

The Lifetime Education





Product Catalogue www.thelittleengineer.com

The Founder

Years ago, there was an evolving dream brewing inside of me. I am a Mechanical Engineer with Masters' degree in Engineering Management. I was an instructor at the American University of Beirut (AUB) and I had a vision to guide our youth towards a better future, divert their attention from the trivialities of everyday life and stimulate their passion for Robotics and STEM (science, technology, engineering, mathematics). I was infused with a burning desire to present those topics in an entertaining and engaging way through courses, activities and workshops that would motivate a new generation and in turn make their dreams come true. I wanted people from different cultures, backgrounds, ethnicities and areas to have complete access to STEM. I was aware that the only way to improve people's lives was through education and inspiration.

Yet, I realized as it once was said: "A dream doesn't become reality through magic; it takes sweat, determination and hard work." Although those were qualities I possessed, I still needed a supportive catalyst that would help my ambitions come to fruition. This is where MIT came in. They believed and invested in me. The Little Engineer (TLE) was born and its pioneering presence has now been established in Lebanon and abroad.

The dream has become a reality but it does not end here. We are always expanding, introducing and delivering cutting-edge engineering courses and activities, space and aviation workshops to the four corners of Lebanon and internationally. Furthermore, through The Lifetime Education Foundation (TLEF), we are developing educational, humanitarian and environmental programs that seek the welfare and progress of communities.

Our main principles will always be to empower communities locally and regionally by partnering with NGOs and the public sector, inspire motivation, stimulate creativity, manage talents, cultivate concentration and perseverance, encourage teamwork, develop the skills of trainers in private public and vocational schools, students, tech-enthusiasts and more. That is our promise.



TLE[®] Mission

Investing in young minds & enabling them to unleash their full potential in STEM concepts, through hands-on /minds-on activities.

TLE[®] Vision

Expanding nationally and internationally to expose students and educators to the latest innovations and technological tools needed to excel in the STEM field.

About TLE[®]

Today, The Little Engineer has become an education institution with both "Business to Business" and "Business to Client" channels. The emphasis on science, technology, engineering and mathematics is conveyed by specially tailored hands-on learning activities that allow kids and teens to unleash their full potential in pre-engineering skills while focusing on robotics, coding, renewable energies, aviation, automotive and space industries, Internet of things, Artificial intelligence, 3D modeling and much more. Currently we are collaborating with ministries of education in the MENA region, Africa and the USA in hopes of bridging the gap between theory and practice & schools and universities. By doing so we are allowing for a new generation of engineers that are not only ready for the labor market, but are passionate enough to give back to the wounded world.



We believe in knowledge and values that impact our society.

Leadership:

The courage to shape a better future

Passion: Committed in heart and mind

Collaboration:

Leverage collective genius

Diversity:

Heterogeneous and all-inclusive as our curriculum

Integrity:

Adhere to moral and ethical principles

Quality:

When we do it we do it right

Accountability:

Responsibility for actions and decisions

TLE[®] Acquired Skills

CONFIDENCE PERSEVERANCE CREATIVITY Tailored Workshops 21ST CENTURY SKILLS **S** CONCENTRATION FOC IING ORGANIZI COMMUNICATI SKILLS MANAGEMENT PROBLEM SOLVING PRECISION ING **COLLABORATION** REASONING PUBLIC SPEAKING CR ICAL T **TEAMWORK** DESIGN

TLE[®] Priorities

Engine

Youth

• Provide youth with the best possible means to develop their skills in STEAM (science, technology, engineering, mathematics) and instill essential values which include: Leadership, Collaboration, Integrity, Accountability, Passion, Diversity and Quality.

• Prepare youth to meet future challenges by enhancing their capabilities for critical thinking, teamwork, perseverance, concentration, problem-solving, entrepreneurship and programming.

• Cultivate youth talents and shape them into the future pioneers they are destined to be.

Efforts

• Offer inspiring educational and technological courses, activities and workshops which bridge the gap between theory and practice, schools and universities and between the digital age and the material world.

• Pursue and optimize the advantages of the latest updates, uprising topics and cutting-edge technologies ranging from Robotics and Renewable Energy to 3D Printing, Web Development and Coding.

Innovation

• Develop original ideas and design products that provide a better user experience and devise new ways to engage students in STEM education.

- Turn a creative concept into a profitable innovation.
- Envision and develop creative solutions to problems and product-development challenges.

• Be spirited and professional and able to plan out a project carefully while accepting the fact that projects don't always go as planned and realizing this, be willing to improvise when unexpected events arise.

