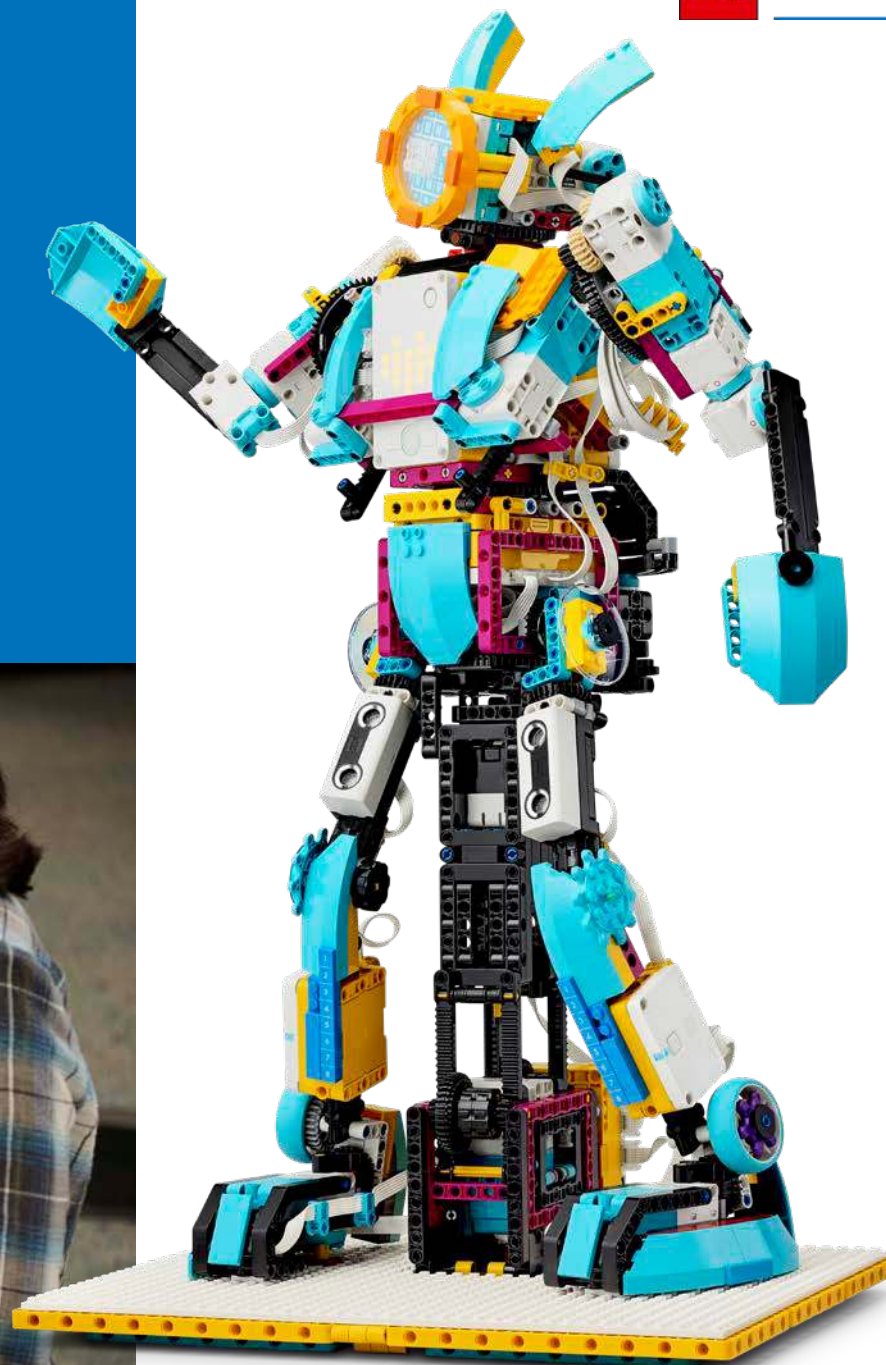
