![mta modern teaching aids logo]

LEGO® Education
Classroom Solutions

2020

Provide hands-on experiences to explore core STEM concepts

FREE freight
on all orders over $199*
*Conditions apply, see website for details

teaching.com.au
P **1800 251 497**   F **1800 151 492**

LEGO® Education Classroom Solutions

Inspired through learning!

School Professional Learning is important for the growth of your staff and students.

Modern Teaching Aids offers Professional Development programs to ensure teachers get the most out of their investment in LEGO® Education resources. All MTA facilitators are experienced classroom users of LEGO Education products. Through hands-on workshops participants will learn how to apply LEGO Education resources in the classroom to meet curriculum objectives.

Modern Teaching Aids workshops are designed to enable teachers to better facilitate rather than direct student learning, thereby encouraging students to take a more active role in the learning process.

Workshops and information sessions on offer:
– **LEGO MINDSTORMS® Education EV3**
– **LEGO Education SPIKE™ Prime**
– **LEGO Education WeDo 2.0**

For further information on workshops in your area visit **www.teaching.com.au/page/mta-lego**

NESA Registered Professional Development

Modern Teaching Aids is endorsed to provide NESA Registered Professional Development for teachers accredited at Proficient Teacher in NSW for the "Introductory Robotics Workshop Coding Made Easy with LEGO Education EV3".

Completing this Introductory LEGO Education EV3 workshop will contribute 5 hours of NESA Registered PD addressing 2.1.2,2.6.2,3.3.2,6.2.2 from the Australian Professional Standards for Teachers towards maintaining Proficient Teacher Accreditation in NSW.

'/LESSONS' – the new free resource page for lesson plans

Visit **https://education.lego.com/en-au/lessons** to easily find use, and share LEGO Education lesson plans. Select the Year level, subjects you want to teach, duration of the lesson, difficulty and/or the product you want to use, and all available lesson plans will be ready to be used!

Useful links

MTA Professional Development Workshops:
www.teaching.com.au/page/mta-lego

LEGO Education Resources:
www.teaching.com.au (Click on LEGO Education)

LEGO Education '/LESSONS'
https://education.lego.com/en-au/lessons

ACARA Curriculum Links for RoboCup Junior Australia (RCJA)
http://www.robocupjunior.org.au/acara

FIRST® LEGO League:
http://firstaustralia.org/programs/first-lego-league/

Useful LEGO Community:
http://www.legoengineering.com/

EV3 and NXT related resources:
www.damienkee.com

Free NXT & EV3 Tutorials:
www.drgraeme.org

MTA catalogues

Look out for our main MTA and LEGO Education Early Learning catalogues, or find all of our products online at **teaching.com.au**

Key icons to look out for

👤 Recommended students per set	🔲 Total number of elements in a set	📦 Storage box included
📋 Projects/activities/lessons in a unit plan	🕐 Duration of project/activity/lesson	☁ Free website downloads

Suitable age range of set

Free app available

What is LEGO Education?

LEGO Education is dedicated to inspiring the students of today to be the smart, creative and STEAM-minded leaders of tomorrow. We believe that building skills through hands-on learning is essential to building bright futures. We're committed to fully engaged, imaginative learning.

Hands-On LEGO Learning

Studies have shown that being physically engaged before, during or after learning something helps your brain retain that information. Each hands-on solution incorporates the five characteristics of playful learning experiences as identified by the LEGO Foundation: joyful, actively engaging, socially interactive, iterative and meaningful.

Three Levels of Learning

The products in this catalogue are organised into three developmental levels: early, primary and secondary learning.

	Early Learning	Primary	Secondary
STEM Coding	*Coding Express* p. 48	*WeDo 2.0* p. 29 / *SPIKE™ Prime* p. 23	*LEGO MINDSTORMS® Education EV3* p. 2
Machines & Mechanisms	*Early Simple Machines* p. 46	*Simple Machines* p. 44	*Simple & Powered Machines* p. 41

Children are born with natural curiosity and creativity and are eager to learn. Our Early Learning solutions help students understand the world around them by exploring topics like language and literacy, early maths and science, physical coding and social and emotional development. We use guided play and lessons developed using guidelines from national standards to help students ignite a passion for lifelong learning.

The hands-on learning tools in this developmental level channel students' creativity and jump-start their STEAM engagement. Our Primary solutions are designed to introduce students to STEAM concepts while improving collaboration, communication and problem-solving skills. Our lesson plans are aligned to national standards and provide learning opportunities across grades and STEAM subjects.

Using smart bricks and digital tools, students at this developmental level can explore coding, programming and engineering. Our Secondary solutions help students develop critical-thinking skills, expand their creativity and explore real-life STEAM themes. Each engaging lesson plan is aligned to national standards.
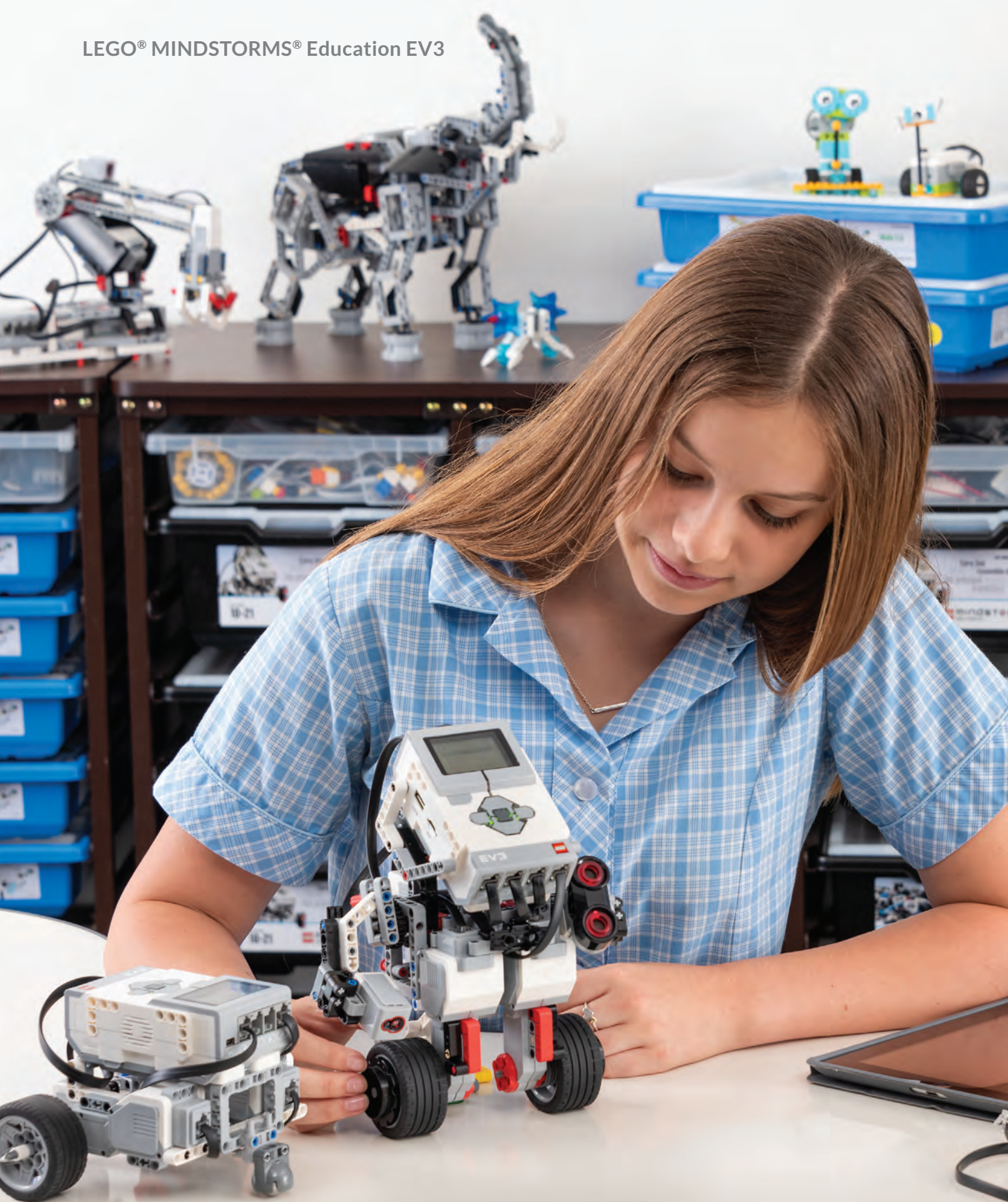
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LEGO® MINDSTORMS® Education EV3
Instant STEM learning with the best in class Robotics Solution for Years 5-12

LEGO® MINDSTORMS® Education EV3 brings project-based learning to the world of computer science and STEM, enabling secondary students to improve critical-thinking, problem-solving, and collaboration skills. As inspiring as it is engaging and creative, you can use the EV3 robotics technology straight out of the box, and download the software, curriculum material and elearning modules for free. Your greatest challenge will be getting your students to leave the classroom.

LEGO MINDSTORMS Education EV3 is a hands-on, cross-curricular STEM solution that combines LEGO Technic elements, classroom-friendly software and curriculum-aligned lessons to spark creative confidence and critical thinking. This solution tackles subjects like engineering, coding and physics with intuitive guides and smart bricks, and places real-life STEM topics right at pupils' fingertips.

Cross-Curricular & Aligned Unit Plans

Designed with collaboration in mind, each core set includes a getting-started guide, video tutorials and materials to support two pupils, providing them with the necessary resources to design, build and program their creations. More than 100 lessons based on recognised curriculum-aligned standards allow for an engaging and effective learning environment. LEGO MINDSTORMS Education EV3 offers lessons in:

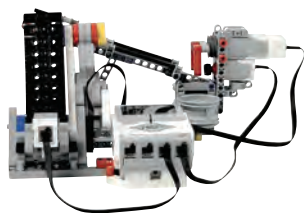– **Coding**   – **Engineering**   – **Technology**   – **Science**   – **Maker**

Robotic systems that perform complex tasks   *Measure distance and speed*   *Robots that react to the environment*

FREE freight on all orders over $199. Conditions apply, see website for details.

LEGO® MINDSTORMS® Education EV3

LEGO® MINDSTORMS® Education EV3 Core Set

1-3 · 541 · 10+

Age Group Years 5–12

This core set is optimised for classroom use and contains all you need to teach using the exciting LEGO® MINDSTORMS® set. It enables students to build, program and test their solutions based on real life robotics technology.

The system includes the Intelligent EV3 Brick, a compact and powerful programmable computer that makes it possible to control motors and collect sensor feedback using the intuitive icon-based programming and data logging software.

The set is delivered in a sturdy storage bin with a sorting tray, three servo motors, five sensors (gyro, ultrasonic, colour, and two touch), a rechargeable battery, connecting cables, and building instructions.

LEG45544-1   **$729.95**

What's Included?

Core Set & Software
- EV3 Core Set
- EV3 Classroom Software
- EV3 Python

Unit Plans
- EV3 Design Engineering Projects (Years 7-9)
- EV3 Coding Activities (Years 7-9)
- EV3 Maker Activities (Years 7-9)
- EV3 Autonomous Vehicles (Years 9-12)
- EV3 Computer Integr. Manufacturing (Years 9-12)

Unit Plans for additional parts
- EV3 Space Challenge
- EV3 Science

Support
- Getting started tutorials
- EV3 Teacher Guides
- Assessment Tools

EV3 works with your choice of Operating System and Coding Platform

Supported Operating Systems
- iOS
- Chrome
- Windows
- Mac
- Android

Compatible coding platforms
- Python
- Swift Playgrounds™ from Apple
- Microsoft MakeCode
- Scratch
- CoderZ
- Open Roberta Lab
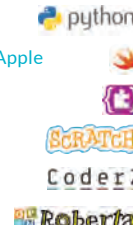
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# Included with every purchase of the EV3 curriculum solution

UNIT PLAN
EV3 Coding Activities

9   60-135

This solution supports a computing or computer science unit plan. EV3 Coding activities also have cross-curricular opportunities within science, design, technology, and math. With EV3 Coding activities, students can develop their programming knowledge and discover coding in everyday life.
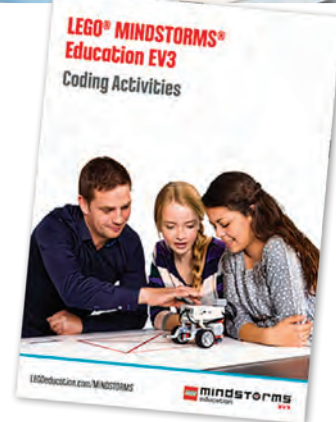
UNIT PLAN
EV3 Maker

9   90-120

When you combine the building, coding, and learning power of LEGO MINDSTORMS Education EV3 with the creative freedom of Maker, there's no end to the possibilities of students' imaginations. This unit plan lets teachers guide their students through open-ended design challenges based on real-world scenarios. Students get hands-on experience sharing ideas, defining design criteria, and tinkering with advanced prototypes.