Teamwork & Diversity

• A team setting fueled by a blend of talents, skills and traits which allow the quality of our product and service provision to stand out from the rest.

- Embrace different disciplines, various backgrounds and areas of expertise.
- Freedom to decide how to achieve goals while also maintaining the discipline to work in alignment with the organization's strategy and with team members through communication and collaboration.

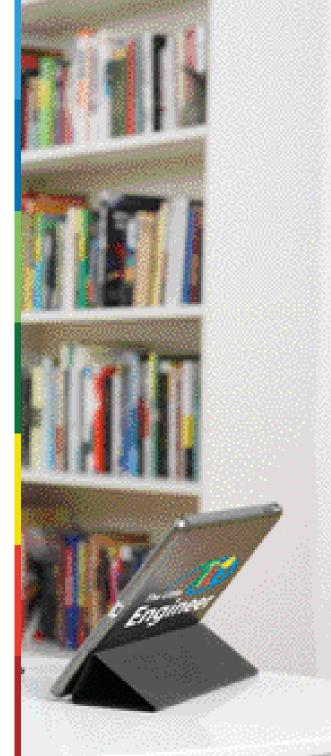
Future

- Continue to expand our pioneering presence.
- Deliver space technology and aviation workshops in Lebanon and internationally.

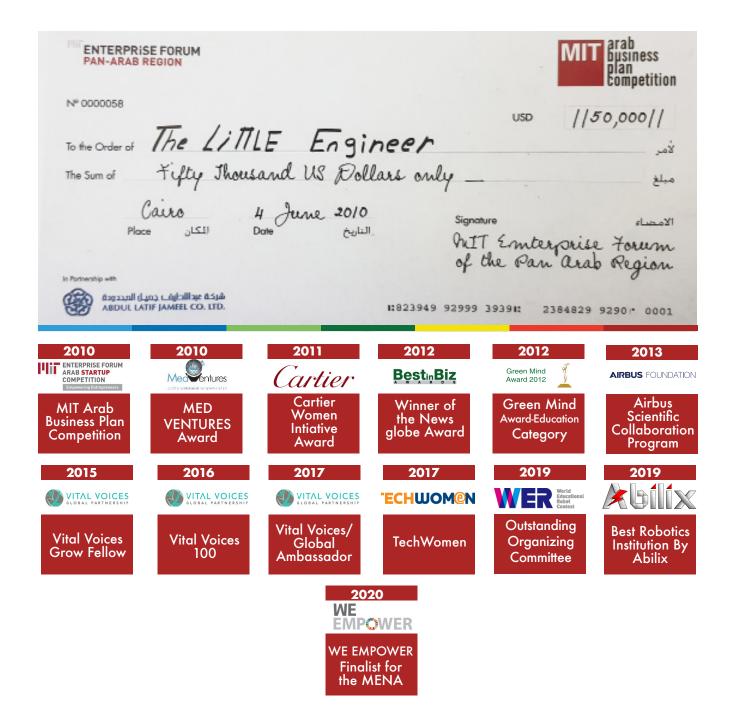
• Keep addressing both immediate and long-term STEAM needs and secure means to provide them through collaborations with the private and public sectors.

TLE[®] Social Impact

- 1 Investing in Kids & Teens boys and girls.
- 2 Creating part time jobs for women who cannot commit to full time jobs.
- **3** Creating part time jobs for undergraduate students to support our services in the afternoon.
- **4** Women Empowerment programs in rural areas. Creating jobs, building capacities, generating retention and sustainability.
- **5** Raising awareness on environmental issues with Sustainable Countries programs and emphasizing the value of solar and wind energy through handson/minds-on learning activities.
- **6** Bridging two gaps :between schools and universities, theory and practice



TLE[®] Awards







TLE[®] is commited to the 2030 UN SDG's

SDG 4:

We ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Our programs feature the latest innovation In technology to prepare talents for the 4th industrial revolution with the aim to bridge two gaps: The gap between Schools and Universities, and the one between Theory and Practice.

SDG 5:

We have customized programs for boys and girls to engage them all in STEM field.

SDG 7:

We have recently our ionic " Save Lebanon" program with our iconic Save Lebanon Program tailored for learners of Grade 7 to draw awareness on affordable, reliable, sustainable and modern energy for all

SDG 8:

One of our many objectives is creating part time jobs for women who cannot commit to full time jobs and part time jobs for undergraduate students to support their education, special program for women in Rural areas.

SDG 9:

Industry, innovation and Infrastructure. Preparing youth for the fourth industrial revolution by delivering innovative programs to inspire youth about STEM.