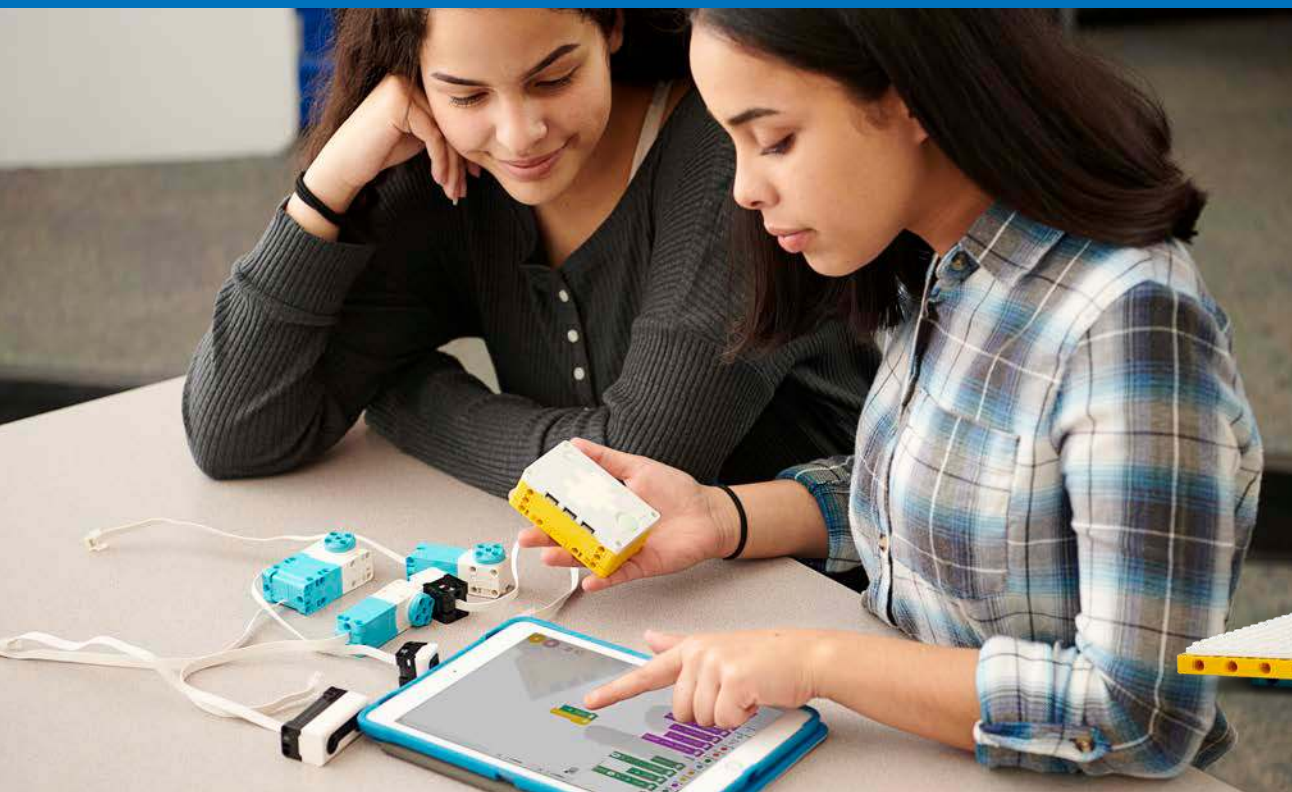


