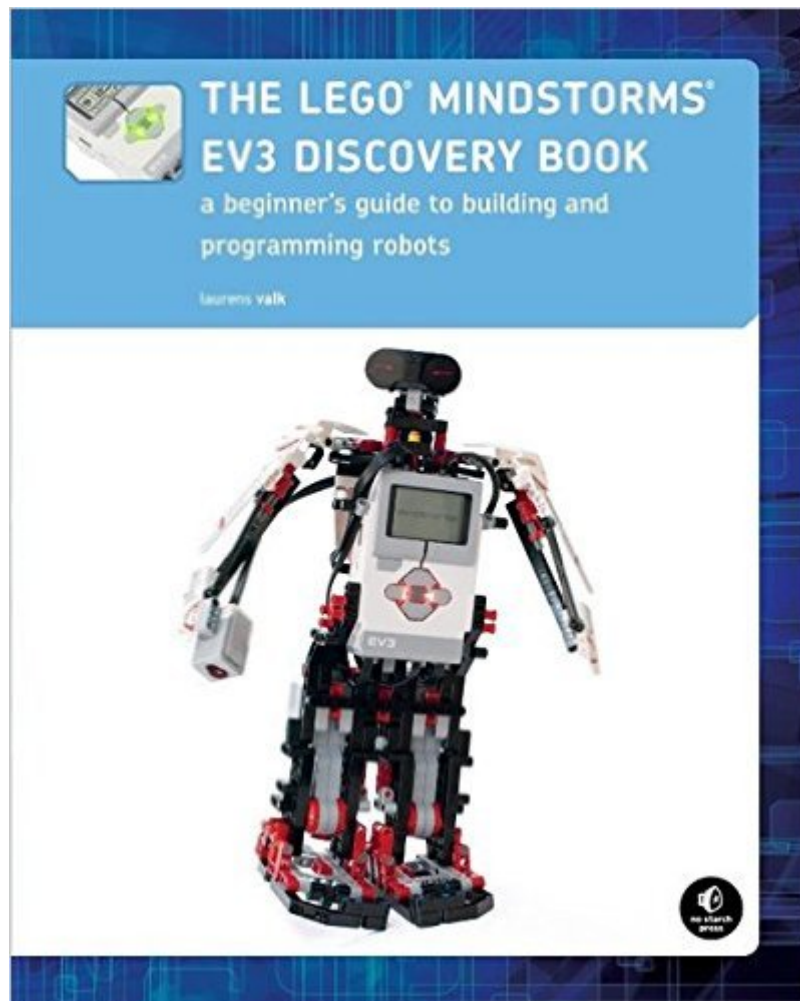


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The LEGO MINDSTORMS EV3 Discovery Book (Full Color): A Beginner's Guide To Building And Programming Robots



Synopsis

LEGO MINDSTORMS has changed the way we think about robotics by making it possible for anyone to build real, working robots. The latest MINDSTORMS set, EV3, is more powerful than ever, and The LEGO MINDSTORMS EV3 Discovery Book is the complete, beginner-friendly guide you need to get started. Begin with the basics as you build and program a simple robot to experiment with motors, sensors, and EV3 programming. Then you'll move on to a series of increasingly sophisticated robots that will show you how to work with advanced programming techniques like data wires, variables, and custom-made programming blocks. You'll also learn essential building techniques like how to use beams, gears, and connector blocks effectively in your own designs. Master the possibilities of the EV3 set as you build and program: The EXPLOR3R, a wheeled vehicle that uses sensors to navigate around a room and follow lines; The FORMULA EV3 RACE CAR, a streamlined remote-controlled race car; ANTY, a six-legged walking creature that adapts its behavior to its surroundings; SK3TCHBOT, a robot that lets you play games on the EV3 screen; The SNATCH3R, a robotic arm that can autonomously find, grab, lift, and move the infrared beacon; LAVA R3X, a humanoid robot that walks and talks. More than 150 building and programming challenges throughout encourage you to think creatively and apply what you've learned to invent your own robots. With The LEGO MINDSTORMS EV3 Discovery Book as your guide, you'll be building your own out-of-this-world creations in no time! Requirements: One LEGO MINDSTORMS EV3 set (LEGO SET #31313)

Book Information

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Customer Reviews

This book review has taken me longer than usual. I have had a copy of this book for a while now, but I literally just finished it. The reason is not what you might expect. To put it simply, I got caught up in the book. I cant recommend this book enough. Laurens Valk did it again!The LEGO MINDSTORMS EV3 Discovery Book is an essential book for both new and old MINDSTORMS builder alike! First off, the print quality off the book is excellent and this is key. As I spent hours building and referencing the diagrams in the book, it was helpful to have full color and high resolution images. As any LEGO builder knows, some parts are hard to see and the high quality images, coupled with Laurens's excellent building instructions made constructing each bot a breeze.If you have read any of Laurens's other books, some of the bots might seem familiar. (SNATCH3R for example) EV3 is an awesome new platform and seeing the bots upgraded to take advantage of all the updates. Laurens has bots for everyone, from cars to bugs. Each bot is an extreme joy to construct and program. The book provides excellent programming instructions to get you started, but like any LEGO set, the true excitement comes from building on that idea. For each bot, there were countless moments of "oh I bet I could made it do that!". For example, I added a marker and had it drawing shapes on the floor (and then had SNATCH3R following the line!).For the seasoned LEGO MINDSTORMS Builder, there are excellent diagram on showing how to build with Technic. This would be super useful for teachers and FIRST LEGO League students. One of the most innovative things Laurens presents is the use of graph paper with LEGO. The grid really works well for figuring out angles and layout bot designs.

I just got this book in my hands today and I am so glad I made the purchase. I have an 11 year old son who is STEM oriented and while I find the subject fascinating I have absolutely no experience with robotics. I really felt I was going out on a limb when I purchased the EV3 kit. The plans that come with the kit are impressive, but left me feeling lost. I want my son to understand how the components work together and then challenge him to solve problems and make him work for it a bit. This book is exactly what I was looking for!It starts out at the very beginning - preparing your LEGO set for use (even tips for aligning the stickers), installing the software, etc. Then it moves on to building a simple first robot. And this is where the book goes from useful to fantastic. After presenting a concept there are discoveries (or a series of them) which challenge the reader to use his or her knowledge to create a program to meet a specific goal. An early example is

this:"Discovery #4:ROBOSPELLER!Use Move Steering blocks to make a program that enables the EXPLOR3R to drive as if it were drawing the first letter of your name. How many blocks do you need for that letter?"The discoveries get progressively more challenging and are rated for difficulty (based on the presumption that you started with no knowledge and are moving chronologically through the book) and time estimates.Lest anyone mistake this for a simplistic book for beginners, I will include a portion of a later discovery (#132) which claims to be challenging and I can only presume is since it's still entirely Greek to me:"TAMAGOTCHI!Can you turn LAVA R3X into a lifelike robot with different moods and behaviors?

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