

# Comprehensive Building Instructions and Program Code for the LEGO WeDo Set: Unleash Your Creativity

Step into the fascinating world of LEGO WeDo, where imagination and creativity meet the principles of STEM (Science, Technology, Engineering, and Mathematics). This comprehensive guide will provide you with step-by-step building instructions and clear program code to help you construct and program various models using the LEGO WeDo set. Whether you're a budding engineer, an aspiring programmer, or simply a LEGO enthusiast, this guide will empower you to bring your LEGO creations to life.



## Bus: Bulding instruction for the Lego Wedo 2.0 set + program code by Doreen Tovey

★★★★★ 5 out of 5

Language : English

File size : 8807 KB

Screen Reader : Supported

Print length : 187 pages

Lending : Enabled



## Getting Started with LEGO WeDo

### Components of the LEGO WeDo Set

The LEGO WeDo set comes with a range of components, including:

- **Building bricks:** A variety of LEGO bricks in various shapes and sizes to construct models.

- **Sensors:** Motion sensor, tilt sensor, and light sensor to detect movement, orientation, and light levels.
- **Motors:** Medium motor and large motor to power your models.
- **Smart Hub:** The central brain of your WeDo creations, connecting all components and running the programs.
- **WeDo 2.0 Software:** User-friendly software that allows you to program your WeDo models.

## **Installing and Setting Up the Software**

To start programming your WeDo models, you'll need to install the WeDo 2.0 software on your computer. Visit the official LEGO Education website to download the software compatible with your operating system.

Once downloaded, follow the on-screen instructions to install the software. Once installed, connect your Smart Hub to your computer using the USB cable provided in the set.



## Building Instructions

Now that you're all set with the software, let's dive into the exciting world of building and programming your LEGO WeDo creations! The WeDo set comes with a variety of building instructions for different models, ranging from simple projects to more complex ones.

### Building Model 1: Robotic Arm

Let's start with a simple yet engaging model – the Robotic Arm. Follow these step-by-step instructions and accompanying images to assemble the model:

1. Start by building the base of the robotic arm using the bricks provided.
2. Attach the Medium motor to the base and connect it to Port A on the Smart Hub.

3. Build the arm structure using the remaining bricks and connect it to the motor.
4. Attach the gripper to the end of the arm.
5. Your Robotic Arm is now complete!