LEGO® Education solutions for Higher Education



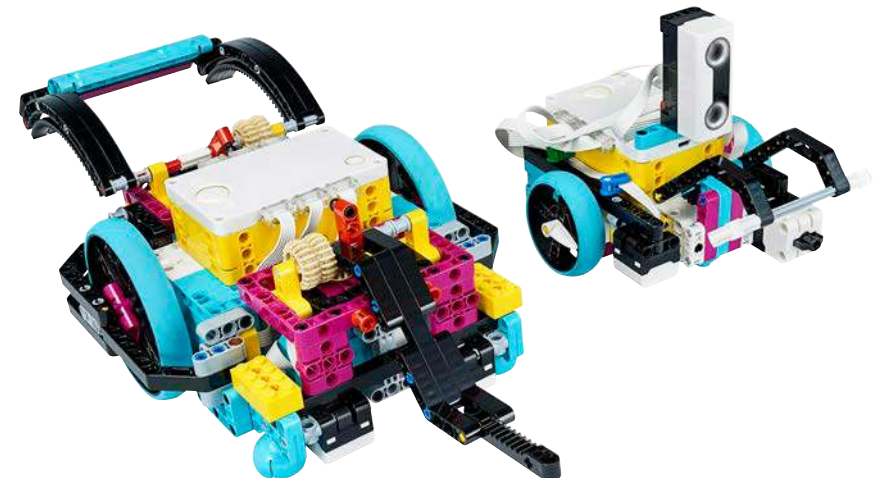
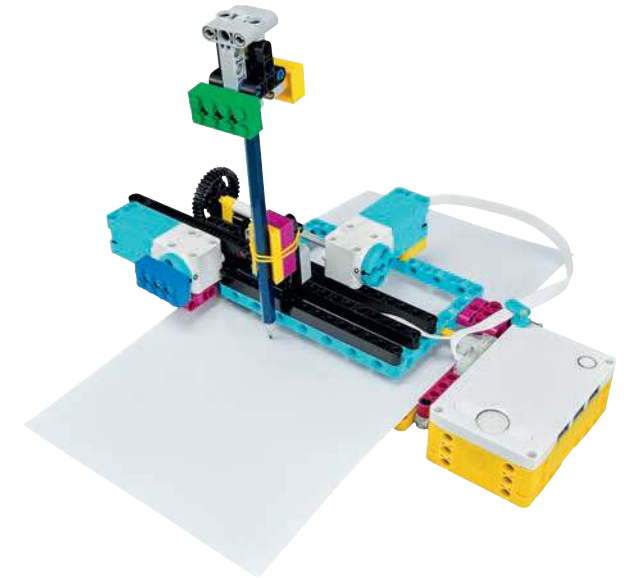
Why LEGO® Education for Higher Education

STEM outreach

Our world is becoming more technology-driven every day as new innovations make STEM based skills increasingly critical. By presenting students with these subjects at every stage in their educational careers, makes it accessible and interesting, therefore increasing their engagement and confidence while preparing them for the future.

Sparking passion for computer science

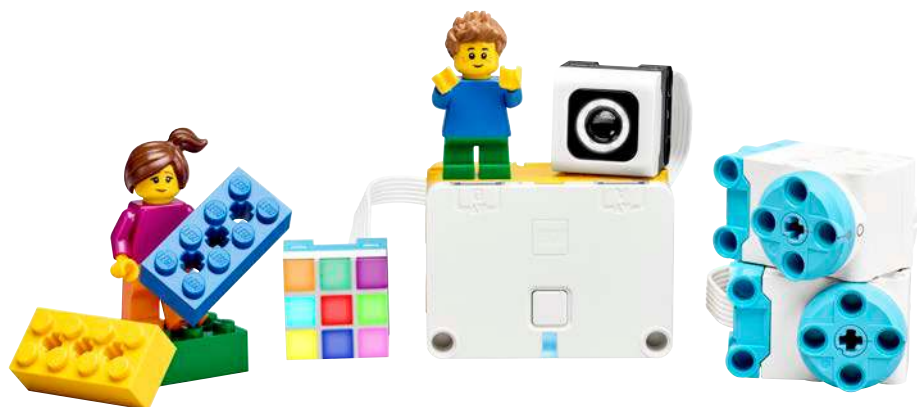
Innovations in automation and artificial intelligence are shaping the workforce and making it more critical than ever that all students learn computer science at the earliest education levels. This prepares students for a future where transferable computer science skills such as computational thinking, problem-solving, reasoning and logical deduction are in demand across every industry. Delivered through the interconnected, scalable LEGO® Learning System, the solutions leverage the familiar LEGO brick and professional development for educators, allowing easy entry and enabling all students to succeed in computer science.



About LEGO Education and the LEGO Learning System

The LEGO Learning System is an intuitive, inclusive and highly adaptable hands-on learning system. It future-proofs pupils' skills and makes them confident life-long learners by giving them unlimited possibilities for hands-on, playful STEAM learning.

With this research-backed learning system, abstract concepts become tangible as pupils move from simple explorations to tackling increasingly complex real-world challenges. Activities such as building, prototyping and storytelling facilitate multi-modal experiences that help pupils learn STEAM concepts more quickly and at a deeper level.



It's time to rethink learning

→ An integrated continuum of learning

Inspire pupils of all ages with exciting STEAM solutions that build knowledge and skills year on year, encouraging collaboration and teamwork.

→ Playful learning experiences

Engage pupils and teachers with solutions backed by over 40 years of experience in creating joyful learning experiences based on learning-through-play principles.