SDG 10:

Our imprints in the private and public sectors to reduce inequalities between the private and public schools, urban and Rural areas

SDG 11:

Customized programs by The Little Engineer® to promote sustainable cities and communities.

SDG 13:

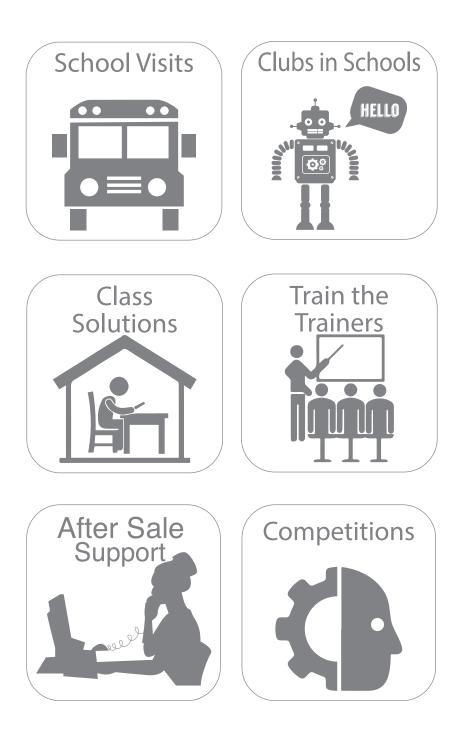
Raising awareness on environmental issues and Acting Green though our Kids and teens go green program and emphasizing the value of solar and wind energy through hands-on/minds-on learning activities.

SDG 17:

Partnering with companies, NGOs and public sector for a goal



TLE[®] Products & Services



School

Visits

chool Visits

Catch the Wheel of Technology

Are you still Hesitating? Not sure how to integrate STEM in your curriculum? Now The Little Engineer is offering you the first step.

School visits are meant to help you see the importance of STEM to your curriculum and see experimentally how students feel about this specific learning.

TLE offers you a 90 min session, for 30 students at a time (minimum of 3 sessions/day) Gather your students and call us for a full day school visit. Your students will be exposed to a full session of hands-on and minds-on learning experience.





For more details visit our website: www.thelittleengineer.com Watch our videos on our YouTube channel: The Little Engineer HQ

KG3 and Grade 1

1- Creativity Workshops

2- Simple Machines

Grade 4 and 5

- 1- Robotics: Automated car
- 2- Gravity car + Well
- 3- Solar energy
- 4- Wind Energy
- 5-3D modeling
- 6- Pneumatic

Grade 2 and 3

- 1- Robotics and Shapes
- 2- Renewable energy

Grade 6 and 7

- 1- Civil Engineering
- 2- Robotics Workshop
- 3- Wind Energy
- 4-3D modeling
- 5- Solar Energy
- 6- Cyber Security
- 7- Artificial Intelligence

Grade 8 to 12

- 1- Arduino
- 2- Java Script
- 3- Python
- 4- IOT
- 5- Robotics
- 6- Solar Energy
- 7-3D Modeling
- 8- Wind Energy
- 9- Cyber Security
- 10- Artificial Intelligence





Car Assembly Line

The Little Engineer® (TLE®) will offer your students an educational **School Outing** that is creatively unforgettable.

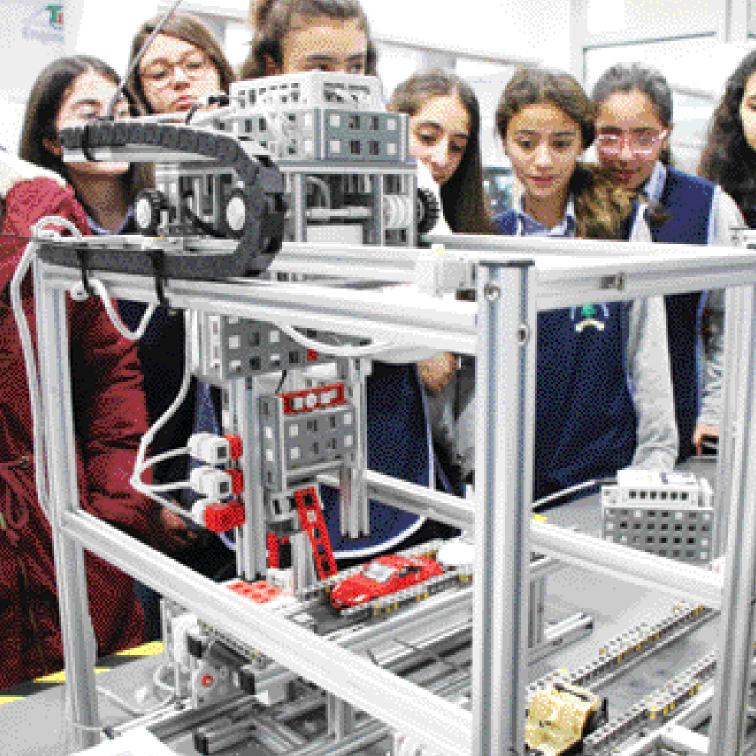
TLE® will be organizing the "Little Engineer Automotive Workshop", an outing for your students which includes 3 hours of hands-on, minds-on activities.