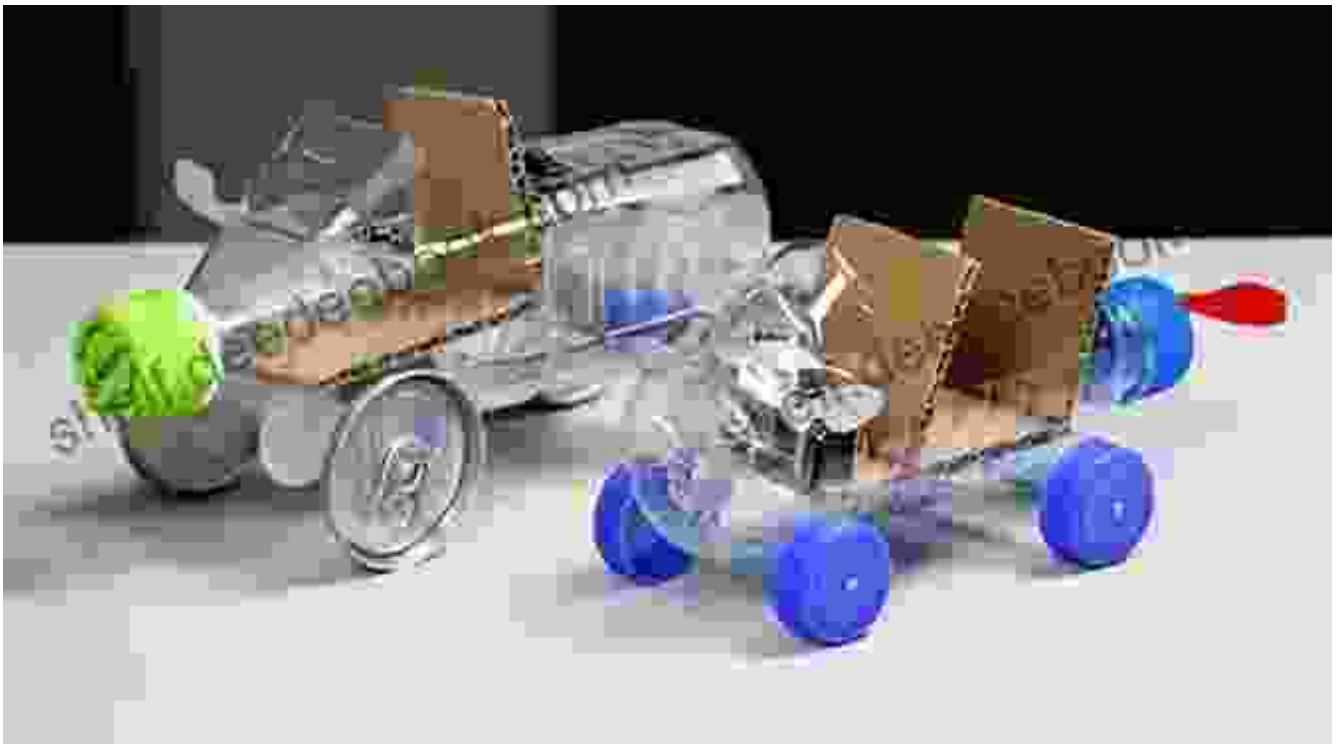


Robotic Arm Building Instructions

## Building Model 2: Moving Car

Let's move on to a more advanced model – the Moving Car. Follow these step-by-step instructions and accompanying images to assemble the model:

1. Start by building the chassis of the car using the bricks provided.
2. Attach the Large motor to the chassis and connect it to Port B on the Smart Hub.
3. Build the wheels and axles, and attach them to the chassis.
4. Add the body of the car and the finishing touches.
5. Your Moving Car is now complete!



### Program Code

Once you've built your WeDo models, it's time to bring them to life with code! The WeDo 2.0 software uses a visual programming language that

makes it easy for beginners to learn and create programs.

## **Programming the Robotic Arm**

Let's start by programming the Robotic Arm to move and pick up objects. Drag and drop the following blocks from the coding palette into the programming workspace:

- **Start:** The starting block.
- **When button pressed:** Trigger the program when the button on the Smart Hub is pressed.
- **Move motor:** Control the movement and speed of the motor.
- **Wait:** Pause the program for a specified duration.

Connect these blocks together as shown below:



Robotic Arm Program Code

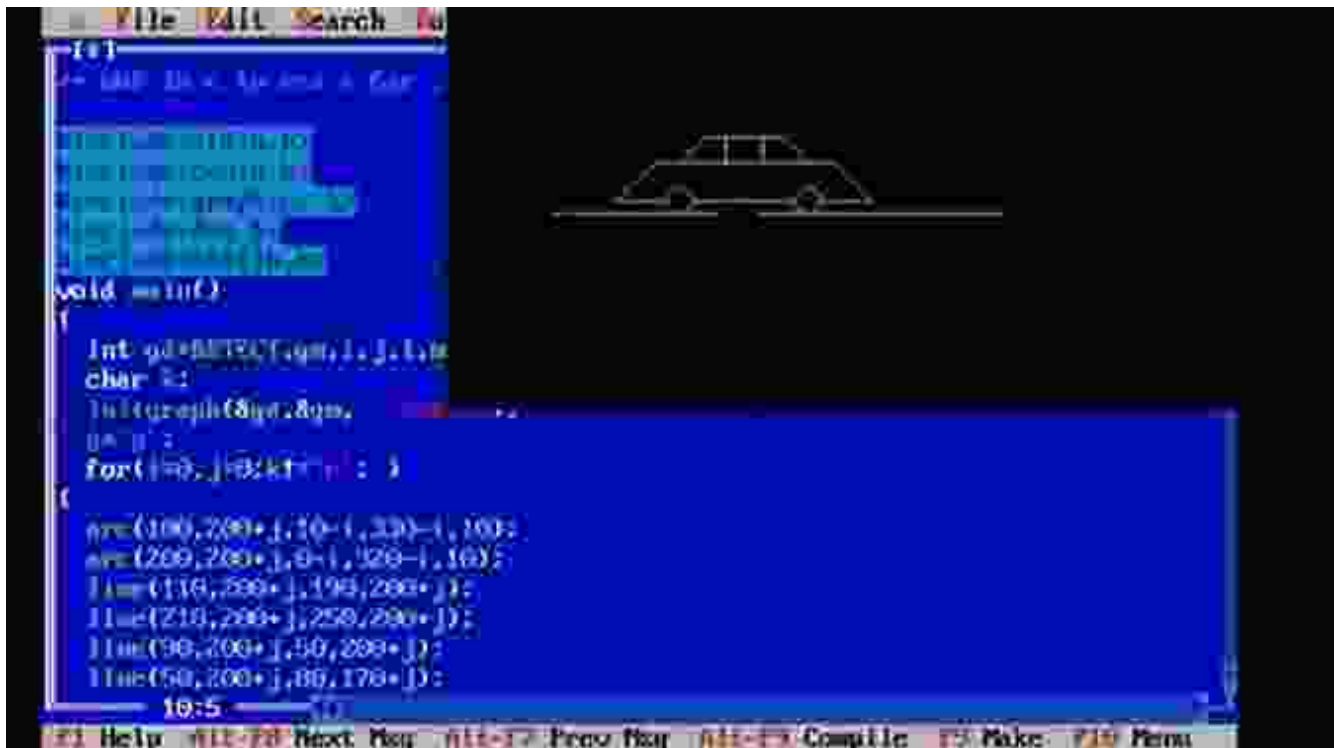
## Programming the Moving Car

Now, let's program the Moving Car to move forward and turn. Drag and drop the following blocks from the coding palette into the programming workspace:

- **Start:** The starting block.

- **When button pressed:** Trigger the program when the button on the Smart Hub is pressed.
- **Move motor:** Control the movement and speed of the motors.

Connect these blocks together as shown below:



## Troubleshooting Tips

If you encounter any issues while building or programming your WeDo models, don't worry! Here are some troubleshooting tips to help you:

- **Check the connections:** Make sure all the components are properly connected to the Smart Hub.
- **Restart the software:** If the software freezes or malfunctions, close it and restart it.
- **Update the firmware:** Ensure that your Smart Hub has the latest firmware update installed. Visit the official LEGO Education support



website for instructions.

- **Refer to the user manual:** The WeDo set comes with a detailed user manual that can provide additional guidance.

Congratulations on completing this comprehensive guide to building and programming the LEGO WeDo set! We hope you've enjoyed the journey of bringing your LEGO creations to life. The WeDo set offers endless possibilities for creativity, exploration, and learning. Continue experimenting, building, and programming to enhance your skills and discover the wonders of STEM education.

If you have any further questions or require additional support, don't hesitate to visit the official LEGO Education support website or connect with the vibrant community of WeDo enthusiasts online.

Keep building, keep coding



## Bus: Bulding instruction for the Lego Wedo 2.0 set + program code by Doreen Tovey

★★★★★ 5 out of 5

Language : English

File size : 8807 KB

Screen Reader : Supported

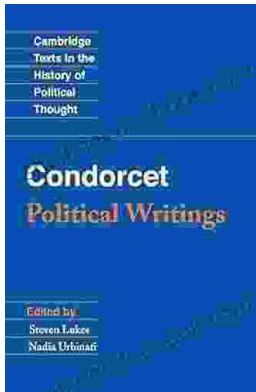
Print length : 187 pages

Lending : Enabled

FREE

DOWNLOAD E-BOOK





## Later Political Writings: A Window into the Evolution of Political Thought

Political thought, like the ever-changing tapestry of human history, has undergone a continuous process of evolution, with each era contributing its...



## The Essential Guide to Family School Partnerships: Building a Strong Foundation for Student Success

: The Importance of Family School Partnerships Family school partnerships are essential for student success. When schools and families work...