→ A brand you know and love

A familiar brand known for playful, hands-on learning experiences and high-quality products that support creativity and critical thinking year after year.

→ A true STEAM solution

Every lesson is designed to help pupils develop a full range of STEAM skills, using familiar LEGO building elements and Minifigures to help connect abstract concepts to real-life experiences.

→ Built-in scaffolding for easy adoption

Easy implementation in the classroom and across the school, along with the support of built-in scaffolding and professional development, allows teachers to focus on their pupils and drive successful learning outcomes.

→ A toolbox to unlock unlimited possibilities

Deliver unlimited STEAM learning possibilities with an interconnected system of solutions that work seamlessly together, driving familiarity over time to unlock deeper learning across year levels, with or without technology.

STEM outreach

STEM outreach teams can deliver an exciting programme of activities inspiring young learners in science, technology, engineering and mathematics.

By creating activities for both pre-16 and post-16 learners to encourage exploration and understanding of life as a STEM student at university and the real-world applications of STEM subjects. It can work in a hybrid manner, delivering activity online, welcoming students onto campus and visiting local schools.



67%

of all STEM jobs
are projected to be in
computer science¹

22%

projected increase
of computer science
jobs from
2020 – 2030²



Using LEGO Education for STEM outreach and engagement at Kingston University

Working with young people aged 7-18, as well as adult learners, Kingston University run STEM-related workshops both in the Outreach Centre at Kingston University and going into schools with 'Lab in a Lorry'. The programme works with schools and colleges in and around Kingston to build interest in STEM degrees and careers.

The STEM outreach team has been running for around 7 years and works closely with the University faculties to offer activities which are both curriculum aligned and

Key benefits of LEGO Education

Demonstrating STEM principles

"We are also very keen to teach young people about how scientists and engineers think and work. The sets are very useful for this as they allow students to investigate the effects of forces experimentally and so teach them how scientists develop and conduct experiments to further their understanding of the world around them. The activities which focus on engineering skills allow students to understand how engineers solve problems by building and developing prototypes in a hands-on approach, this is a great way to build the aspirations of students towards careers in engineering."

showcase the STEM degrees that Kingston University has to offer. The STEM Outreach Team aim to increase the number of young people from disadvantaged and under-represented groups accessing STEM-related courses at university.

The University introduced LEGO® Education products into their outreach programme to help improve the delivery and engagement of the programme.

The online resources and lessons offer flexibility

"The most important aspect of the LEGO Education suite, for us, is its versatility. We work with such a wide range of students, schools, and ages, that we need our equipment to be as adaptable as possible. Having a set of resources which can allow our sessions to be very easily catered to a specific school group, whilst still being curriculum aligned, is incredibly helpful for us. The huge range of ready-made resources available online makes our lives much easier, we are planning to make use of all of the resources available over the next year."

**Kingston
University**
London

Case study



"The introduction of the LEGO Spike and Motion sets are a great addition to our outreach work. The versatility of the kits is great, as it allows us to cover a wide range of Key stages with a variety of activities with a relatively small amount of kit. The sets are a great way to teach and engagingly reinforce coding skills, especially as the STEM outreach team are not specialists.

"The range of activities available for both the Spike and Motion sets are incredibly helpful, they allow us to cater our sessions to the schools we work with, ensure that our sessions are curriculum-aligned, and reduce planning time for our team."

Martin Wood

STEM Outreach Officer - Kingston University



Delivering curriculum

The use of LEGO increases the tactile and kinaesthetic aspects of the learning experience and helps to make abstract concepts more concrete. Students can execute and create programs, whilst giving lecturers the ability to demonstrate fundamental and more advanced concepts.

By introducing practical elements into lessons with robotics, allows pupils to see results more clearly, and understand the effects of the codes they write.

90%

of students
who thought their
computer science class
was fun want to learn
more³

How can the LEGO Learning System help deliver subjects?

Design, build, program and test robots that can complete complex tasks, record live data, respond to environmental changes and more. It can also help develop skills such as teamwork, problem-solving and creativity. Educators can use the familiarity of the LEGO system of bricks to build every student's confidence in computer science learning and other STEM subjects.



