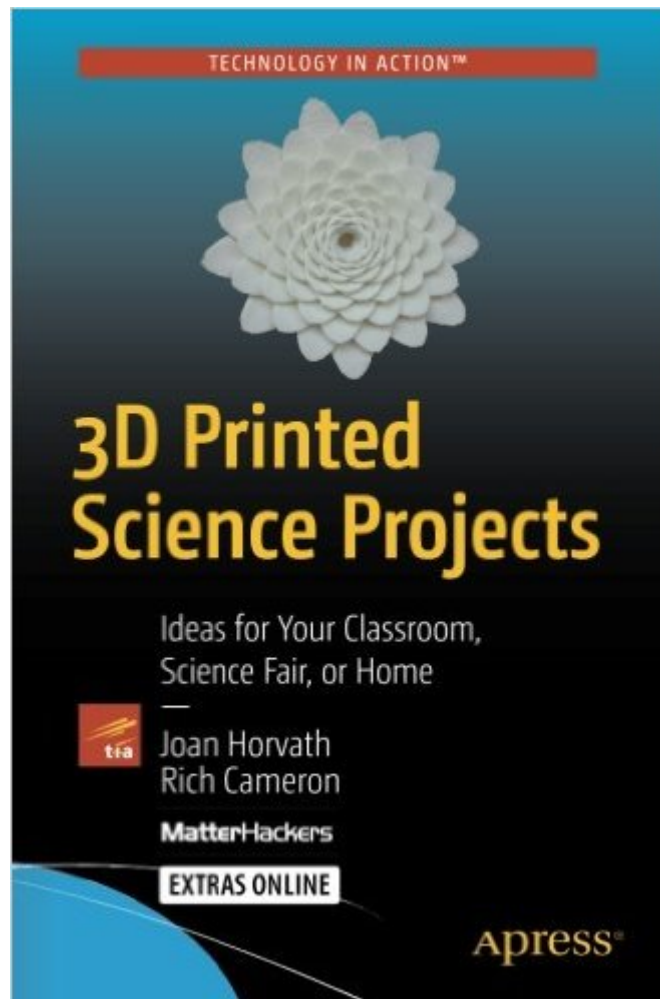# 3D Printed Science Projects: Ideas For Your Classroom, Science Fair Or Home (Technology In Action)

Synopsis

This book describes how to create 3D printable models that can help students from kindergarten through grad school learn math, physics, botany, chemistry, engineering and more. Each of the eight topics is designed to be customized by the reader to create a wide range of projects suitable for science fairs, extra credit, or classroom demonstrations. Science fair project suggestions and extensive "where to learn more" resources are included, too. You will add another dimension to your textbook understanding of science.In this book, you will learn:Â To create (and present the science behind) 3D printed models.To use a 3D printer to create those models as simply as possible.New science insights from designing 3D models.Â Who this book is for:This book shows parents and teachers how to use the models inside as starting points for 3D printable explorations. Students can start with these models and vary them for their own explorations. Unlike other sets of models that can just be scaled, these models have the science built-in to allow for more insight into the fundamental concepts.

Book Information

Series: Technology in Action

Paperback: 203 pages

Publisher: Apress; 1st ed. edition (May 3, 2016)

Language: English

ISBN-10: 1484213246

ISBN-13: 978-1484213247

Product Dimensions: 6.1 x 0.5 x 9.2 inches

Shipping Weight: 9.6 ounces (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 starsÂ Â See all reviewsÂ (3 customer reviews)

Best Sellers Rank: #1,400,656 in Books (See Top 100 in Books)   #118 inÂ Books > Computers & Technology > Graphics & Design > 3D Printing   #717 inÂ Books > Computers & Technology > Computer Science > Robotics   #1001 inÂ Books > Computers & Technology > Graphics & Design > CAD

Customer Reviews

My initial reaction was to give this book a 10 star rating. So why 5 stars. Well that is the limit with .But that was my initial reaction. It still deserves 5 stars for the material it tries to present. It is not just the usual nonsense of the paper clip or the coaster, or some silly rabbit (BTW rabbits are not silly, the 3d version is), but some realy interesting stuff. What it attempts to do is use 3D prints of

concepts difficult to appreciate say on a 2D piece of paper in a 3D printed form. But it goes well beyond that. There are some concepts that I would not waist filament to generate 3D material with, for example levers etc... Once you understand the concepts in this book, there are so many other teaching projects that you can create. couple that with an Arduino, and you are on your way.This is a great teaching tool.Mr. Mosa Kaleel's review is very encouraging. Unfortunately, at first glance the material looks intimidating and I suspect that a number of teachers will get frustrated and perhaps return the book. I recommend starting with the $1.75 Kindle version.

If you own a 3D printer, then you should have this book. I highly recommend it!3D Printed Science Projects addresses the â œWe Bought It, Now What?â • problem of 3D printers. Each chapter starts with a science or math concept and then provides a model for you to print. So, in the chapter about Gravity, the science about the orbit of Haleyâ ™s Comet around the Sun is discussed. Then they give you the actual software code to make an orbit model. Pretty cool.The authors use the free software openSCAD. Donâ ™t be afraid. I was, but the online documentation for openSCAD turns out to be good. After spending not much time using the software, my rookie fear is disappearing.Encouraged, Iâ ™ve decided to make the model that explains light waves. The supplied code works fine and Iâ ™m happy to say that the 3D printer is happily 3D printing.One last important meaty note is that once you have a model working in the software, the authors suggest how to easily manipulate the variables for different effects. After you start doing that, the creative juices start flowing.I respect this book. It does exactly what it says it will, with economy. Expect to be challenged, to have to think, and to be inspired. With a strong will and this excellent guidance, you can and should succeed.

As a teacher of blind and visually impaired students, I use 3D printing as a way to present important concepts to my students. The models presented in this book are very helpful to me! I particularly enjoy the chapter and related models on ice crystals. My students are able to get a sense of the orientation of water molecules, not to another, in different types of ice crystals. Given that good lesson planning incorporates methods that work for all students, books of this type will illustrate concepts and provide understanding for many others, not just blind students. This book is an excellent source for teachers!

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