



LEGO® LEARNING SYSTEM FAQs

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General Q&As

What is the LEGO® Learning System?

The LEGO® Learning System is a range of interconnected solutions that work seamlessly together, making it easier to implement STEAM learning at the classroom, school, and district levels. This intuitive, inclusive, and highly adaptable system meets every student wherever they are in their learning journey. Its progression of standards-aligned learning units, LEGO bricks, intuitive hardware, and programming languages helps students of all ages develop essential skills like creativity and critical thinking.

What is the target age group for the LEGO Learning System?

The LEGO Learning System is designed to develop STEAM and essential life skills in primary and secondary school students.

Built-in scaffolding makes it easy for students and teachers to get started and move seamlessly through the lessons.

What is the learning value of the LEGO Learning System?

The LEGO Learning System uses a progression of playful learning experiences to build STEAM knowledge, academic practices, and 21st century skills at the primary and secondary school levels.

These learning experiences strengthen students' ability to apply STEAM concepts, practice interdisciplinary skills (e.g., scientific inquiry, computational thinking, engineering, and

mathematical practices), and develop essential future-proof skills like creativity, critical thinking, collaboration, and effective communication with confidence.

Based on research into the power of learning through play in driving holistic skills development, the learning experiences that comprise the LEGO Learning System facilitate rapid and iterative physical prototyping and experimentation. Abstract STEAM concepts become tangible as students move from simple explorations of specific concepts to tackling increasingly complex real-world challenges. The process of modeling and visualizing phenomena through multi-modal experiences helps students learn STEAM concepts quickly and at a deep level.

The system's sequence of playful learning units enables students to successfully experience a progression of learning from grade to grade. A recognizable and familiar set of tools is used from kindergarten to grade 12, actively engaging students in creating and refining solutions in order to solve individually relatable and increasingly complex challenges. This progression fosters a high level of engagement in a safe and joyful environment that encourages trial and error.

How is the learning progression designed?

The LEGO Learning System uses a progression of easy-to-follow, standards-aligned lesson plans presented in fun thematic units that are intentionally designed to spiral and deepen students' learning. Easy "getting started" material supports students as they build confidence in their creativity and problem-solving abilities. The system's progression provides endless opportunities for students to use their imaginations and apply increasingly sophisticated coding and engineering skills as they develop their solutions.

Does the LEGO Learning System include a pre-K to K solution?

Though not a formal part of the LEGO Learning System, the LEGO Education *Early Learning* portfolio builds a strong foundation for learning through play. These solutions are specially designed for children in pre-K and kindergarten to stimulate their curiosity and desire to explore together, laying the foundation for STEAM learning, and preparing them for primary school.

Research shows that the earlier students begin to engage with STEAM subjects, the higher their confidence. LEGO Education is ready to support that development with hands-on solutions for all ages and abilities.

What makes the LEGO Learning System systematic?

The LEGO Learning System is comprised of integrated components and toolboxes that progress in complexity through the grades. All of the learning experiences are carefully designed with continuity to build on one another, driving a progression of learning.

This systematic approach of hands-on STEAM learning experiences combines LEGO bricks, programmable hardware (e.g., Hub, motors, sensors), and a Scratch-based or Python programming language with lesson plans that teach students how to solve relatable challenges all within the same app. All of the system's components scale from simple to complex. Simple building with familiar stackable LEGO bricks leads to prototyping with sturdy LEGO Technic elements, and it progresses from icon-based block coding for non-readers to word-based block coding and finally to text-based coding.

Schools can choose to dive fully into our comprehensive technology-enhanced STEAM solutions with *LEGO® Education SPIKE™ Essential* for primary school and *LEGO® Education SPIKE™ Prime* for secondary school. Or start with *LEGO® Education BricQ Motion Essential* and *LEGO® Education BricQ Motion Prime* for primary and secondary school. BricQ Motion is a hands-on analog solution that explores the physical science of sports. When used together, these four solutions unlock even more learning opportunities.

What does a LEGO® Learning System solution include?

Each LEGO Learning System solution includes a progression of standards-aligned learning units, LEGO bricks, intuitive hardware, and digital tools designed to build students' 21st century skills. This easy-to-integrate system of products can be adopted in full or introduced over time as it scales seamlessly from entirely hands-on analog solutions to digitally-enhanced solutions. The professional development components allow teachers to learn, practice, and master the competencies they need to empower their students to succeed.

How many products comprise the LEGO Learning System? What are their roles in the overall system?

The LEGO Learning System offers 4 solutions for primary and secondary education.

