



CODE CONFIDENTLY

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.



SYSTEM REQUIREMENTS

LEGO Education SPIKE™ Prime utilizes the coding language based on Scratch with your choice of operating system: iOS, Chrome, Windows 10, Mac and Android. To find out if your device is supported, please visit:

LEGOeducation.com/start



LEGO® EDUCATION SPIKE™ PRIME

Building STEAM Skills and Confidence in Middle School

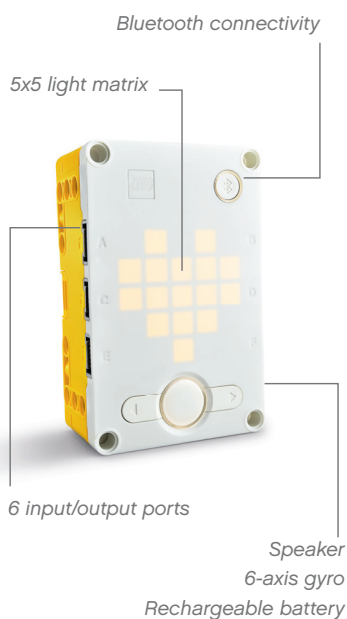
LEGO® Education SPIKE™ Prime helps spark STEAM curiosity and confidence in middle school students. This concept brings together colorful LEGO building elements, easy-to-use hardware, intuitive coding language based on Scratch and student-ready units to continuously engage your class regardless of their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





THE HUB

The heart of the LEGO® Education SPIKE™ Prime system is the programmable Hub. The SPIKE Prime Set also includes highly accurate motors and sensors that, together with a large variety of colorful LEGO building elements, let students design and build fun robots, dynamic devices and other interactive models. Many attachment points on the Hub, motors and sensors plus new, large building elements means students spend less time building and more time learning.



SET

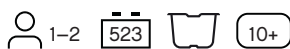
LEGO® Education SPIKE™ Prime Set

45678

The LEGO® Education SPIKE™ Prime Set is the go-to STEAM learning tool for grade 6-8 students. Combining colorful 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. From easy-entry projects to limitless creative design possibilities, SPIKE Prime helps students learn the essential STEAM and 21st century skills needed to become the innovative minds of tomorrow... while having fun!

KEY LEARNING VALUES

- Apply engineering design skills at each step of the design process.
- Develop efficient problem-solving and coding skills through decomposition of problems and algorithmic thinking.
- Design projects that combine hardware and software components to collect and exchange data.
- Work with variables, data arrays and cloud data.
- Apply critical thinking and develop life skills for the careers of tomorrow.



APP

Intuitive app scales from easy-entry to limitless creative design

In addition to a Getting Started Material, the LEGO® Education SPIKE™ App comes with 4 learning units of curriculum-aligned STEAM content focusing on Engineering and Computer Science. Designed for students grades 6-8 and optimized for 45-minute lessons, these units accelerate STEAM learning by consistently engaging students to think critically and to solve complex problems, regardless of their learning level.

EXPANSION SET

LEGO® Education SPIKE™ Prime Expansion Set

45680

Enter the exciting world of robotics competitions with the LEGO® Education SPIKE™ Prime Expansion Set (45680). With 603 elements, including large wheels, banana gears, a color sensor and a large motor, this add-on to the SPIKE Prime Set (45678) features over 10 hours of targeted STEAM learning that will inspire 6th to 8th grade students and teachers to build more advanced models and prepare them for the fun and challenging world of robotics competitions.

KEY LEARNING VALUES

- Learn the basics of creating and programming autonomous robots using sensors.
- Develop collaboration and teamworking skills to build a competition robot. Systematically test and refine programs.
- Use problem-solving skills and complete competition missions.
- Apply critical thinking and develop life skills for the careers of tomorrow.

REQUIRES ADDITIONAL PRODUCTS

LEGO® Education SPIKE Prime Set (45678)

603 10+



GETTING STARTED



START HERE ⌚ 5

Connect the Hub and create a LEGO emoji.

MOTORS AND SENSORS ⌚ 30

Explore action-reaction.

MAKE IT MOVE ⌚ 30

Build and code.

UNIT PLANS

⌚ 45-90 ☁

SPIKE PRIME SET

INVENTION SQUAD 📋 5

Explore engineering.

KICKSTART A BUSINESS 📋 6

Investigate computer science.

LIFE HACKS 📋 7

Practically apply data.

SPIKE PRIME EXPANSION SET

COMPETITION READY 📋 8

Use curiosity and teamwork.

SUPPORT

SOLUTION INCLUDES

- Lesson Plans
- Assessment Tools & Technical Support

ADDITIONS

- Training & Professional Development

LEGO® Education SPIKE™ Prime Elements

  Unless noted

LEGO® Technic™ Large Hub

45601

This advanced yet simple-to-use brick-shaped device features 6 input/output ports for connecting a variety of sensors and motors, a customizable 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.



LEGO® Technic™ Large Angular Motor

45602

The ideal solution for high-power, high-torque applications, featuring an integrated rotation sensor and absolute positioning for true straight-line control.



LEGO® Technic™ Medium Angular Motor

45603

Build high-response robots. Low-profile design, integrated rotation sensor with absolute positioning and 1-degree accuracy.



LEGO® Technic™ Distance Sensor

45604

Deliver high-accuracy results. 1-200cm range, +/- 1cm accuracy, programmable LED 'eyes' and an integrated 6-pin adaptor for third-party sensors, boards and DIY hardware.



LEGO® Technic™ Color Sensor

45605

Distinguishes between 8 colors and measures reflected and ambient light from darkness to bright sunlight.



LEGO® Technic™ Force Sensor

45606

Measure pressures of up to 10 Newtons (~1kg) for accurate, repeatable results. Can also be used as a touch sensor when the front button is pressed, released or bumped.



LEGO® Technic™ Large Hub Battery

45610

Rechargeable lithium-ion battery for use with the 45601 LEGO® Technic™ Large Hub (sold separately). This high-capacity, 2,000 mAh battery can be charged while fitted to the Hub using a micro USB cable and can also be removed quickly and conveniently without the need for tools. This battery is included with the 45601 Technic Large Hub and LEGO Education 45678 SPIKE™ Prime Set.



LEGO® Technic™ Micro USB Connector Cable

45611

Connects compatible computers and tablets with the 45601 Large Hub for tasks such as transferring data, performing firmware updates and charging the Large Hub.



Replacement Pack

LE Replacement Pack Prime








 

2000719

Keep your LEGO® Education SPIKE™ Prime Set (45678) in perfect working order with the LE Replacement Pack Prime. With over 100 LEGO Technic™ and System elements, this replacement pack means you won't waste precious classroom time searching for missing pieces.

To find out more about LEGO Education in your area, please contact your local distributor.

Icons

-  Recommended number of students per set
-  Total number of elements in a set
-  Storage box included
-  Suitable age range of set
-  Projects/activities/lessons in a unit plan
-  Duration of project/activity/lesson
-  Free website downloads

LEGOeducation.com

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