Building Tomorrows Engineers

School Workshops

LEGO education
Who We Are...

Learn it Educational Solutions Ltd. are the official partners of LEGO® Education in Ireland. We provide services for schools such as Student Workshops, Distribution of LEGO Education products and LEGO Education Academy Training.

We are Ireland’s only LEGO Education Partner, of which we are very proud of. We have been working since 2011 to bring LEGO Education to schools in Ireland. All our instructors are trained to LEGO Education Academy standards are fully Garda Vetted. We have a full child protection policy in place and are fully insured.

LEGO® Education has been creating solutions for pre-schools and classrooms for 30 years. The skills and techniques that the LEGO System for Learning embodies meet many of the needs of 21st century learners. LEGO Education solutions enable students to be active, creative and collaborative solution-seekers. In this way their instinct to learn is stimulated, and they are motivated to apply their learning in new contexts, which means that they embark on a self-directed learning process. We call this being ‘LEGO Smart™’.

LEGO Smart students use LEGO bricks and digital tools to solve problems creatively and to excel at working with others and thinking critically. By working in this way, they develop their understanding and ability to retain knowledge of key curriculum concepts, and therefore do well in school and on high-stakes tests.

Learn it has been featured on TV and in leading papers. We have also won awards for our workshops and camps. We have run our workshops for many organisations and worked with Education & Industries leaders, just a few of whom are featured below.


We’ve worked with:

schools.learnit.ie
Planning Your School Visit...

Over the next few pages you will see details of the various workshops we can offer you. There are several ways we can organise a visit to your school. Every school is different and each of our workshop packages can be tailored to meet your needs.

We can run multiple workshops over the course of one or more days so that every class in the school gets to participate or we can run longer sessions for 1-2 classes spanning over the course of a day or more.

Workshop Requirements

In order to make our workshops run as smoothly as possible we do have several recommendations and requirements.

Class Sizes:
Our workshops work great with average class sizes of 30, they work even better with smaller classes. While we can accommodate larger classes, the students will get more from the workshops with smaller classes. For larger classes we recommend splitting the class into two separate workshops.

Location:
Ideally we will be located in one room for the duration of the workshops, students will come from their classes to us to partake in the workshops. This way we can set the room up for the duration of the workshops and save on time between workshops. Projectors/whiteboards would be a bonus (but not a necessity), as we do have slide shows/demos we can show the students. For furniture we would require enough tables for children to work comfortably at, chairs are not a necessity as we've found the children tend to stand while participating at our workshops, but for longer workshops having them as an option would be recommended.

Booking

For further information on what we can do for you feel free to contact us at schools@learnit.ie or by phone at Dublin 01-5240004 or Cork 021-2430000.

Are you LEGO Smart™?
Testimonials

“I cannot recommend this workshop highly enough. It was one of the most successful and highly rated activities, which catered for all age and ability levels that we have ever had in our school.”

Siobhan (Principal) - St. Brendans B.N.S

“It’s brilliant to see something out of the ordinary captivating their minds like the Learn it workshop did. It was very easy to witness learning taking place. I’d highly recommend it to anyone else interested in it.”

Brendan - St. Nicholas N.S

“It was the best day we ever had in school, we really enjoyed The Lego workshop. When Ross and Rob came we were excited. Then we saw all of the Lego coming in and we got really excited.”

Shane, Kristian and Glenn - Students

“It is amazing how technology such as what you used with my class yesterday can be made so accessible by people such as yourselves. The maths skills that the boys learn it yesterday within the space of a few hours could never have been delivered as successfully or as practically as you and Rob managed in a regular classroom setup.”

Rebecca - De La Salle Ballyfermot

To read more of our testimonials visit shop.learnit.ie/testimonials
We have a range of Early Learning workshops available for both Junior and Senior Infants.

Early Simple Machines :: Junior & Senior Infants :: 20 - 30 min's

Our Early Machines workshops are great for Junior & Senior Infants students. They can build from eight mechanical models using simple double sided full colour building instruction cards. Students will use gears, levers, pulleys, wheels and axles, as well as a plastic punch-out sheet with eyes, sails, scales and wings.

Key Learning Values
- Exploring basic mechanical principles such as gears, levers, pulleys, wheels and axles
- Investigating force, buoyancy and balance
- Solving problems through design
- Working with others and sharing findings

Inspired Building :: Junior & Senior Infants :: up to 60 min's

Our Inspired Building workshops are great for Junior & Senior Infants students. They can build from several inspiration cards or build from their imagination. Students will use a wide range of Duplo bricks and accessories to build amazing structures, vehicles and creations. With inspirations such as crazy golf, tallest tower and fast cars students will have a blast at our workshops.

Key Learning Values
- Exploring creativity
- Investigating structures, balance, friction and flow
- Solving problems through design
- Working with others and sharing findings

Are you LEGO Smart?
To make a booking contact Learn it @ 01 5240004 or 021 2430000 or email schools@learnit.ie
Junior Engineering & Robotics

Our Junior Engineering Workshops are perfect for budding engineers in First and Second class

Junior Engineering :: First & Second Class :: 60 min's

Our Junior Engineers Workshops allow students to work in teams on problem-solving models that will enable them to investigate and understand the operation of simple and compound machines found in everyday life: gears, wheels and axles, levers and pulleys. With a various range of projects we can customise each workshop to fit around your curriculum.

Key Learning Values

▪ Observing and investigating simple machines: gears, wheels and axles, levers and pulleys
▪ Developing scientific enquiry skills.
▪ Following a design brief as part of the engineering process.
▪ Investigating and working through observations, reasoning, predicting, reflecting and critical thinking.
▪ Collecting data and describing outcomes.
Our Junior Robotics Workshops are perfect for budding engineers from Second to Fourth Class.