Students from ages 10 plus are welcome to this highly **Motivational** and **Educational** journey.

Learners will be exposed to an assembly line demonstrating real life examples of how cars are put together in automobile factories. Learners will have the opportunity to participate in a **90-min** workshop session where they can explore the automotive industry and become informed about the principal systems which constitute a car. Moreover, students will be introduced to the notion of preventive maintenance that also address safety precautions. Will be familiarized with the concepts of **Manufacturing**, **Automation**, **Robotics** and **Programming**.

The other **90-min** would include another exciting hands-on activity where learners will construct their own solar car and gain knowledge about the importance of the renewable energy and the future of green energy

Grab this opportunity and empower your students with a lifetime education, get them closer to the 4th industrial revolution. Book a session on our website





The Little Engineer® will offer your students an educational School Outing that is creatively unforgettable.

TLE will be organizing the "**What's behind the Amusement Park**", an outing for your students which includes 3 hours of hands-on, minds-on activities.

Students from ages 6 to 12 are welcomed to this highly Motivational and Educational journey.

Learners will be exposed to a fully automated amusement park including 7 programmable models demonstrating real-life machinaries from the train to the Ferris Wheel, Merry Go Round, Free Fall, Pirate Boat and more.

Learners will have the opportunity to participate in a 90-min workshop where they can explore what is behind this industry, how to construct and program similar models in addition to becoming informed about the principal systems which constitute the amusement park.

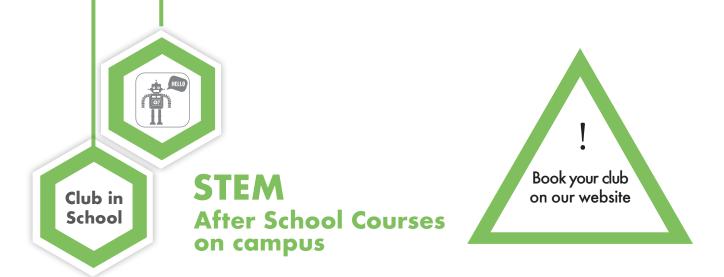
- 90- min of Renewable energy will follow.

Grab this opportunity, give your learners the chance to explore a Lifetime Education, and preparing them for the 4th industrial revolution.

Class capacity: 60 students. From 10 am till 1 pm.

Class capacity: 60 students. From 10 am till 1 pm. To book a session, visit our website





TLE is expanding at a fast pace, not only through our local and regional franchises but through our Clubs in school.

Clubs in schools are a TLE moving Satellites aiming

- To implement our unique programs while collecting the ultimate number of learners from each school

- To participate in the technological development of each school's curriculum

Our team is ready to serve any school all over the country.

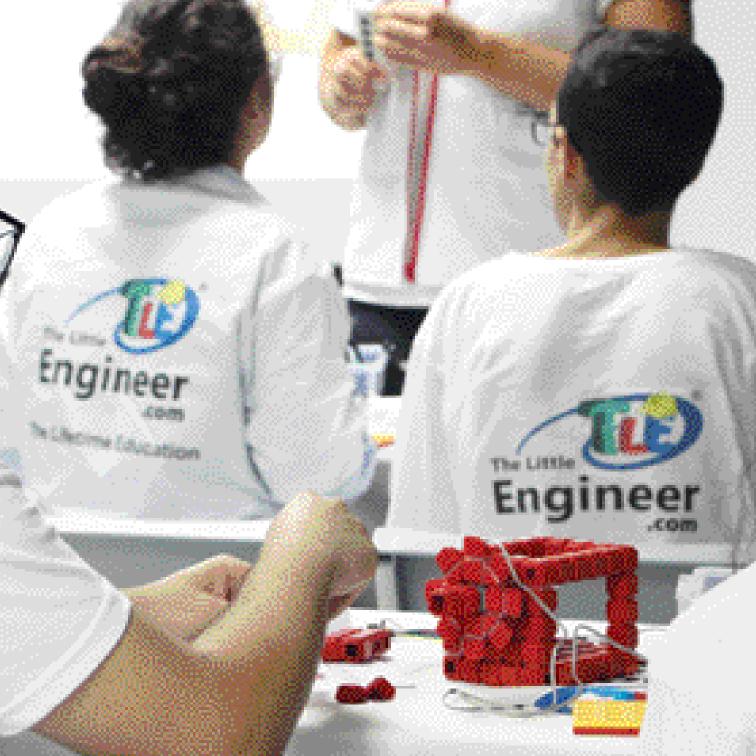
During the club in school TLE team will deliver a 20 hrs course at the school premises and certify the students.