Using LEGO Education to create practical programming at the University of South Wales

The University of South Wales was looking for a practical, flexible platform for programming exercises, particularly in their robotics modules. Christopher Tubb, Senior Lecturer, explains:

“LEGO was chosen as part of our lab and teaching equipment as it provides a great deal of flexibility and functionality for the cost associated. The staff and student familiarity with LEGO were also seen as an advantage. Generally for the exercises, the students are presented with a set configuration or prebuilt devices and asked to programme it to achieve specific tasks.

Usually, we ask students to work in pairs when using LEGO for developing code to share their experiences. As the tasks progress, we find and encourage, communication throughout the group as they share their frustrations and successes in completing the task.

We also use LEGO in student projects; the nature of LEGO makes it an ideal platform for students who are not studying electronics or mechanical engineering to build and experiment with prototype devices which might otherwise have been costly and time-consuming for them to create.

We intend to use our LEGO to provide students with a friendly tool to develop ideas. We also find that we discover more ways in which LEGO can be integrated into our teaching practice as we and the students continue working with it.”

Key benefits of LEGO Education

Familiarity

“Students’ familiarity with LEGO helps them to engage with the exercises; the platform is not intimidating and we hope it makes the exercises more fun. Certainly, practical sessions do buzz when the students are using the robots. There was some concern that using LEGO might in some way be seen as trivialising the exercises, but this has not been the case”.

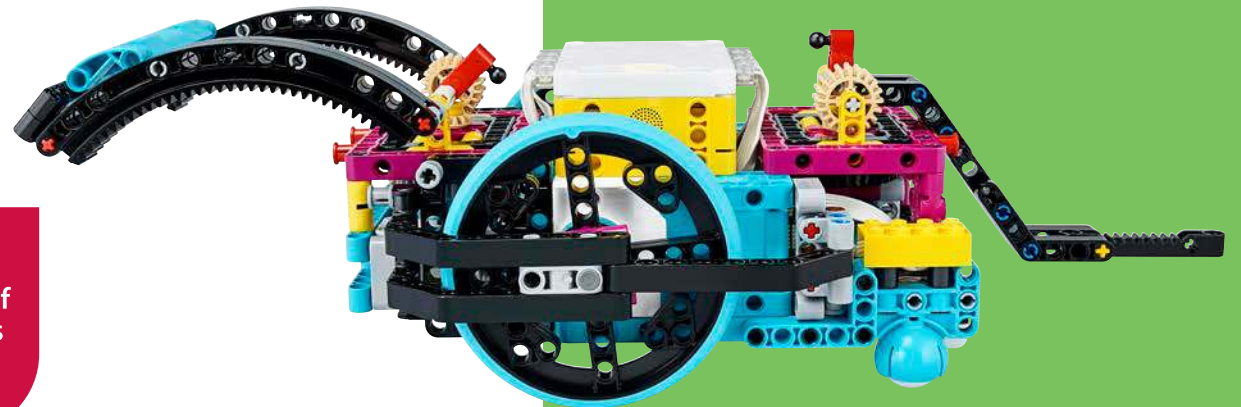
Easy to deploy

“LEGO is easily deployed at a practical level in sessions. We can have multiple sites and many students working at once; it is the right physical size for pairs of students to work on is safe and reliable”.



“LEGO is familiar. It is not intimidating to students. Everyone likes LEGO. Classes using LEGO are fun”.

Christopher Tubbs
Senior Lecturer - University of South Wales



University of
South Wales
Prifysgol
De Cymru

Proof of Concept (PoC) programme

Getech, in partnership with LEGO Education, has developed an engaging, playful Proof of Concept (PoC) programme for education.

This hands-on trial enables you to see the positive impact first-hand and gain a full understanding of the wide range of teaching resources included in the learning system.

What's included/How it works

- A LEGO Certified Trainer will visit your institution
- Getech will provide a full selection of LEGO Learning system products on the day. Including SPIKE™ Prime, SPIKE™ Essentials and BricQ Motion
- We will demonstrate the LEGO Learning system with different situations based on your objectives
- Getech will provide follow up advice on the best solution for the school based on learnings from the day
- You will also receive best pricing on LEGO Education products by participating in the PoC programme



- ➔ Learn how the LEGO Learning System creates an engaging and inspiring learning environment
- ➔ Get a first-hand look at the range of LEGO Education products available
- ➔ See the cross-curriculum benefits and its role in STEAM learning



Ready to explore LEGO Education?

Contact

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Getech.co.uk/LEGO