- 45345 LEGO® Education SPIKE™ Essential Set
- 45678 LEGO® Education SPIKE Prime Set
- 45401 LEGO® Education BricQ Motion Essential Set
- 45400 LEGO® Education BricQ Motion Prime Set

SPIKE Essential gets primary school students excited about STEAM learning by engaging them in playful, narrative-based problem-solving as they investigate simple solutions to increasingly complex challenges. This solution combines stackable LEGO bricks, simple hardware, and an easy coding language based on Scratch to keep students exploring as they develop into independent STEAM thinkers.

SPIKE Prime engages secondary school students in critical thinking, data analysis, and prototype development as they refine creative hands-on solutions to real-world problems. This solution combines robust LEGO Technic elements, versatile and accurate hardware, and a

familiar coding language based on Scratch and Python to enable students to explore complex engineering and technology concepts within a real-world context.

BricQ Motion Essential and BricQ Motion Prime allow primary and secondary school students to discover forces, motion, and interactions in a sports-related context. They'll set bricks in motion as they explore physical science hands-on and without technology.

Which products should I start with?

One option is to dive right into using our comprehensive technology-enhanced STEAM solutions with *SPIKE Essential* for primary school and *SPIKE Prime* for secondary school. Both of these core LEGO Learning System solutions meet students at their level, building their skills as they progress in their learning journey.

Alternatively, you could start with *BricQ Motion Essential* and *BricQ Motion Prime* for primary and secondary school. BricQ Motion is a hands-on analog solution that explores the physical science of sports without the use of technology.

How do I start using this material with my students?

The "getting-started" material, grade-band structured units, and 45-minute standards-aligned lesson plans make it easy for teachers to start implementing these solutions in their classrooms, driving concrete learning outcomes right out of the gate.

For more guidance, please visit LEGOeducation.com/start. Select the solution you'll be using, and follow the onboarding guide for your set/unit grade band.

Curriculum

What is a LEGO Learning System curriculum unit?

A *LEGO Learning System curriculum unit* is a progression of lessons, which includes lesson plans and teaching resources. Each unit starts with an introductory lesson that's followed by guided activities and an open project. Each curriculum unit includes 6–8, 45-minute lessons (the open project is 2 x 45 min). Additionally, each lesson includes 30+ minutes of language arts or math extensions. Therefore, each curriculum unit contains a total of 6–10 hours of educational content.

How much learning content does the LEGO® Learning System offer?

LEGO Education SPIKE™ Essential offers 6 curriculum units in total; 2 for lower primary (grades 1 & 2) and 3 for upper primary (grades 3–5). The sixth unit is designed specifically for the *FIRST®* LEGO League Explore competition.

SPIKE Prime offers 5 curriculum units for secondary school students, all mapped to grade 6–8 curriculum standards.

BricQ Motion Essential offers 2 curriculum units; one for lower primary and one for upper primary.

BricQ Motion Prime offers one curriculum unit for secondary school students.

Which educational standards are covered?

All of the LEGO Learning System learning units are linked to national standards for primary and secondary school. Each unit includes a learning promise that's supported by a progression of playful learning experiences designed to develop students' STEAM knowledge, academic practices, and 21st century skills.

Where can I find lesson plans and teaching resources?

Please visit LEGOeducation.com/lessons to find all of LEGO Education's online lesson plans and teaching resources. You can search by product, grade, subject, or keyword to find an engaging lesson that fits your needs.

In which languages is the LEGO Learning System curriculum available?

The LEGO Learning System curriculum is available in 21 languages: English (US), English (UK), English (AU), Chinese, Japanese, Russian, German, Dutch, Swedish, Norwegian, Danish, French, Italian, Korean, Portuguese (BR), Spanish, Spanish (MX), Polish, Turkish, Vietnamese, and Arabic.

What type of assessment tools are included?

Each lesson includes an observational checklist for teachers, and tools to support self-assessment and peer (student-to-student) feedback.

Hybrid Learning

Does the LEGO Learning System offer hybrid learning opportunities?

Yes! The LEGO Learning System offers hybrid extensions to provide the flexibility to extend the learning experience to remote environments, and to help students continue their learning outside of class. Used in combination with the classroom sets, the Personal Learning Kits are designed to support hybrid learning by reinforcing students' learning outcomes at home.

We offer two versions of the Personal Learning Kit.

- 2000471 LEGO® Education BricQ_Motion Essential Personal Learning Kit
- 2000470 LEGO® Education BricQ_Motion Prime Personal Learning Kit

Professional Development

Is professional development available?

Yes. The LEGO Learning System is fully supported by a comprehensive professional development program. Our progressive, competency-based professional development program supports teachers in learning, practicing, and mastering the competencies necessary to deliver effective hands-on STEAM learning experiences.

Please visit LEGOeducation.com/PD for more details.