UNIT PLAN
EV3 Design Engineering Projects

15   45-180

This unit plan turns students into engineers through engaging problem-solving. Projects like building autonomous robots, experimenting with ultrasonic sensors, and constructing robotic systems help students learn STEAM topics in a fun, hands-on way. Each activity includes a design brief and culminates in a final project that can help hone students' presentation skills.

UNIT PLAN
Autonomous Vehicles

3   120+

This unit plan is focused on high school students and is suitable for years 9-12. The unit plan consists of three lessons. In lesson 1, students design a cruise control system that will change the speed of a vehicle with the touch of a button. Lesson 2 focuses on the design, build and programming of a robotic system that follows a path and communicates its position at least twice along the way. In lesson 3, an autonomous vehicle that follows user-defined driving commands will be designed.

UNIT PLAN
Computer Integrated Manufacturing

4   120+

This unit plan is focused on high school students and is suitable for years 9-12. The unit plan consists of four lessons. In each of the lessons, students will design and build a computer-integrated manufacturing system, such as a CNC machine, a factory conveyor, a Pick and Place robot or a Sorting machine.

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LEGO® Education Classroom Solutions

Bringing Best-in-Class STEAM and Robotics Tools to the Classroom

Digital Technologies

Programming for real. Develop computational thinking skills through coding by enabling students to program simple and complex algorithms via an easy-to-use drag and drop interface.

Science

Learning by doing. Design, build and test robots that can record live data and respond to environmental changes.

Technologies

Real-world robotics. Actively engage students in the world of robotics in order to solve problems or challenges.

Engineering

From idea to working prototype. Engage your students in practical, open-ended engineering challenges and open-ended problem solving.

Maths

Complex numbers simplified. Explore applied mathematics, making abstract concepts tangible by integrating maths and science using physical constraints.

New LEGO® MINDSTORMS® Education EV3 Classroom

NEW

The current version of the EV3 Lab software is not compatible with the upcoming release of Apple's operating system for Mac computers, called 'Catalina'. Therefore, LEGO® MINDSTORMS® Education EV3 is transitioning to a new software app, called LEGO MINDSTORMS Education EV3 Classroom. Featuring a coding language based on Scratch, EV3 Classroom will initially launch for macOS in November 2019 and in spring 2020 for iOS, Windows 10, Android and Chrome. EV3 Classroom will offer a consistent experience, features, and content across all devices.

For Mac users to continue to enjoy an uninterrupted EV3 experience, LEGO recommend that you upgrade to the new EV3 Classroom app before updating to the new OS version. Note that the existing EV3 software will continue to work on operating systems designed to support 32-bit applications (such as Win 7, Win 10 and previous MacOS).

LEGO education

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Program EV3 with 3rd party software

The LEGO® MINDSTORMS® Education EV3 Core Set can, besides with the LEGO Education EV3 software, also be programmed with Python, Apple Swift Playground, CoderZ and Roberta. This allows students and teachers to use both block-based and textbased programming languages.

Python

– Text-Based Python Programming with LEGO MINDSTORMS Education EV3

– With LEGO MINDSTORMS Education EV3, high school students can now experience real-world applications of Python, which is considered the most common language used to teach computer science in colleges. The new EV3 MicroPython programming language, which is standard for all EV3 high school content from LEGO Education, is an optimised version of Python for microcontrollers. EV3 offers a number of standards-aligned lessons for grades 9-12 with real-world relevance based on themes like computer integrated manufacturing and real-life vehicles. For example, students are asked to build and program models with real-world applications, including autonomous vehicles, a sorting machine, a CNC drawing machine, a factory conveyor, and a robotic arm.

– The EV3 MicroPython experience works with Windows 10 and Mac OS computers. In addition to the LEGO MINDSTORMS Education EV3 Core Set, it also requires a micro SD card.

Make Code

– MakeCode is an online, browser-based Microsoft block-based programming environment (www.MakeCode.com).

– Users can also program in JavaScript and convert this into block-based programming (and visa verse).

– In the MakeCode extension is the simulator, where the user can easily see the immediate effect of the coding

– Includes getting started activities and lessons developed by LEGO Education.

Scratch 3.0

– Online programming environment

– Based on Blockly (programming blocks with text labels)

– Large active online community with lesson plans and teacher ideas and inspiration

– Free download from https://scratch. mit.edu/

Apple Swift Playground

– Apple's playful learn to code language

– Text based programming, using Swift programming

– Free to download, with a great free tutorial

– Only compatible with iPads

– Download from https://www.apple.com/au/swift/playgrounds/

CoderZ

– Online learning environment where students worldwide learn STEM by coding virtual 3D robots

– Block-based language and text-based programming

– Browser based platform

– Visual programming interface: see the Java code behind the blocks. More experienced students can program directly in Java

– Download from http://gocoderz.com/

Roberta

– Cloud-based integrated programming environment that requires no registration and is completely open source

– Requires USB WiFi Dongle and a micro SD card

– Implementation languages are Java, JavaScript and html (NEPO)

LEGO® MINDSTORMS® Education EV3

1-3 | **853** | **10+**

LEGO® MINDSTORMS® Education EV3
Expansion Set Add-on

This set contains a wide range of supplementary elements like fun advanced building activities and additional mechanical elements to help students deepen their robotics experience and engage their creative instincts.

LEG45560 **$204.95**

Requires Additional Products
LEGO® MINDSTORMS® Education EV3 Core Set (LEG45544-1), see page 4.
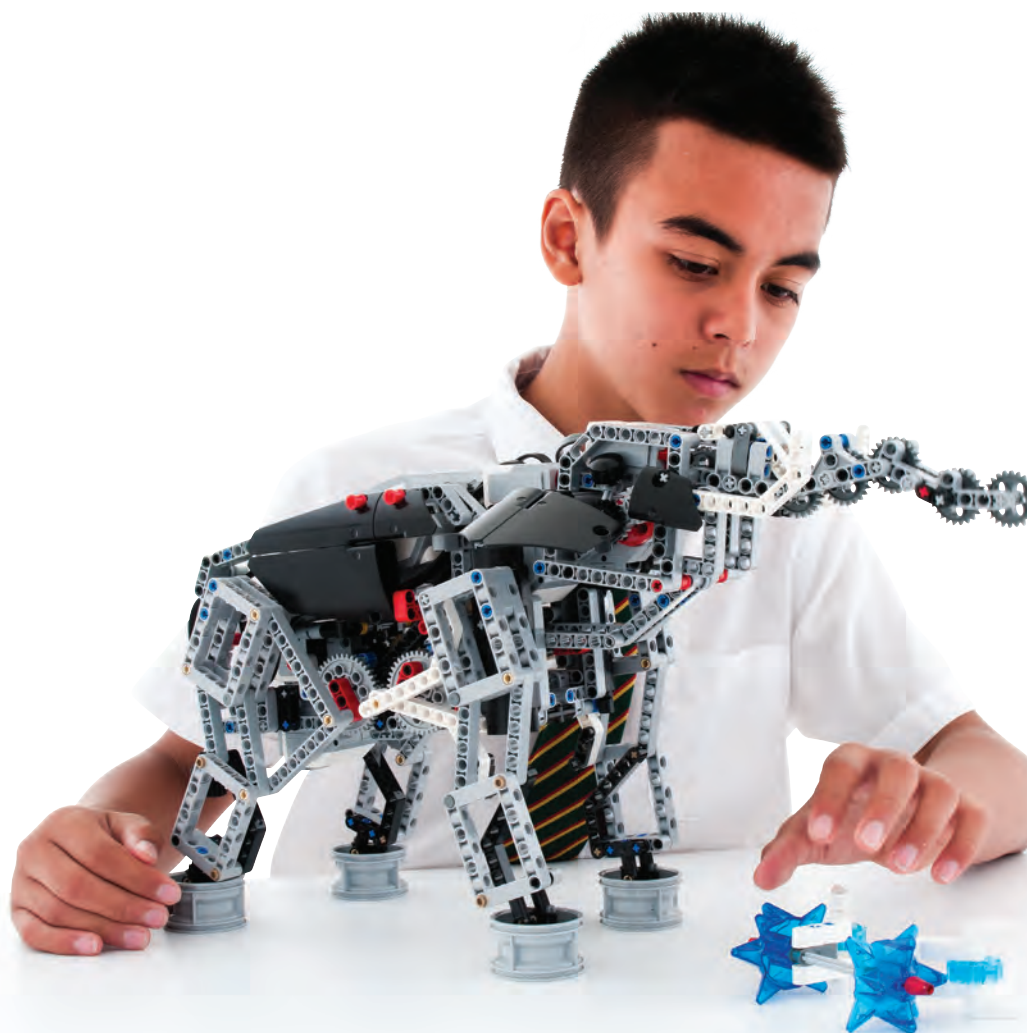
Add-on Set

Create bigger & more complex models

Tank Bot Robot

Stair Climber Robot

Znapp Robot

LEGO education

🌐 teaching.com.au   📞 **Freecall** 1800 251 497   🖨 **Freefax** 1800 151 492   Prices exclude GST

Classroom Solutions
EV3 Curriculum Solution Packs
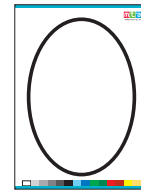
		LEGO Education EV3 Curriculum Solution **LEG45544-1**	Battery Charger **LEG8887**	Robotics Training Mat **ROB014** 3rd party product	MTA Storage **System Double** **SUN832** 3rd party product
LEG45544-1K 2-3	**$784.95** Save $9.95	1	1		
LEG45544-S4 8	**$2,949.95** Save $99.75	4	2		
LEG45544-4 8	**$3,179.95** Save $119.60	4	4	1	
LEG45544-4S 8	**$3,379.95** Save $181.45	4	4	1	1
LEG45544-S5 10	**$3,639.95** Save $139.70	5	2		
LEG45544-5 10	**$3,939.95** Save $154.50	5	5	1	
LEG45544-5S 10	**$4,129.95** Save $226.35	5	5	1	1
LEG45544-S6 12	**$4,389.95** Save $184.60	6	3		
LEG45544-6 12	**$4,679.95** Save $209.40	6	6	1	
LEG45544-6S 12	**$4,869.95** Save $281.25	6	6	1	1
LEG45544-S8 16	**$5,839.95** Save $259.45	8	4		
LEG45544-S10 20	**$7,279.95** Save $344.30	10	5		

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LEGO® MINDSTORMS® Education EV3

mta

Comes with 2 MTA Double Storage Systems →

×2

LEG45544-10S

Classroom Solutions
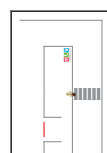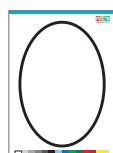
EV3 Curriculum Solution Packs

		LEGO® Education EV3 Curriculum Solution **LEG45544-1**	Battery Multi-Charger **WLMC01**	Robotics Training Mat **ROB014**	Robotics Challenge Mat **ROB15**	MTA Storage System Double **SUN832**	MTA Storage System Triple **SUN833**
			3rd party product	3rd party product	3rd party product	3rd party product	3rd party product
LEG45544-8 👤 16	**$6,049.95** Save $299.55	8	1	1			
LEG45544-8S 👤 16	**$6,299.95** Save $382.35	8	1	1			1
LEG45544-10 👤 20	**$7,329.95** Save $479.45	10	1		1		
LEG45544-10S 👤 20	**$7,799.95** Save $533.15	10	1		1	2	
LEG45544-12 👤 24	**$8,799.95** Save $859.30	12	2		1		
LEG45544-12S 👤 24	**$9,199.95** Save $983.00	12	2		1	2	
LEG45544-15 👤 30	**$10,699.95** Save $1,149.15	15	2		1		
LEG45544-15S 👤 30	**$11,129.95** Save $1,384.75	15	2		1		2

