



# LEGO MindStorms

SLQ Wiki Fabrication Lab 2024/04/25 16:26

# LEGO MindStorms



LEGO MindStorms is a platform to support the development of programmable robots based on LEGO building blocks. It contains an intelligent brick computer that controls the system, a set of modular sensors and motors, and LEGO parts from the Technic line to create the mechanical systems.

Everything you need comes in one box. You begin by building your robot, following the step-by-step visual instructions. Then, after downloading the free EV3 Programmer App to your computer (PC or Mac) or tablet, you can program the robot to move and carry out actions.

|                          |  |
|--------------------------|--|
| <b>Recommended Ages</b>  | Year 4+ (ages 10+)   |
| <b>Product Cost</b>      | Core Set \$650-\$750<br>Expansion Set \$150-\$200<br>A rechargeable battery kit is available as an optional extra (\$200-\$250) or included in the Starter kit |
| <b>Where to Purchase</b> | Can be purchased from larger toy/educational stores or <a href="#">Modern Teaching Aids</a>  |

## Product Requirements

- A Computer or Tablet with Bluetooth capabilities is required
- Each Intelligent Brick uses 6AA batteries or the optional rechargeable battery.

## Loanable Kits

State Library has kits of this item available for loan to libraries within the Regional Libraries Queensland and Indigenous Knowledge Centres network. Libraries can place a reservation through the Aurora catalogue (availability is subject to existing reservations, loans and associated return dates).

The kits are for use by patrons within the library only, as part of supervised library programming. They will not be listed in the public online catalogue for personal reservation.

Please contact [Access Services](#), or phone 07 3842 9014 with any queries.

## Use In Libraries

### Moreton Bay Library

Moreton Bay is one of 19 [Successful FIRST® LEGO® League Robotics Grant recipients](#) and the first to

organise a community competition through this grant program. Moreton Bay provided weekly workshops for 6 weeks with a small group of young people using the LEGO® Mindstorms® kit. Their key learnings are as follows:

- Incorporate a mentoring structure during the program
- Develop partnerships where possible. For example, a partnership with Robotics@QUT ambassadors was very useful as it created a better ratio of mentors to participants
- Build a strong foundation with secondary teachers from the local schools
- Share all aspects of FIRST® LEGO® Australia training with your LEGO® Robotics team, including the tournaments (set up table), goals and team spirit, even if not specific to local program.

## Activities

- [LEGO MindStorm Phonograph](#)
- [Coding a LEGO Puppy](#) - Coming Soon
- [LEGO Sumo Wrestling](#) - Coming Soon

## Resources

### Replacement Parts

Replacement parts can be ordered directly from LEGO at <http://service.lego.com/en-us/replacementparts>. You will require either the LEGO set number or the individual LEGO brick part number.

LEGO Set numbers can be found on the original LEGO box while brick part numbers are embossed on each brick. You can also use the website <http://bricklink.com/> to search for set/part numbers.

### Set Content List

- [LEGO EV3 MindStorms Core Set](#)
- [LEGO EV3 MindStorms Expansion Set](#)

## Models

### Basic

### Core Set

### Core + Expansion Set

Building a Basic Vehicle

Puppy Model

[Spinner Factory](#)

|               |                |
|---------------|----------------|
| Colour Sorter | (1)            |
|               | (2)            |
| Educator      | (3)            |
| Gyroboy       | Elephant       |
| Robot Arm     | Remote Control |
|               | Stair Climber  |
|               | Tank Bot       |
|               | Znap           |

## Video Tutorials

[SLQ MindStorms Basics Workshop Video](#)