# Comprehensive Building Instructions for the LEGO SPIKE Set: A Step-by-Step Guide to Program Coding

The LEGO SPIKE Set is an exciting and versatile robotics kit that combines the fun of LEGO building with the power of coding. With its programmable Hub, sensors, and motors, you can build and control a wide range of interactive creations, from robots that navigate obstacles to machines that solve puzzles.

Building Instructions

Before you start coding, it's important to build your LEGO SPIKE creation according to the instructions. Here's a step-by-step guide:
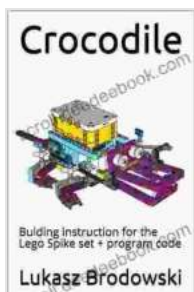
Walking Robot: Bulding instruction for the Lego Spike set + program code by Elliott Lang

★★★★★ 5 out of 5

Language	: English
File size	: 7557 KB
Screen Reader	: Supported
Print length	: 162 pages
Lending	: Enabled

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Step 1: Gather Your Materials

- LEGO SPIKE Set

- Computer with SPIKE App installed

- USB cable

Step 2: Unpack the Set

Remove all the pieces from the box and sort them by type. This will make it easier to find the pieces you need as you build.

Step 3: Build the Base

Start by building the base of your creation. This will provide a stable foundation for the rest of the build.

Step 4: Add the Hub

Once you have the base built, add the SPIKE Hub to the top. The Hub is the brain of your creation and it will control all the motors and sensors.

Step 5: Add the Motors and Sensors

Now it's time to add the motors and sensors to your creation. Motors will allow your creation to move, while sensors will allow it to detect its surroundings.

Step 6: Connect the Wires

Once you have all the motors and sensors added, it's time to connect the wires. Wires will carry power and data between the Hub and the motors and sensors.

Step 7: Test Your Creation

Once you have everything connected, it's time to test your creation. Turn on the Hub and see if all the motors and sensors are working properly.

Program Coding

Once you have built your LEGO SPIKE creation, it's time to start coding. The SPIKE App provides a drag-and-drop interface that makes it easy to learn how to code.

Step 1: Open the SPIKE App

Start by opening the SPIKE App on your computer. Click on the "New Project" button to create a new program.

Step 2: Drag and Drop Blocks

The SPIKE App uses a drag-and-drop interface to create programs. Drag blocks from the palette onto the workspace to create your program.

Step 3: Connect the Blocks

Connect the blocks together to create a logical flow of events. For example, you can connect a "Motor On" block to a "Sensor Value" block to make the motor turn on when the sensor detects something.

Step 4: Test Your Program

Once you have created your program, click on the "Run" button to test it. The SPIKE Hub will execute your program and your creation will come to life!

Troubleshooting

If you are having trouble building or coding your LEGO SPIKE creation, here are some troubleshooting tips:

- Make sure all the wires are connected properly.

- Check the batteries in the Hub and make sure they are fresh.

- Restart the SPIKE App and try again.

- Visit the LEGO SPIKE website for more help.

The LEGO SPIKE Set is a great way to learn about robotics and coding. The building instructions and program coding guidance in this article will help you get started building and coding your own interactive creations. So what are you waiting for? Get started today!

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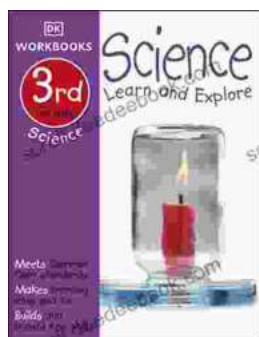
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