LEG45544-10CS

Comes with 2 MTA Triple Storage Systems

x2

Classroom Solutions
EV3 Curriculum Solution Packs

		LEGO Education EV3 Curriculum Solution **LEG45544-1**	Battery Multi-Charger **WLMC01** 3rd party product	Robotics Training Mat **ROB014** 3rd party product	Robotics Challenge Mat **ROB15** 3rd party product	EV3 **Expansion Set** **LEG45560**	MTA Storage System Triple **SUN833** 3rd party product
LEG45544-8C 👤16	$6,699.95 Save $469.35	8	1		1	4	
LEG45544-8CS 👤16	$6,999.95 Save $834.95	8	1		1	4	2
LEG45544-10C 👤20	$8,249.95 Save $584.20	10	1		1	5	
LEG45544-10CS 👤20	$8,769.95 Save $729.80	10	1		1	5	2
LEG45544-12C 👤24	$10,099.95 Save $908.95	12	2	1	1	6	
LEG45544-12CS 👤24	$10,499.95 Save $1,174.55	12	2	1	1	6	2
LEG45544-15C 👤30	$12,399.95 Save $1,208.70	15	2	1	1	8	
LEG45544-15CS 👤30	$12,799.95 Save $1,807.10	15	2	1	1	8	3

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LEGO® MINDSTORMS® Education EV3

LEGO® MINDSTORMS® Education EV3 Space Challenge Set

Take STEAM learning into the stratosphere with this expansion set co-developed with leading space experts. This set conforms to national standards and puts students to work on three space-themed research projects. The EV3 Space Challenge Set includes three learning mats, a challenge mat, dual lock tape and all the LEGO® elements required to build the challenge models. The accompanying digital content helps teachers and students blast off to hands-on learning. Requires the LEGO MINDSTORMS® Education EV3 Core Set (LEG45544-1).

LEG45570   **$399.95**

Requires Additional Products
LEGO MINDSTORMS Education EV3 Core Set (LEG45544-1), see page 4.

Add-on Set
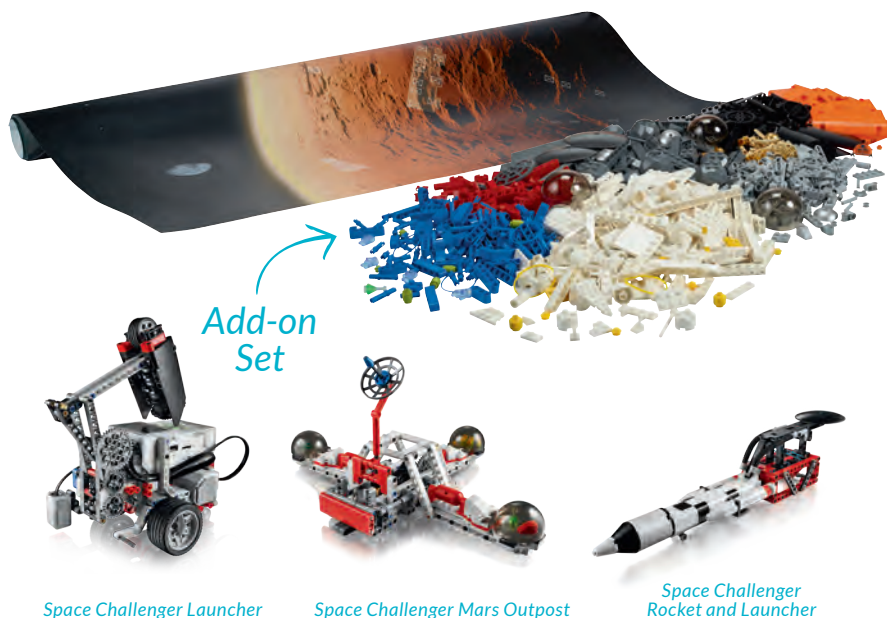
Space Challenger Launcher

Space Challenger Mars Outpost

Space Challenger Rocket and Launcher

Key Learning Values

– Get started with STEAM and robotics
– Discover real-world applications using problem-solving skills
– Develop solutions through teamwork skills
– Learn to build, test, and evaluate robots
– Gain hands-on experience with programming, sensors, motors, and intelligent units

What's Included?

Explore space through hands-on missions with curriculum guides covering the following categories:

Gear Basics
Learn the basics of gears so students can build robots by applying knowledge of physical science and mathematical principles. 1 Lesson - 45-90min

Learning Missions
The Learning Missions encourage students to investigate, observe, calculate, and apply knowledge to solve specific tasks. 9 Missions - 45-90min each

Challenge Missions
The missions challenge students to apply and creatively adapt programming and problem solving skills to construct robots that solve actual space exploration challenges. 7 Missions - 90-180min each

Research Projects
One aspect that makes the Space Challenge Curriculum so appealing to students is the fact that the three Research Projects are 100% real. Developed together with actual NASA engineers, they focus on three key problems that space researchers around the globe are striving to solve. 3 Projects - 45-90min each

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Teach STEM with a Mission to Mars using LEGO MINDSTORMS Education EV3 Space Challenges

This curriculum conforms to national curriculum standards and contains challenge and learning missions based around the theme of space. Three research projects, co-developed with space experts, providing rich opportunities for students to explore and create innovative solutions to current space exploration topics. The EV3 Space Challenge Set* includes three learning mats, a challenge mat, dual lock tape and all of the LEGO elements required to build the challenge models*. The accompanying digital content provides student-ready materials, teacher notes and Building Instructions.

*Not included and sold separately.

The EV3 Space Challenge Curriculum is only available for desktops with EV3 Classroom. It requires the LEG45570 EV3 Space Challenge Set.

Classroom Solutions
Space Challenge Packs

		LEGO Education EV3 **Curriculum Solution** LEG45544-1	EV3 Space Challenge Set **LEG45570**	Battery Charger **LEG8887**
LEG45570-3	**$1,139.95** Save **$59.90**		3	
LEG45570-6	**$2,259.95** Save **$139.75**		6	
LEG45544-SP4 👤 8	**$3,899.95** Save **$79.55**	4	2	4
LEG45544-SP8 👤 16	**$7,599.95** Save **$359.05**	8	4	8

🚚 **FREE freight on all orders over $199.** Conditions apply, see website for details.

LEGO education

Main Components

Transformer 10V DC

Allows you to recharge your LEG9693 Rechargeable Battery DC, EV3 rechargeable battery LEG45501 or LEG8878 Power Functions Rechargeable Battery Box. *Only compatible with the white Rechargeable Battery LEG9693.

LEG8887   **$64.95**

EV3 Intelligent Brick

It features an illuminated 6 button interface, a high-resolution black and white display, built-in speaker, USB port, a mini SD card reader, 4 input ports and 4 output ports. Also supports USB, Bluetooth and WiFi communication.

LEG45500   **$474.95**

EV3 Rechargeable DC Battery

Designed for use with the EV3 Intelligent Brick. The charge time is around 3 to 4 hours. It requires the LEG8887 DC Charger, sold separately.

LEG45501   **$167.95**

EV3 Large Servo Motor

Comes with built-in rotation sensor and has a 1 degree accuracy.

LEG45502   **$65.95**
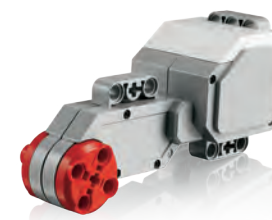
EV3 Medium Servo Motor

Comes with built-in rotation sensor and has a 1 degree accuracy. Great for lower load, higher speed applications.

LEG45503   **$54.95**

EV3 Cable Pack

Contains the same 7x RJ12 Connector Cables as included in the LEG45544-1 EV3 Core Set & Software. The pack contains: 4x 25cm, 2x 35 cm, 1 x 50cm.

LEG45514   **$35.95**

Sensor Elements

EV3 Ultrasonic Sensor

Measures distance and detect objects around the EV3.
LEG45504   **$65.95**

EV3 Gyro Sensor

Measures angles and measures degrees per second of rotation.
LEG45505   **$65.95**

EV3 Colour Sensor

Detects colours and measures light intensity, ambient and reflected light. Auto ID is built into EV3 software.
LEG45506   **$65.95**

EV3 Touch Sensor

Has 3 different modes: It can be pressed, released or it counts the number of presses.
LEG45507   **$43.95**

EV3 Infrared Beacon

For use with the EV3 Infrared Seeker Sensor. The beacon emits an infrared signal which the sensor can track. The beacon can also be used as a remote control for the EV3.
LEG45508   **$66.95**

EV3 Infrared Sensor

Detects proximity to the robot and reads signals emitted by the EV3 Infrared Beacon. Can create remote controlled robots and learn how infrared technology is used.
LEG45509   **$66.95**

FREE freight on all orders over $199. Conditions apply, see website for details.

Robotic Resources & Accessories
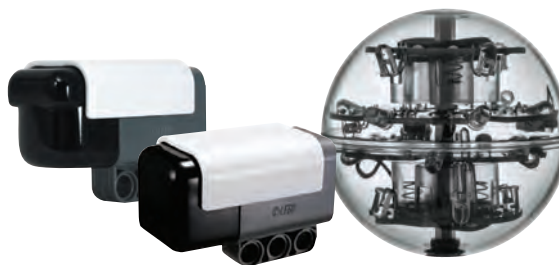
HiTechnic Sensors

Soccer Kit

3rd party product

The kit includes: Elekit IR Ball (LEGIB1005), HiTechnic IRSeeker V2 (LEGNX1042) to locate and provide the direction to the IR Ball, HiTechnic Compass Sensor (LEGNX1034) to determine the orientation of the playing field and the heading to the goal.

LEGIB1005K $329.95

~~$339.85~~
$329.95
Save **$9.90**

Angle Sensor

Measure axle rotation position and rotation speed with the HiTechnic Angle Sensor. The Angle Sensor enables you to measure 3 rotation properties: 1. Absolute Angle 2. Accumulated angle 3. Rotation Speed - Perfect for building a distance measuring wheel or a weather station wind vane.

LEGNX1030 $89.95

Force Sensor

The Force Sensor will enable you to build robots that can measure a physical force applied through a LEGO® cross axle. The sensor has a LEGO cross axle receptacle and the value represents the force that is applied to an axle going into the sensor. Note that the force measured is the linear force going into the sensor.

LEGNX1074 $89.95

Compass Sensor

The Compass Sensor is a digital compass for more accurate navigation.

LEGNX1034 $109.95

Colour Sensor v2

This colour sensor can detect an extended range of more than 15 target colours.

LEGNX1038 $109.95

Barometric Sensor

Track your environment with the HiTechnic Barometric Sensor. The sensor measures atmospheric pressure and temperature.

LEGNX1036 $99.95

IR Seeker v2

With this sensor's ability to work in both DC and AC (pulsed) modes it can detect both the new and old RobocupJunior IR Balls.

LEGNX1042 $109.95

Enquire about our Professional Learning workshops in your region

Multi-Charger Designed for EV3, NXT & WeDo 2.0 Batteries

3rd party products

Charge up to 8 EV3, NXT and WeDo 2.0 batteries simultaneously. It comes standard with 8 leads.

WLMC01	$389.95

Charge up to 10 EV3, NXT and WeDo 2.0 batteries simultaneously. It comes standard with 10 leads.

WLMC04	$429.95

Flexi-Cables for NXT-EV3

3rd party products

Thin and flexible cables, compatible with both NXT and EV3. Supplied in a pack of 3 either 10 or 20cm long.

MIND020	20cm – Set of 3	$21.95
MIND010	10cm – Set of 3	$23.95

Rotacasters

3rd party products

Multi-directional wheels with LEGO compatible hub. Ideal for use in RobocupJunior events.

