri  Why did you write this book?  I am all about low-tech/no-tech Maker projects. They’re a helpful onramp to more advanced Making skills, plus they’re cheap and quick enough to do at home or in the classroom. While new materials are constantly being developed, the number of amazing projects
Makers are doing with everyday stuff inspired me to come up with a books' worth of projects just using paper, scissors, glue, and a few easy-to-find additions like LEDs and conductive tape. What did this book teach you about paper? I didn’t realize how much of the papermaking process takes place at the molecular level. The tiny strands of plant fiber that make up a sheet of paper are held together by a microscopic electrical pull called van der Waals forces. By tinkering with these forces, scientists can control how strong a sheet of paper is or how quick to decompose when its been used, as with toilet paper. Why is paper such a good material for Makers? I focused on paper as a building material because everyone has access to it in a wide variety of forms. You can use it to create very simple designs, but it can also be used to make projects that are very complex and clever. As you’ll see in the Engineering section of the book, when you roll paper up, it can support enough weight to build structures big enough to sit inside! Turn Your Junk Mail Into Art! Many simple projects and techniques can seem difficult the first time you try them. Don’t give up, and don’t worry if your first try isn’t perfect. You can always do better the second time. Keep an eye out for interesting kinds of paper. It doesn’t have to be expensive most projects look fine if you use paper reclaimed from old books, wallpaper samples, or even junk mail. If you want your paper invention to last a long time, you may need to "ruggedize" it. For flat projects, you can laminate it using clear wide packing tape or clear adhesive shelf paper. For three-dimensional shapes, you can spray or brush on sealer (or make your own by thinning white glue with water). Test your method of choice first on a piece of scrap to make sure it doesn’t harm your final design!

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