Junior Robotics :: Second - Fourth Class :: 60 - 75 min's

Introducing students to control technology and programming using robotics. Our LEGO Education WeDo based Junior Robotics workshops enables students to work with theme-based activities, building LEGO robotic models with working motors, gears, cams and sensors before programming with the intuitive WeDo robotics software to bring them to life. Our Junior Robotics workshops cover subjects such as Information and Control Technology, Science and Maths as well as Language and Literacy.

Key Learning Values

▪ Introduce the theory behind working with simple machines using gears, levers, pulleys and transmission of motion.
▪ Developing scientific inquiry skills.
▪ Develop students’ core skills in communication, team building and problem solving.
▪ Investigating and working through observations, reasoning, predicting, reflecting and critical thinking.
▪ Collecting data and describing outcomes.

Curriculum Links - Junior Engineering & Robotics

▪ Maths
  Number - Counting and Numeration, Comparing & Ordering, Addition & Subtraction
  Shape & Space - Spatial Awareness, 3-D shapes, Symmetry, Angles
  Measures - Length, Time, Weight
  Data - Representing and Interpreting Data

▪ Science
  Working Scientifically - Questioning, Observing, Predicting, Investigating & Experimenting, Estimating & Measuring, Analysing, Recording & Communicating,
  Designing & Making - Exploring, Planning, Making, Evaluating
  Energy & Forces - Forces

▪ Arts
  Construction - Making Constructions, Looking & Responding
  Concepts - An Awareness of Shape, Form, Colour, Pattern, Rhythm & Space

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Our **Senior Engineering** Workshops are great for budding engineers from **Fourth** to **Sixth** Class

**Junior Engineering :: Fourth - Sixth :: 60 - 240 min's**

Our Senior Engineers Workshops help students deepen their understanding of how forces can affect motion and explore concepts of energy. Students will predict, estimate, observe, measure, and record their investigations. In this way they exercise scientific inquiry skills, while experiencing physical science & technology first hand. Students can then build more complex mechanisms and use them to make accurate observations, measurements and records; and even design their own solutions.

We offer a range of Senior Engineering Workshops that cover a range of topics, engineering, mechanics and design. From simple machines to pneumatics and renewable energy. We have worked with leading Irish Engineers to develop our materials with the goal of introducing students to engineering and Industry 4.0.

**Key Learning Values**

- Building and exploring real life Machines and Mechanisms.
- Investigating powered machines with motors.
- Developing scientific enquiry skills.
- Following a design brief as part of the engineering process.
- Investigating and working through observations, reasoning, predicting, reflecting and critical thinking.
- Collecting data and describing outcomes.

[Image of students and mechanical models]

[Image of LEGO models and tools]

[Image of education-related graphics]
Senior Engineering Expansions

Our **Pneumatics** and **Renewable Energy** Expansions are suitable for **Fifth** and **Sixth** class and require longer workshops. Please contact us for further details.

**Pneumatics**

With our Pneumatics Expansion workshop students will investigate power systems and components, learning how pneumatics are used in industry through working on real-life based projects. Students will discover how to measure in PSI and Bar and explore kinetic and potential energy.

**Renewable Energy**

With our Renewable Energy Expansion workshop students learn about renewable energy sources. Through the use of solar panels, turbine blades, generators and a power meter students will discover solar, wind, and hydro power through real-life based projects. Exploring energy supply, transfer, accumulation, conversion and consumption, these workshops will engage students in renewable energy engineering and design.

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**Curriculum Links - Senior Engineering**

- **Maths**
  - **Number** - All Operations, Fractions, Decimals & Percentages, 2/3D Shapes, Symmetry, Lines & Angles
  - **Algebra** - Equations, Rules & Properties, Variables
  - **Measures** - Length, Area, Weight, Time, Capacity
  - **Data** - Representing and Interpreting Data

- **Science**
  - **Designing & Making** - Exploring, Planning, Making, Evaluating
  - **Energy & Forces** - Forces, Electricity :: **Materials** - Properties & characteristics of materials
  - **Environmental Awareness and Care** - Environmental awareness, Science & the environment, caring for the environment.

- **Arts**
  - **Construction** - Making Constructions, Looking & Responding
  - **Concepts** - An Awareness of Shape, Form, Colour, Pattern, Rhythm & Space

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Senior Robotics

Our Senior Robotics Workshops are great for budding engineers, coders and programmers in Fifth & Sixth Class

**Senior Robotics :: Fifth & Sixth :: 90 - 240 min's**

Our Senior Robotics Workshops enable students to discover Science, Technology, Engineering and Mathematics in a fun, engaging and hands on way. Our workshops will introduce your students to the world of robotics, working with our Mindstorms NXT and EV3 kits students will build and program robots to complete various challenges.

With workshop projects such as escape the maze, follow the line and sumo wars to day long workshops based around data logging, space exploration and renewable energy we have a workshop that is sure to get your class excited.

Your students will take one the roles of engineers as they work with industry (LabView) based software, powerful hardware and discover what industry 4.0 is all about.

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**Key Learning Values**

- Design and build programmable robots using motors, sensors, gears, wheels, axles, and other technical components.
- Understand and interpret two-dimensional drawings to create three-dimensional models.
- Build, test, troubleshoot and revise designs to improve robot performance.
- Gain practical, hands-on experience using mathematical concepts such as estimating and measuring distance, time, speed.
- Communicate effectively using scientific and technical language.
“Robots Will Be The Next World-Changing Technology”
- Bill Gates

Curriculum Links - Senior Robotics

- **Maths**
  - **Number** - All Operations, Fractions, Decimals & Percentages, 2/3D Shapes, Symmetry, Lines & Angles
  - **Algebra** - Equations, Rules & Properties, Variables
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