ROT5435 – Dual 50mm Rotacaster - 35A - LEGO Hub

ROT8465 – Dual 50mm Rotacaster - 60A - LEGO Hub

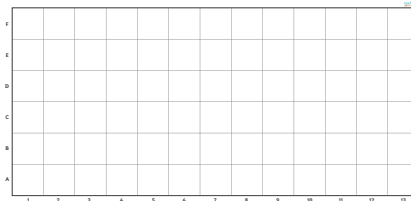| ROT5435	$19.95
ROT5460	$19.95

IR Temperature Sensor for EV3 or NXT

3rd party product

Measure ambient temperature as well as temperature of surrounding devices.

– Non-contact
– Resolution: 0.1 degrees
– Returns values in Celsius and Fahrenheit
– EV3/NXT Compatible Connector
– Programming blocks available for EV3 or NXT

MIND001	$108.95

Robotics Coordinates Whiteboard Mat

NEW

3rd party product

This mat features a 6 x 13 grid with A to F on one side and 1 to 13 on the other side and is a large 100 x 205cm. The mat is made of a write and wipe material, to be used with whiteboard markers. Please note: due to the shiny surface, colour sensors might not read the values properly.

TEB6255	$89.95

Actuator

3rd party product

This 2.2 inch 320x240 TFT Colour Display attaches to the EVShield for easy user interaction. It has a 5 Position Navigation Switch and has been integrated with the EVShield library for easy programming. It also works with just Arduino (without the EVShield).

FIR12-50	$119.95
FIR12-100	$119.95

EV3 Sensor Multiplexer for EV3 or NXT

3rd party product

Need more Sensors? Connect up to 3 LEGO sensors on a single port. Works with NXT or EV3. It does not work with third party sensors. Supported Sensors: EV3 Ultrasonic, Gyro, Infrared, Colour and Touch sensor.

MIND005	$99.95

EVShield with Arduino Uno Bundle

3rd party product

The Force Sensor will enable you to build robots that can measure a physical force applied through a LEGO cross axle. The sensor has a LEGO cross axle receptacle and the value represents the force that is applied to an axle going into the sensor. Note that the force measured is the linear force going into the sensor.

MIND002	$134.95

UI module for EVShield or Arduino

3rd party product

This 2.2 inch 320x240 TFT Colour Display attaches to the EVShield for easy user interaction. It has a 5 Position Navigation Switch and has been integrated with the EVShield library for easy programming. It also works with just Arduino (without the EVShield).

MIND003	$54.95

FREE freight on all orders over $199. Conditions apply, see website for details.

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Robotics Resources & Accessories

MTA Storage Systems suitable for EV3

SUN831

SUN832

SUN833

Compatible with LEGO Education Storage Tubs

NEW **EXCLUSIVE**

MTA Storage Systems & Trays

3rd party product

These MTA exclusive storage systems have been designed to organise your LEGO® Education Storage tubs. The storage system also houses its own storage containers in two sizes. Each unit comes with the option of castors or adjustable feet for static storage. Assembly required

SUN831	Single - Holds 3 EV3 trays	**159.95**
SUN832	Double - Holds 6 EV3 trays	**$239.95**
SUN833	Triple - Holds 9 EV3 trays	**$319.95**
SUN832S	Small Tray	**$10.95**
SUN831L	Large Tray	**$13.95**

SUN832S

SUN831S
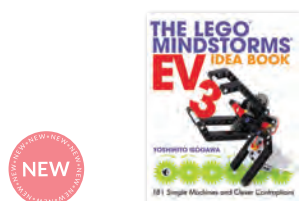
The LEGO® MINDSTORMS® EV3 Idea Book

NEW

3rd party product

Explore dozens of creative ways to build amazing mechanisms with EV3. Each model demonstrates simple mechanical principles that you can use as building blocks for your own creations. 232 Pages.

PEN6003   **$59.95**

STEM by Design Teaching with LEGO MINDSTORMS EV3

STEM by Design

Teaching with LEGO Mindstorms EV3

By Barbara Bratzel
Foreword by Chris Rogers

3rd party product

STEM by Design contains a full range of classroom tested activities for using the LEGO MINDSTORMS EV3 Education Set.

CO1001   **$139.95**

Classroom Activities for the Busy Teacher: EV3

Classroom Activities for the Busy Teacher: EV3

3rd party product

A 10 week curriculum package for implementing the LEGO EV3 Set in your class. With over 20 chapters, from the basics of the EV3 to gradually incorporating sensor and programming concepts.

LPLEG8   **$76.95**

Replacement packs for EV3 & NXT

LEGO Education Replacement Packs are the ideal way to replace key elements for your LEGO Education products.

Replacement Pack 1 – LEGO® Education EV3

For the EV3 Curriculum Solution (LEG45544-1) and the EV3 Expansion Set (LEG45560).

LEG2700   **$12.95**

Replacement Pack 2 – LEGO Education EV3

For the EV3 Expansion Set (LEG45560).

LEG2701   **$12.95**

Replacement Pack 3 – Ball & Ball Joint for EV3

For the EV3 Curriculum Solution (LEG45544-1).

LEG2702   **$15.50**

Replacement Pack 4 – Green City Challenge

For the Green City Challenge Set (LEG9594).

LEG2703   **$15.50**

RobocupJunior

In 2020 Modern Teaching Aids celebrate 13 years of sponsorship with RobocupJunior in Australia and New Zealand.

The RobocupJunior competition extends coding and computational thinking from the classroom with comprehensive relevant links to the Australian Curriculum - Digital Technology as well as encompassing STEM skills.

The RobocupJunior competition supports local, regional and international robotics events and has experienced exponential growth with over 1000 teams taking part in Australia and New Zealand and played in over 40 countries in the world.

RoboCupJunior encompasses not only engineering and science and technology skills, but extends right across a school curriculum to maths, literacy, music and art. It also addresses social development by encouraging sportsmanship, sharing, teamwork, understanding diff erences, cooperation and organisational skills.

The competition has been developed with 3 levels of increasing complexity with students programming their robots to compete in **OnStage, Rescue** and **Soccer** Competitions.

RobocupJunior:
Competitive in an encouraging & supportive environment extending coding and computational thinking from the classroom

Competition Details

Australian Open:
Friday October 9th – Sunday October 11th
Adelaide Showgrounds, SA

New Zealand Nationals:
Please visit
www.robocupjunior.org.nz
for 2020 competition
dates and locations

Australian Curriculum - Digital Technology encompassing STEM skills

Want to get involved?

Let your students gain an interest in science and technology by competing in one of the many regional competitions, while expanding their social, intellectual and problem solving skills and help them to develop into creative and independent adults.

Contact us for one of the many training sessions and for your nearest regional competitions.

www.robocupjunior.org.au or **www.robocupjunior.org.nz**

FREE freight on all orders over $199. Conditions apply, see website for details.

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RobocupJunior Challenges

RCJ OnStage

There are 3 divisions in On-Stage. Novice, Experienced and Open. All divisions will have Primary and Secondary school students competing against one another.

RoboCupJunior OnStage Performance is a stunning integration of Science, Technology and the Arts. Participants challenge themselves to design, build and program their robots to move to music. This performance may be in the form of a dance in time with the beat of the music, story-telling or even a theatrical presentation.

Competitors are encouraged to decorate their entries and motorise robot limb movements, to give their robots real personality and the performance real appeal. The On-Stage Performance Challenge is a real team effort with each student playing their role to design, program, create and perform.

RCJ Rescue

Artificial intelligence at its best! The Rescue competition mirrors the real-life use of robots that rescue people from life-threatening situations. A disaster has occurred, and it is too dangerous for human to enter. A rescue mission is necessary.

Rescue Line

There are 3 divisions in Rescue Line Primary, Secondary and Open Rescue. Robots compete by following a winding line on a series of tiles to a designated rescue area. On the way the robot could encounter obstacles and while the clock is still ticking the robot must find "the victim" before pushing them out of the chemical spill to safety or be required to find and lift the victim to safety.

Rescue Maze

The Rescue Maze challenge is open to all RoboCup Junior age groups. A fully autonomous robot needs to be sent into the hazardous maze to locate heated victims so that the humans know where they are. A rescue package needs to be dropped for the humans that will locate them and keep them alive, 'water' etc (note: simulated).
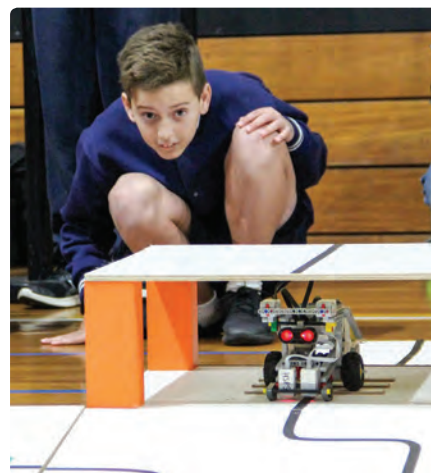
RCJ Soccer

There are 3 divisions in Soccer with addition of Simple Simon Soccer at some State and Regional events. The divisions are Standard League (LEGO®-only robots) Lightweight League and Open League.

Students are required to design, build, and program two robots to compete in a dynamic game of robot soccer against an opposing pair of robots. Teams have a choice of using 2 attacking robots or an attacker teamed with a goalie.

Suggested RobocupJunior resources using the EV3 Robot

For more details on the competition and rules go to **robocupjunior.org.au**

For more RobocupJunior Packs go to the RobocupJunior page at **teaching.com.au**

Save **$53⁴⁰**

On-Stage Pack (2 Robots)
3rd party product

The kit consists of:
– 2x LEG455 4-1 EV3 Core Set & Software
– 1x ROB001 Art & Craft On-Stage Pack
– 2x LEG8887 Battery Charger

RCJ45544-D   **$1,595.95**
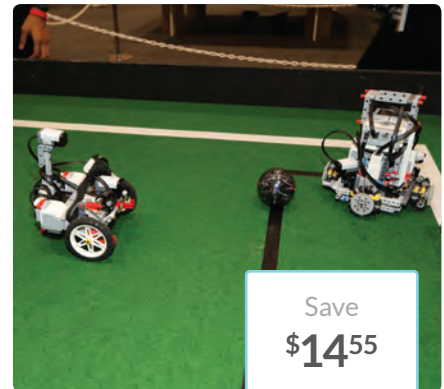

Save **$40⁷⁵**

Rescue (1 Robot)
3rd party product

The kit consists of:
– 1x LEG45544-1 EV3 Core Set & Software
– 1x ROB009 Rescue Field
– 1x LEG45506 EV3 Colour/Light Sensor (+colour/ light in set)
– 2x ROT5435 Rotocaster wheel
– 1x LEG8887 Battery Charger

RCJ45544-R   **$999.95**

Save **$14⁵⁵**

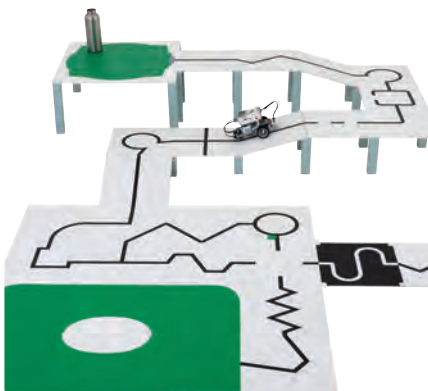## Standard Soccer (2 Robots)
3rd party product

The kit consists of:
– 2x LEG45544-1 EV3 Core Set & Software
– 1x LEGIB1005K Soccer Kit (includes Soccer ball)
– 2x LEGNX1042 Hi Technic IR Seeker Sensor
– 2x LEGNX1034 Hi Technic Compass Sensor
– 1x LEG45560 EV3 Expansion Set
– 2x LEG8887 Battery Charger

RCJ45544-SN   **$2,339.95**

RCJA Rescue Field - Cut and Printed Tiles Kit
NEW

3rd party product

This modular robotics RobocupJunior Rescue Course has been designed to allow schools to have an almost completely out of the box ready challenge for students which also meets the course specifications necessary to prepare for the RCJA Rescue Competition. Includes 29 tiles (1 tile measures 60 x 60cm and 28 double-sided tiles measuring 30 x 30cm), 4 ramps, risers to create different levels and heights within the course, reusable colour stickers (4x4cm) and a variety of pins and plugs.

ROB016   **$899.95**
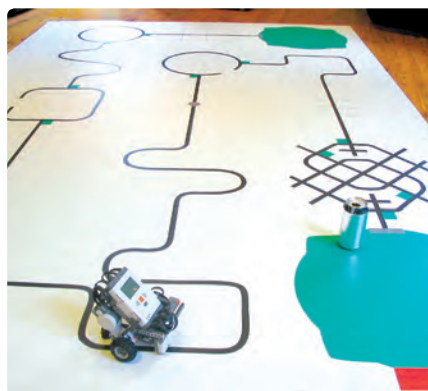
Official RobocupJunior Rescue Practice Field
3rd party product

The Rescue Practice Field is a durable and waterproof vinyl resource that has been designed for use in the RobocupJunior Australia competition. The field includes the Premier tiles and can be cut into 15 separate tiles or used as one complete field. Complete size: 297.8cm(W) x 311.2cm(L). Individual tile size: 594mm x 594mm.

ROB009   **$139.95**
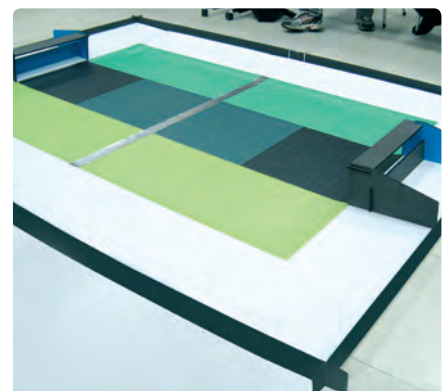
RobocupJunior Soccer Field
3rd party product

The Robot Soccer Field can be used as an educational activity in the classroom as an introduction to coding and the use of sensors broadening the appeal of robotics to encouraging a wider range of students to explore STEM subjects and careers. The RoboCupJunior Australia Simple Simon Soccer Game could be used with this mat which is an introductory league. Please refer to Simple Simon rules listed under Soccer on the RobocupJunior website.

ROB010   **$139.95**

🚚 **FREE freight on all orders over $199.** Conditions apply, see website for details.

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RobocupJunior Resources

~~$339.85~~
$329⁹⁵
Save $9.90

Soccer Kit
3rd party product

The kit includes: Elekit IR Ball (LEGIB1005), HiTechnic IRSeeker V2 (LEGNX1042) to locate and provide the direction to the IR Ball, HiTechnic Compass Sensor (LEGNX1034) to determine the orientation of the playing field and the heading to the goal.

LEGIB1005K   **$329.95**

~~$59.55~~
$56⁹⁵
Save $2.60

Art & Craft Pack RobocupJunior Dance
3rd party product

This Art & Craft Pack is perfect for the On-Stage competition.

Pack includes (contents may vary to image shown):

– CL5770 – Large Glue On Eyes 1.5cm
– CL1970 – Fancy Pipe Cleaner Lengths Pk 200
– EC209 – Foam Sheets 30 x 30cm
– CL6227 – Feathers 100
– TH013 – Coloured Petit Fours Cases 100
– PH20 – Pom Poms
– TEB0200 – Sticky Tac

ROB001   **$56.95**

Pulsed IR RoboBall
3rd party product

This Elekit IR ball contains 20 infrared LEDs giving full signal coverage. The ball can run in un-modulated (no pulse) mode to be compatible with existing RoboCup Jr requirements or there are 3 other pulsed modes allowing detection ranges up to 5 metres. Uses 4 AAA batteries (not included).

LEGIB1005   **$119.95**

IR Temperature Sensor for EV3 or NXT
3rd party product

Measure ambient temperature as well as temperature of surrounding devices.

– Non-contact
– Resolution: 0.1 degrees
– Returns values in Celsius and Fahrenheit
– EV3/NXT Compatible Connector
– Programming blocks available for EV3 or NXT

MIND001   **$108.95**

Sumo Mat
3rd party product

This Sumo robotics mat is a perfect mat to practise for sumo robotics competitions. The mat measures 1m in diameter, with the outer white circle measuring 5cm.

TEB6229   **$49.95**

HiTechnic Colour Sensor v2

This colour sensor can detect an extended range of more than 15 target colours.

LEGNX1038   **$109.95**

HiTechnic Compass Sensor

The Compass Sensor is a digital compass for more accurate navigation.

LEGNX1034   **$109.95**

HiTechnic IR Seeker v2

With this sensor's ability to work in both DC and AC (pulsed) modes it can detect both the new and old RoboCup IR Balls.

LEGNX1042   **$109.95**

FREE freight on all orders over $199. Conditions apply, see website for details.

LEGO® Education Classroom Solutions

Inroducing LEGO® Education SPIKE™ Prime Building STEAM Skills and Confidence in Years 5-8

NEW

LEGO® Education SPIKE™ Prime helps spark STEAM curiosity and confidence in year 6-8 students. This concept brings together colourful LEGO building elements, easy-to-use hardware, intuitive coding language on Scratch and student-ready units to continuously engage your class regardless of their learning level. The endless creative design possibilities and easy-entry lessons of SPIKE Prime help students explore learning and build the STEAM skills they need to become the innovative of tomorrow.
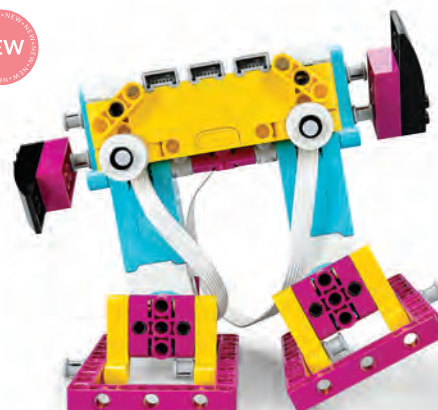
Unit Plans

LEGO Education SPIKE Prime offers four units, each with a specific theme focus. All units are designed to develop critical thinking skills through complex, engaging and personally relevant STEAM challenges.

Unit 1 Invention Squad

– Focus on the design and engineering process
– Define a problem and success criteria
– Create prototypes
– Establish systematic testing procedures
– Analyse data and improve solutions
– Describe best solution

Unit 2 Kickstart a Business

– Focus on developing and applying computational thinking skills
– Decompose a problem into sub-problems
– Recognise patterns
– Find and fix bugs
– Use conditions and compound conditions

Unit 3: Life Hacks

– Focus on mathematics and working with data representation and manipulations
– Create variables
– Perform basic maths operations
– Use cloud data
– Design projects that combine hardware and software components to collect and exchange data

Unit 4: Competition Ready*

– Program autonomous robots
– Test and refine models
– Focus on collaboration and teamwork
– Create life skills for future careers
* Please note - requires the SPIKE Prime Expansion Set

1-2 | **523** | **10+**

LEGO Education SPIKE Prime Set

NEW

The LEGO Education SPIKE Prime Set is the go-to STEAM learning tool for year 5-8 students. Combining colourful LEGO building elements, easy-to-use hardware, and an intuitive drag-and-drop coding language based on Scratch, SPIKE Prime continuously engages students through playful learning activities to think critically and solve complex problems, regardless of their learning level. The set includes the programmable hub, a large motor, 2 medium motors, distance, force and colour sensor and a variety of LEGO Technic and System elements, all packed in a sturdy box.

LEG45678 $535.95

Age Group
**Years
5–8**

What's Included?

Core Set & App
– LEGO Education SPIKE Prime Set
– LEGO Education SPIKE Prime App

Unit Plans
– Invention Squad
– Kick-Start a Business
– Life Hacks
– Competition Ready (requires Expansion
  Set, see page 584)

Support
– Getting started tutorials
– EV3 Teacher Guides
– Assessment Tools

SPIKE Prime works with your choice of Operating System and Coding Platform

Supported Operating Systems

– iOS
– Chrome
– Windows
– Mac
– Android

Coding platform
The intuitive coding environment for tablets and computers takes the best from the popular coding language based on Scratch, creating a system that teachers and students will love.

FREE freight on all orders over $199. Conditions apply, see website for details.

Classroom Solutions
SPIKE Prime Curriculum Solution Packs

		LEGO® Education SPIKE™ Prime Set LEG45678	LEGO Education SPIKE Prime Expansion Set LEG45680	MTA Storage System Double SUN832 *3rd party product*	MTA Storage System Triple SUN833 *3rd party product*	Ten Port USB Charger LVS120 *3rd party product*
LEG45678-3 👤6	**$1,549.95** Save $57.90	3				
LEG45678-6 👤12	**$3,159.95** Save $165.70	6				1
LEG45678-6S 👤12	**$3,339.95** Save $247.55	6		1		1
LEG45678-8 👤16	**$4,159.95** Save $237.60	8				1
LEG45678-8S 👤16	**$4,429.95** Save $300.40	8			1	1
LEG45678-10 👤20	**$5,149.95** Save $319.50	10				1
LEG45678-10S 👤20	**$5,589.95** Save $403.20	10		2		1
LEG45678-12 👤24	**$6,129.95** Save $411.40	12				1
LEG45678-12S 👤24	**$6,579.95** Save $485.10	12		2		1
LEG45678-15 👤30	**$7,699.95** Save $559.20	15				2
LEG45678-15S 👤30	**$8,269.95** Save $654.80	15			2	2
LEG45678-3E 👤6	**$1,709.95** Save $83.80	3	1			
LEG45678-6E 👤12	**$3,649.95** Save $233.40	6	3			1

Add-on Set

603 **10+**

LEGO® Education SPIKE™ Prime Expansion Set

NEW

The LEGO® Education SPIKE™ Prime Expansion set is an add-on set for the SPIKE Prime set (LEG45678) and includes 603 elements, including large wheels, banana gears, a colour sensor and a large motor. It features over 10 hours of targeted STEAM Learning that will inspire both students and teachers to build more advanced robots and prepare them for the challenging world of robotics competitions.

LEG45680 $171.95

NEW **1**

LEGO SPIKE Prime Technic Large Hub

Features 6 input/output ports for connecting sensors and motors, a customisable 5x5 light matrix, Bluetooth connectivity, speaker, 6-axis gyro, rechargeable lithium-ion battery and a micro USB port for connectivity with compatible computers and tablets.

LEG45601 $404.95

NEW **1**

LEGO SPIKE Prime Technic Large Angular Motor

The LEGO Technic Large Angular Motor is the ideal solution for high-power, high-torque applications, featuring an integrated rotation sensor and absolute positioning for true straight-line control.

LEG45602 $59.95

NEW **1**

LEGO SPIKE Prime Technic Medium Angular Motor

Build high-response robots with the LEGO Technic Medium Angular Motor featuring low-profile design, integrated rotation sensor with absolute positioning and 1-degree accuracy.

LEG45603 $55.95

NEW **1**

LEGO SPIKE Prime Technic Distance Sensor

Deliver high-accuracy results with the LEGO Technic Distance Sensor, featuring 1-200cm range, +/- 1cm accuracy and programmable LED 'eyes'.

LEG45604 $58.95

NEW **1**

LEGO SPIKE Prime Technic Colour Sensor

The LEGO Technic Colour Sensor distinguishes between 8 colours and measures reflected and ambient light from darkness to bright sunlight.

LEG45605 $39.95

NEW **1**

LEGO SPIKE Prime Technic Force Sensor

The LEGO Technic Force Sensor measures pressures of up to 10 Newtons (~1kg) for accurate, repeatable results. The sensor can also be used as a touch sensor when pressed, released or bumped.

LEG45606 $35.95

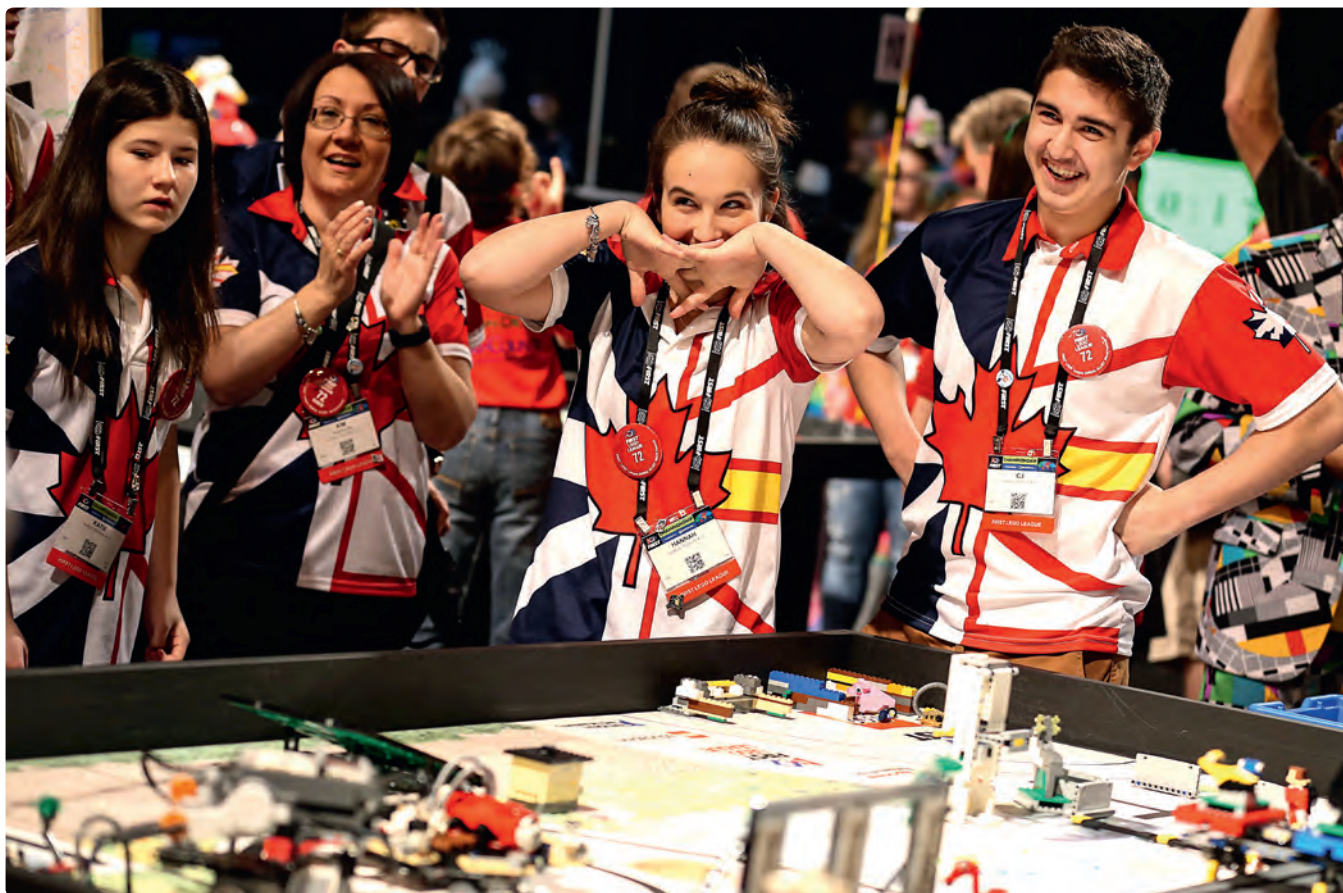**NEW** **1**

LEGO SPIKE Prime Technic Large Hub Battery

A specifically designed rechargeable battery for powering the Technic Large Hub. It is charged inside the Hub via micro USB cable and can be removed from the Hub without the use of tools.

LEG45610 $99.95

FREE freight on all orders over $199. Conditions apply, see website for details.

LEGO education

Participate in *FIRST*® LEGO® League with LEGO MINDSTORMS® Education EV3 or LEGO Education SPIKE™ Prime

More Engaged Students One Robot at a Time

Since today's students are the leaders of tomorrow, this competition puts them to work solving real-world science and technology challenges. Teams design their own solutions to a current scientific problem, building and coding autonomous

LEGO® MINDSTORMS® robots to perform a series of missions based on an annual theme. This helps students develop their creativity and problem-solving skills, gain confidence in their ability to overcome obstacles and open their eyes to the wide world of career options in STEAM. Get involved at

www.FIRSTLEGOLeague.org

A new addition to competitions

For robotics competitions such as *FIRST* LEGO League and WRO, the LEGO Education SPIKE™ Prime Expansion Set and Competition Ready unit help empower students and teachers who are new to robotics and in need of more formalised training. The final lesson of the unit has direct ties to the annual FIRST LEGO League Robot Game, making this the ideal start of the exciting Competitions journey in or out of the classroom.

FIRST
LEGO LEAGUE JR.
AGES 9-14 (GRADES 4-8)

PROVEN, VERIFIABLE IMPACT FOR PARTICIPANTS IN *FIRST* LEGO LEAGUE**

98%
IMPROVED PROBLEM-SOLVING SKILLS

95%
INCREASED TIME MANAGEMENT SKILLS

93%
INCREASED CONFLICT RESOLUTION SKILLS

OVER **76%**
STRENGTHENED COMMUNICATION SKILLS

****FIRST* LEGO League Jr. Evaluation Study (2014). The Research Group, Lawrence Hall of Science, University of California, Berkeley and Brandeis University, 2013 *FIRST* LEGO League Evaluation

FREE freight on all orders over $199. Conditions apply, see website for details.

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LEGO® Education WeDo 2.0
Making STEAM Come to Life in Years 2-4

At its core, science isn't about lab coats and research papers. It's about asking questions and investigating the answers. It's about wonder. WeDo 2.0 encourages students to put those aspects of scientific discovery to work by solving real STEAM problems. Using LEGO® bricks, sensors and motors, students can use this solution to ignite their creativity, develop critical-thinking skills, explore career possibilities and simply get hands-on STEAM experience. This set helps make abstract engineering and science concepts concrete and improves students' collaboration, problem-solving and computational thinking skills.

Code Confidently

The LEGO Education WeDo 2.0 Software consists of intuitive drag-and-drop programming blocks to bring your models to life. Different shapes and colours have different actions that help teach students how to build behaviours into their own models. When students master the WeDo 2.0 Software, they can move on to Scratch 3.0 and eventually Tynker, to incorporate text based programming.

Flow Blocks
These blocks help the program start, stop, pause, or repeat.

Output Blocks
These are blocks that define the outcome - like motor action, sound, light, or display.

Input Blocks
These blocks define the input, such as sensor, sound, or text.

teaching.com.au   Freecall 1800 251 497   Freefax 1800 151 492   Prices exclude GST

LEGO Education WeDo 2.0 Core Set

The LEGO Education WeDo 2.0 Core Set is a hands-on solution that helps teach STEAM concepts in an engaging, discovery-based way. Designed with collaboration in mind, this set combines LEGO bricks with classroom-friendly software to introduce students to science, engineering and computational principles. Each set includes the programmable SmartHub, medium motor, motion sensor, tilt sensor and building elements.

LEG45300 $319.95

Age Group Years 2–4

What's Included?

Core Set & Software
– LEGO Education WeDo 2.0 Core Set
– LEGO Education WeDo 2.0 Software

Unit Plans
– WeDo 2.0 Science & Engineering
– WeDo 2.0 Computational Thinking
– WeDo 2.0 Maker

Support
– WeDo 2.0 Teacher Guides
– Getting Started Tutorials
– Assessment Tools

WeDo 2.0 works with your choice of Operating System and Coding Platform

Supported Operating Systems
– iOS
– Chrome
– Windows
– Mac
– Android

Compatible coding platforms
– Scratch
– Open Roberta
– Tynker

FREE freight on all orders over $199. Conditions apply, see website for details.

LEGO® Education Classroom Solutions

LEGO® Education WeDo 2.0. Make science come to life

With real-world science projects, including engineering, technology and coding, students experience how science comes to life. WeDo 2.0 builds students' confidence to ask questions, define problems and design their own solutions, by putting discovery in their hands and their minds.

...enable teaching across science topics

Life Science

Investigate life cycles, habitats, traits, environmental changes and more.

Earth and Space Science

Discover the various climates, research of weather patterns and examine weather-related hazards. Example project: Design an automatic LEGO® floodgate to control the water level of a stream according to various precipitation patterns.

Physical Science

Explore forces and motion, cause and eff ect, and more. Example project: Investigate the factors that make a car go faster, to help predict future motion.

Engineering

Design projects involving constraints, prototype and test models. Example project: Create a solution to assist with the rescue of animals in dangerous situations.

Code Confidently

Build your own code by putting programming blocks together. Diff erent shapes and colors have diff erent actions that help teach students how to build behaviors into their own models.

Flow Blocks

These blocks help the program start, stop, pause, or repeat.

Output Blocks

These are blocks that define the outcome - like motor action, sound, light, or display.

Input Blocks

These blocks define the input, such as sensor, sound, or text.

teaching.com.au   Freecall 1800 251 497   Freefax 1800 151 492   Prices exclude GST

Included with each purchase of the WeDo 2.0 curriculum solution

24 **30-120**

UNIT PLAN
WeDo 2.0 Science & Engineering

Built on the latest science standards, this unit plan promotes investigation and experimentation in life, physical, earth, and space sciences. This unit plan gives teachers an engaging, hands-on way to introduce engineering, technology, and computing projects.

8 **90-120**

WeDo 2.0 Computational Thinking

Computational thinking is a way of solving problems computationally. This unit plan promotes skills such as distilling problems into smaller tasks, organizing actions in the right order, evaluating solutions, and communicating ideas in simple and creative ways.

4 **45-90**

WeDo 2.0 Maker

This unit plan combines the STEAM elements of WeDo 2.0 with the creative freedom of Maker. These open-ended activities invite students to question, create, tinker, make, innovate, and remake again while exploring early coding and more.

Program WeDo 2.0 with 3rd party software*

The WeDo 2.0 Core Set can, besides with the LEGO WeDo 2.0 software, also be programmed with Scratch, Tynker and Roberta. This allows students and teachers to use both block-based and text-based programming languages.

Scratch 3.0

– Online programming environment

– Based on Blockly (programming blocks with text labels)

– Large active online community with lesson plans and teacher ideas and inspiration

– Free download from https://scratch. mit.edu/

Tynker

– Similar to blockly

– Combine WeDo sensors with the tablet's own sensors

– Start with visual blocks and progress to JavaScript and Python

– Subscription based, download from https://www.tynker.com/

*Please note: 3rd party software is not developed, approved or endorsed by LEGO Education.

Roberta

– Cloud-based integrated programming environment that requires no registration and is completely open source

– Requires USB WiFi Dongle and a micro SD card

– Implementation languages are Java, JavaScript and html (NEPO)
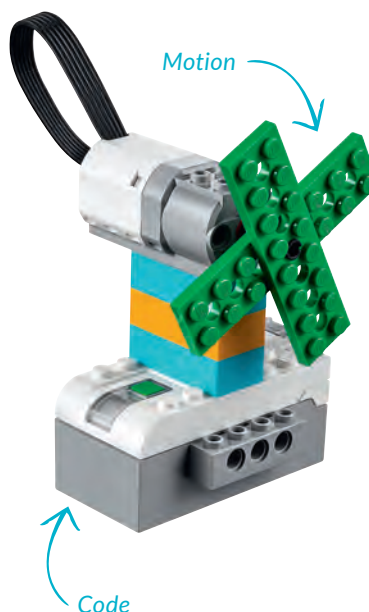
Motion

Code

THEME
WeDo 2.0 allows students to explore and develop solutions to real-life problems.

CODE
Block-base coding helps students understand how to combine the digital and physical aspect of the world.

MOTION
By experimenting with gears and motors, students can explore the science behind motion.

FREE freight on all orders over $199. Conditions apply, see website for details.

Classroom Solutions
WeDo 2.0 Curriculum Solution Packs

3rd party product   3rd party product

		WeDo 2.0 Curriculum Solution LEG45300	WeDo 2.0 Add-On Power Pack LEG54838	MTA Storage System Single SUN8316	MTA Storage System Double SUN8326
LEG45300-2K ⦿4	$609.95 Save $29.95	2			
LEG45300-2KP ⦿4	$935.95 Save $53.75	2	2		
LEG45300-3K ⦿6	$899.95 Save $59.90	3			
LEG45300-3KP ⦿6	$1,379.95 Save $104.60	3	3		
LEG45300-5K ⦿10	$1,479.95 Save $119.80	5			
LEG45300-5KP ⦿10	$2,289.95 Save $184.30	5	5		
LEG45300-5KS ⦿10	$1,629.95 Save $139.75	5		1	
LEG45300-5KPS ⦿10	$2,429.95 Save $214.25	5	5	1	
LEG45300-8K ⦿16	$2,359.95 Save $199.65	8			
LEG45300-8KP ⦿16	$3,629.95 Save $328.85	8	8		
LEG45300-8KS ⦿16	$2,579.95 Save $219.60	8			1
LEG45300-8KPS ⦿16	$3,799.95 Save $398.80	8	8		1
LEG45300-12K ⦿24	$3,499.95 Save $339.45	12			
LEG45300-12KP ⦿24	$5,319.95 Save $618.25	12	12		

Classroom Solutions

WeDo 2.0 Curriculum Solution Packs

		WeDo 2.0 Curriculum Solution LEG45300	WeDo 2.0 Add-On Power Pack LEG54838	MTA Storage System Double SUN8326 (3rd party product)	MTA Storage System Triple SUN8336 (3rd party product)
LEG45300-12KS 👤 24	**$3,719.95** Save $359.40	12		1	
LEG45300-12KPS 👤 24	**$5,519.95** Save $658.20	12	12	1	
LEG45300-15K 👤 30	**$4,374.95** Save $424.30	15			
LEG45300-15KP 👤 30	**$6,699.95** Save $722.80	15	15		
LEG45300-15KS 👤 30	**$4,624.95** Save $474.25	15			1
LEG45300-15KPS 👤 30	**$6,949.95** Save $772.75	15	15		1

🚚 **FREE freight on all orders over $199.** Conditions apply, see website for details.

Classroom Solutions

WeDo 2.0 Curriculum Solution Packs

3rd party product   3rd party product

		WeDo 2.0 **Curriculum Solution** LEG45300	WeDo 2.0 **Multi-Charger** WLMC01 or WCMC04	MTA Storage **SUN8326 or SUN8336**	LEGO® Transformer 10V DC - Battery Charger **LEG8887**	Smarthub Rechargeable Battery LEG45302
LEG45300-8C 👤 16	**$3,529.95** Save $299.20	8	1x 8-port charger			8
LEG45300-8CS 👤 16	**$3,739.95** Save $329.15	8	1x 8-port charger	1x double storage unit		8
LEG45300-10C 👤 20	**$4,279.95** Save $467.95	10	1x 10-port charger			10
LEG45300-10CS 👤 20	**$4,399.95** SAVE $568.95	10	1x 10-port charger	1x double storage unit		10
LEG45300-12C 👤 24	**$4,869.95** Save $848.70	12	1x 10-port charger		2	12
LEG45300-12CS 👤 24	**$4,929.95** Save $1,028.65	12	1x 10-port charger	1x double storage unit	2	12
LEG45300-15C 👤 30	**$5,999.95** Save $1,228.45	15	2x 8-port charger			15
LEG45300-15CS 👤 30	**$6,099.95** Save $1,428.40	15	2x 8-port charger	1x triple storage unit		15

MTA Storage Systems suitable for WeDo 2.0

SUN8336

MTA Storage Systems & Trays

3rd party product

These MTA excusive storage systems have been designed to organise your LEGO Education Storage tubs. The storage system also houses its own storage containers in two sizes. Each unit comes with the option of castors or adjustable feet for static storage. Assembly required

SUN8316	$169.95
SUN8326	$239.95
SUN8336	$299.95

SUN8316

SUN8326

SUN832S

Compatible with LEGO Education Storage Tubs

Smarthub & Batteries

LEGO® Education WeDo 2.0 Smarthub

The two-port Smarthub brings WeDo 2.0 sensors and motors to life. Using WeDo 2.0 Software and Bluetooth Low Energy (BLE), the Smarthub transmits data between a tablet or computer and the WeDo 2.0 Construction Set. Require two AA batteries or a Smarthub Rechargeable Battery.

LEG45301 $109.95

LEGO Education WeDo 2.0 Smarthub Rechargeable Battery

Rechargeable lithium ion battery for the WeDo 2.0 Smarthub. Includes a built-in LED to indicate charge status.

LEG45302 $109.95

LEGO Education WeDo 2.0 Add-On Power Pack

Save $14.95

This rechargeable battery and charger is designed exclusively for use with the Smarthub. It provides longer run time than AA batteries and has a charge time of around three hours.

LEG54838 $159.95

Sensors & Motors

LEGO Education WeDo 2.0 Medium Motor

Get things moving with the Medium Motor. Slotting between three modules, this medium-size, medium-power motor has 2x2 studs on top and a snap interface on the front to allow easy and optimized integration with TECHNIC and WeDo 2.0 constructions. No set-up is required. Simply connect the Medium Motor and it will be identified automatically by the WeDo 2.0 Software.

LEG45303 $44.95

LEGO Education WeDo 2.0 Motion Sensor

Attach a Motion Sensor to the WeDo 2.0 Smarthub and detect objects within a range of 15cm, depending on the design of the object. No set-up is required. Simply connect the Motion Sensor and it will be identified automatically by the WeDo 2.0 Software.

LEG45304 $44.95

LEGO Education WeDo 2.0 Tilt Sensor

Attach a Tilt Sensor to the WeDo 2.0 Smarthub and detect seven different types of orientation: Tilt This Way, Tilt That Way, Tilt Up, Tilt Down, No Tilt, Any Tilt and Shake. No set-up is required. Simply connect the Tilt Sensor and it will be identified automatically by the WeDo 2.0 Software.

LEG45305 $44.95

Replacement packs for WeDo 2.0

Replacement Pack WeDo 2.0

Don't let a missing piece spoil your enjoyment of WeDo 2.0. This Replacement Pack includes elements for the LEGO® Education WeDo 2.0 Core Set (part of LEG45300).

LEG2715 $14.95

WeDo 2.0 uses Bluetooth® Low Energy

For WeDo 2.0, we have integrated the latest Bluetooth technology into our solution to let you take 'live' control of the models you create for near-instantaneous response. To ensure the best-possible WeDo 2.0 experience, desktops, laptops and tablet devices must meet a minimum set of system requirements.

https://education.lego.com/en-au/support/wedo-2/ software-requirements

FREE freight on all orders over $199. Conditions apply, see website for details.

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Participate in *FIRST*® LEGO® League Jr. with LEGO Education WeDo 2.0

SUCCESS STORY

Inspiring Students to Reach for the Stars

In April of 1993, Ellen Ochoa became the first Latina astronaut to ever go to space. Today *FIRST*® LEGO® League Jr. is helping students at her namesake elementary school learn to shoot for the stars. Elementary school students from Ellen Ochoa STEM Academy in Grand Prairie, Texas participated in the CREATURE CRAZE™ Challenge and learned a lot about the important role of bees in human existence. Using WeDo 2.0 and the annual Inspire Set, the intrepid STEMVentors (a team name the students chose together) set to work making a moving model to show how astronauts could potentially harness bee power to make life on Mars a reality. During the competition, the students also got a chance to visit NASA headquarters and talk about their research. "The experience was life-changing to many of our students and their families that had never been outside our community," says technology teacher Carmela Brown, adding that her students were excited to see what opportunities lay ahead of them in STEAM fields. Thanks to their time in *FIRST* LEGO League Jr., the students' interest in robotics and other STEAM topics was launched into the stratosphere.

FIRST LEGO LEAGUE JR.
AGES 6-10 (GRADES K-4)

PROVEN, VERIFIABLE IMPACT FOR PARTICIPANTS IN *FIRST* LEGO LEAGUE JR.**

98% SHOWED GREATER AWARENESS OF STEM

85% WERE BETTER ABLE TO EXPLAIN IDEAS

71% COULD PROBLEM-SOLVE

88% SHOWED TEAMWORK SKILLS

**FIRST LEGO League Jr. Evaluation Study (2014). The Research Group, Lawrence Hall of Science, University of California, Berkeley and Brandeis University, 2013 *FIRST* LEGO League Evaluation
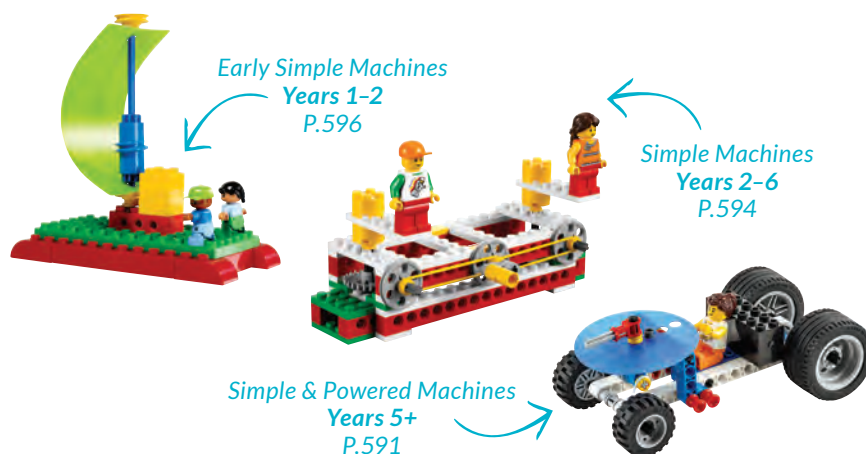
FREE freight on all orders over **$199.** Conditions apply, see website for details.

39

LEGO® Education Machines & Mechanisms
Discover how the Real World Works

With Machines & Mechanisms, teachers can ignite STEM learning in scientific inquiry and creative engineering design. We help teachers with guidance, easy-to-use activities, and real-world inspiration, bridging into technology and science textbooks.

Early Simple Machines
Years 1–2
P.596

Simple Machines
Years 2–6
P.594

Simple & Powered Machines
Years 5+
P.591

The Machines & Mechanism Continuum

Machines & Mechanisms is a range of challenging hands-on tools that link book-learning in science, technology, engineering and maths to real-world phenomena. From early primary to the end of high school, students will be engaged with hands-on solutions to real-world problems. From LEGO® DUPLO® to motor-powered models, the Machines & Mechanisms range will create that 'Aha!' moment, while improving problem-solving, collaboration and critical thinking skills.

Early Simple Machines

Simple Machines

Simple & Powered Machines

teaching.com.au   Freecall 1800 251 497   Freefax 1800 151 492   Prices exclude GST

LEGO Education Simple & Powered Machines Core Set

This is the STEAM tool that helps students investigate everything from basic mechanical principles to advanced motor-powered machines. Let STEAM curiosity rev up with full lessons, extension activities and problem-solving tasks that help students explore design engineering with more advanced mechanisms, structures and forces.

LEG9686 $324.95

Age Group **Years 5–12**

What's Included?

Core Set
– Simple & Powered Machines

Unit Plans
– Introducing Simple & Powered Machines
– Advancing with Simple & Powered Machines
– Simple & Powered Machines Maker

Support
– Quick-Start Guides
– Assessment Tools

Key Learning Values
– Investigate the principles of simple machines, mechanisms and structures
– Experiment with balanced and unbalanced forces
– Experiment with friction
– Transformation of energy
– Measure distance, time, speed and weight
– Calibrate scales
– Investigate powered forces, motion, speed and pulling power

Included with the Core Set

UNIT PLAN
Introducing Simple & Powered Machines
48 45-90

Using model activities and problem-solving tasks, students get a fundamental understanding of simple machines, structures, and mechanisms.

Advancing with Simple & Powered Machines
28 45-90

Use our unit plan to actively engage students in inquiry, reasoning, and critical thinking. This unit plan is designed to apply students' prior learning in science, technology, and mathematics together with engineering skills, creativity, and intuition.

Simple & Powered Machines Maker
15 45-90

Using open-ended problembased design challenges, teachers can encourage students to really explore the world of machines and mechanisms.

Classroom Solutions

Simple & Powered Machines Curriculum Solution Packs

		Simple & Powered Machines Curriculum Solution **LEG9686**	Track, Ramp & Stand **EIS0355DYTR** 3rd party product	MTA Storage System Double **SUN832** 3rd party product	MTA Storage System Triple **SUN833** 3rd party product
LEG9686-3N 👤 6	**$939.95** Save $34.90	3			
LEG9686-6N 👤 12	**$1,859.95** Save $89.75	6			
LEG9686-6ST 👤 12	**$2,079.95** Save $131.60	6		1	
LEG9686-8N 👤 16	**$2,439.95** Save $159.65	8			
LEG9686-8ST 👤 16	**$2,689.95** Save $242.45	8			1
LEG9686-12N 👤 24	**$3,629.95** Save $269.45	12			
LEG9686-12ST 👤 24	**$4,069.95** Save $353.15	12		2	
LEG9686-12NS 👤 24	**$4,169.95** Save $373.10	12	1	2	
LEG9686-15N 👤 30	**$4,429.95** Save $444.30	15			
LEG9686-15ST 👤 30	**$4,929.95** Save $609.90	15			2
LEG9686-15NS 👤 30	**$4,999.95** Save $779.80	15	2		2
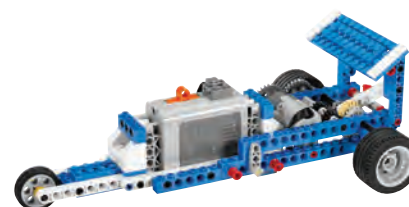
Energy Elements

Solar Panel

The Solar Panel provides sufficient power to operate the LEGO® Energy Meter and motors. It delivers: 5V, 4mA in direct light from a 60W incandescent bulb positioned 25 cm from the solar panel (>2000 lux); and 5V, 20mA in direct light from a 60W incandescent bulb positioned 8cm from the panel (>10,000 lux).

LEG9667 $106.95

Power Functions Battery Box

Give even more power and movement to your models with an extra battery box to supply power to your Power Functions motors! Each battery box can power 2 XL-Motors or 4 M-Motors at the same time. Requires 6 AA (1,5V) batteries, not included.

LEG8881 $26.95

Power Functions Light

Add bright LED lights to your models to create glowing eyes, illuminated headlights, and anything else you can imagine and build.

LEG8870 $25.95

Power Functions

Power Functions Rechargeable Battery Box

This rechargeable battery box has built-in Lithium polymer batteries for low weight and maximum power. Use the LEG8887 10VDC LEGO Transformer to charge the battery. Motor speed can be controlled via the battery box speed control dial! Output voltage is 7.4V.

LEG8878 $144.95

Power Functions Extension Wire 50cm

Build your Power Functions-equipped models bigger, better and more mechanised and motorised than ever before by adding this 50cm extension wire.

LEG8871 $14.95

Power Functions Extension Wire 20cm

Build your Power Functions-equipped models bigger, better and more mechanised and motorised by adding this 20cm extension wire.

LEG8886 $11.95

Power Functions XL-Motor

Build an extra medium-strength, medium-sized M-Mot Add an extra XL-Motor to your models! This superstrong motor will give plenty of power to your models, whether it's spinning a wheel or turning a system of gears. Use the "M" Motor to animate larger builds. Requires battery box (LEG8881), not included.

LEG8882 $29.95

Power Functions M-Motor

Build an extra medium-strength, medium-sized M-Motor into your LEGO creations and watch things start moving.

LEG8883 $26.95

Transformer 10V DC

This standard 10V DC transformer allows you to recharge your LEG45501 EV3 Rechargeable Battery, LEG8878 Power Functions Rechargeable Battery Box and WeDo 2.0 rechargeable battery.

LEG8887 $64.95

FREE freight on all orders over $199. Conditions apply, see website for details.

LEGO® Education Simple Machines

Age Group
Years 2–6

1-6 | 204 | | 7+

LEGO® Education Simple Machines Core Set

Use this set to help students investigate and understand the operation of simple and compound machines. This set features an assortment of bricks, gears, wheels, pulleys and levers to inspire students to explore science and engineering.

LEG9689   **$119.95**

What's Included?

Core Set
– Simple Machines

Unit Plans
– Simple Machines
– Simple Machines Maker

Support
– Quick-Start Guides
– Assessment Tools

Key Learning Values

– Observe and investigate
– Develop scientific enquiry skills
– Follow a design brief as part of the engineering design process
– Learn to apply relevant vocabulary for simple machines
– Test, predict and measure; collect data and describe outcomes

Included with the Core Set

UNIT PLAN
Simple Machines

20   45-90

Ignite students' curiosity about science and engineering with this unit plan. The Simple Machines unit plan includes 20 lessons with instructions for a variety of models and problem-solving activities. By working through them, students will develop critical-thinking skills while investigating simple and compound machines.

Simple Machines Maker

20   45-90

Introduce elementary students to the hands-on creative freedom of Maker. Using open-ended questions and real-life scenarios, students can think up ideas, tinker with prototypes, and build and develop solutions using the LEGO® Education Simple Machines Core Set and other materials from around the classroom. Through worksheets and assessments, students can feel supported and inspired, and teachers can have the creative confidence to help students think up new ideas.

teaching.com.au   Freecall 1800 251 497   Freefax 1800 151 492   Prices exclude GST

Classroom Solutions

Simple Machines Curriculum Solution Packs

3rd party product

	Simple Machines **Curriculum Solution** LEG9689	Power Functions **Battery Box** LEG8881	Power Functions **M-Motor** LEG8883	MTA Storage **System Single** SUN831
LEG9689-4N 👤 8	**$459.95** Save $19.85	4			
LEG9689-4NM 👤 8	**$659.95** Save $35.45	4	4	4	
LEG9689-8N 👤 16	**$899.95** Save $59.65	8			
LEG9689-8NM 👤 16	**$1,199.95** Save $190.85	8	8	8	
LEG9689-8NS 👤 16	**$1,349.95** Save $211.75	8	8	8	1
LEG9689-12N 👤 24	**$1,299.95** Save $139.45	12			
LEG9689-12NM 👤 24	**$1,799.95** Save $286.25	12	12	12	
LEG9689-12NS 👤 30	**$1,899.95** Save $357.15	12	12	12	1

Power Functions Battery Box

Give even more power and movement to your models with an extra battery box to supply power to your Power Functions motors! Each battery box can power 2 XL-Motors or 4 M-Motors at the same time. Requires 6 AA (1,5V) batteries, not included.

LEG8881 $26.95

Power Functions M-Motor

Build an extra medium-strength, medium-sized M-Motor into your LEGO creations and watch things start moving.

LEG8883 $26.95

FREE freight on all orders over $199. Conditions apply, see website for details.

LEGO® Education Early Simple Machines

Age Group
**Years
1–2**

1-3   102   5+

LEGO® Education Early Simple Machines Core Set

This set has all the gears, levers, pulleys, wheels, wings and more that students need to explore real-world science concepts with LEGO® DUPLO®. With building instructions, student worksheets and teacher guides, this set sparks engaged learning, problem solving skills, creativity and critical thinking.

LEG9656   Each Set **$274.95**

What's Included?

Core Set
– Early Simple Machines

Unit Plans
– Early Simple Machines

Support
– Quick-Start Guides
– Assessment Tools"

STEAM

Included
with the Core Set

UNIT PLAN
**Early
Simple Machines**

12   30-45

This unit plan contains 12 lessons: six beginner lessons, four intermediate lessons, and two advanced lessons. This unit plan is designed to help kindergarteners through second graders discover how gears, axles, pulleys, and more work by building them with LEGO DUPLO bricks.

LEGO education

🌐 teaching.com.au   📞 **Freecall** 1800 251 497   🖨 **Freefax** 1800 151 492   Prices exclude GST

Classroom Solutions

Early Simple Machines Curriculum Solution Packs

3rd party product

		Simple Machines **Curriculum Solution** *LEG9656*	MTA Storage **System Single** *SUN8317*
LEG9656-2N 👤 4	**$529.95** Save $19.95	2	
LEG9656-4N 👤 8	**$1,029.95** Save $69.85	4	
LEG9656-8N 👤 16	**$2,039.95** Save $159.65	8	
LEG9656-8NS 👤 16	**$2,139.95** Save $230.55	8	1

MTA Storage Systems suitable for Machines & Mechanisms

SUN831

SUN832

SUN833

Compatible with LEGO Education Storage Tubs

MTA Storage Systems & Trays

3rd party product

These MTA excusive storage systems have been designed to organise your LEGO Education Storage tubs. The storage system also houses its own storage containers in two sizes. Each unit comes with the option of castors or adjustable feet for static storage. Assembly required

NEW

EXCLUSIVE

SUN831	Single - Holds 3 EV3 trays	**159.95**
SUN832	Double - Holds 6 EV3 trays	**$239.95**
SUN833	Triple - Holds 9 EV3 trays	**$319.95**
SUN832S	Small Tray	**$10.95**
SUN831L	Large Tray	**$13.95**

SUN832S

SUN831S

FREE freight on all orders over $199. Conditions apply, see website for details.

LEGO® Education Coding Express

LEGO® Education Coding Express

A creative and intuitive train that introduces early coding concepts. These LEGO® DUPLO® bricks encourage connections and exploration of early coding concepts, such as sequencing, looping and conditional coding. A free optional app that provides four areas to explore: journeys, characters, music and maths. The different activities change the way the action bricks behave. Ages 2+ years

|		
LEG5025	Each Set	**$427.95**
LEG5025-4	Set of 4	**$1,599.95**

New Action Bricks

The five coloured action bricks will make the train come to life as students place them around the tracks to sound the horn, turn the lights on and off, pause and refuel, change direction and stop the train wherever they like.

Child Directed App

The free optional app combines physical play with digital intervention and is designed to enhance the learning experience. When you introduce the app, the four different themed activities change the way the action bricks behave, altering their effect on the train.
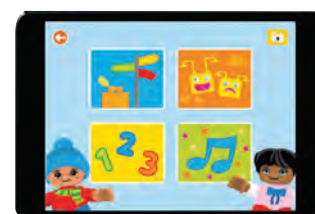
teaching.com.au   **Freecall** 1800 251 497   **Freefax** 1800 151 492   Prices exclude GST

Engage primary and high school students in subjects from science to humanities

LEGO Education provides a continuum of curriculum content that is relevant to students' everyday lives and realworld contexts as well as expandable for teachers. From primary through to high School, the content is created by a full development team of educators and education experts. We off er resources for teaching science, technology, engineering and maths.

2020 School Resource Plan

	Page	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
EV3 Robotics	2						X	X	X	X	X	X	X
EV3 Space Challenge	12						X	X	X	X	X	X	X
SPIKE™ Prime	23				X	X	X	X					
RobocupJunior	19	X	X	X	X	X	X	X	X	X	X	X	X
FLL	28				X	X	X	X	X	X			
***FIRST*® LEGO® League Jr**	38		X	X	X								
WeDo 2.0	29		X	X	X								
Simple & Powered Machines	41				X	X	X	X	X	X	X	X	X
Simple Machines	44		X	X	X	X	X						
Early Simple Machines	46	X	X										
Coding Express	48	X											

Computing	Engineering	Technology	Science	Maths
EV3				
SPIKE Prime				
WeDo 2.0				
Machines & Mechanisms				

FREE freight on all orders over $199. Conditions apply, see website for details.

LEGO education

LEGO® Education
SPIKE™ Prime

LEGO education

Box
Sturdy storage box with sorting trays and over 500 LEGO® Technic™ and System elements

Motors
Large Motor
2 Medium Motors

Sensors
Distance Sensor
Force Sensor
Colour Sensor

Hub
Programmable hub features a 5x5 LED light matrix, 6 input/output ports, integrated 6-axis gyro sensor, speaker, Bluetooth connectivity and rechargeable battery

New bricks
Brand new LEGO Technic elements in a fresh new colour palette

LEGO Education SPIKE™ Prime helps spark STEAM curiosity and confidence in middle school students. This concept brings together colourful LEGO building elements, easy-to-use hardware, intuitive coding language based on Scratch and 4 engaging student-ready units to continuously engage your class regardless of their learning level. The units are designed to develop critical thinking skills through complex, engaging and personally relevant STEAM challenges based on real-life examples.

LEGO Education SPIKE Prime Set

LEG45678

$535⁹⁵