20 hrs course will be distributed on 13 sessions, 1.5 hrs each.

- TLE delivers for grade 1-4: 1- Robotics Level OA/ Robotics Level OB/ Robotics Level OC - TLE delivers for grade 5 -8: Robotics Level 1/ Robotics Level 2/ Robotics Level 3/ Robotics Level 4

- TLE delivers to grade 10-11: Introduction to Arduino/ Advanced Arduino/ JavaScript/ Python/ Internet of Things/ Industrial Robotics/ Bionic Robotics/3D modeling.

For more details visit our website: www.thelittleengineer.com Watch our videos on our YouTube channel: The Little Engineer HQ





Bridging the gap Between Theory and Practice, Between Schools & Universities

Prepare your students for an educational revolution by integrating TLE® Class Solution from KG1 to Grade12 Give your learners the skills and tools needed to confront the challenges of tomorrow.

Why a Class Solution at your school?

We aspire to a generation that can reshape the future, one that possesses a sense of innovation, creativity, ownership, sharing, belonging, responsibility, and leadership. Our goal is to provide quality education for all making sure to envision the sustainable goals in our mission SDG4 and SDG5

What is TLE® class solution

The class solution consists of

- Educational kits, 1 kit for 3 learners
- One Teacher manual and 1 students' manual for 3 learners
- •26 to 28 sessions, 50 minutes each, 1 session per week
- 16 hours to train the trainers (4 hours each day)
- Continuous online and offline support after the training.
- The Little Engineer team will be responsible for training
- your teachers on how to deliver the STEM solution selected in the class
- Spare parts and components

For more details visit our website: www.thelittleengineer.com Watch our videos on our YouTube channel: The Little Engineer HQ

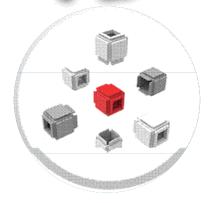
For more details check our website





TLE A Class Solution for KG1- KG2

- **TLE B Class Solution for KG3 Grade1**
- **TLE 01 Class Solution for Grade1**
- TLE 02 Class Solution for Grade 2
- **TLE 03 Class Solution for Grade 3**
- **TLE 04 Class Solution for Grade 4**
- TLE 05 is Class Solution for Grade 5
- TLE 06 is Class Solution for Grade 6
- TLE 07 is Class Solution for Grade 7
- TLE 08 is Class Solution for Grade 8 & 9
- TLE 10 is Class Solution for Grade (10,11 &12)







This solution features shapes and structures. Students will construct different structures using Hi-cube bricks from different colors. This course serves KG1 and KG2 students. They will learn more about shapes, animals, humans, vehicles and plants in 2D and 3D structures.

This solution:

Stimulates creativity

Promotes a basic understanding of physics

Good for social development

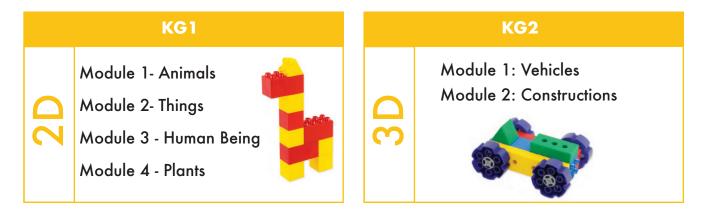
Help children develop fine motion control skills

High level of structured guidance provided

Immense variety of models grouped into themes to cover the full academic year

Supported by inspiring videos and student manuals

Neatly packaged in an attractive portable tub





Class solution TLE - B

2D - 3D MODELING

This solution will serve learners of KG3 and Grade1. It's designed to help make children creative. It features shapes and structures in 2D and 3D models. Students will construct different structures using few blocks with different shapes and colors.

This Solution:

Stimulates creativity

Promotes a basic understanding of physics

Good for social development

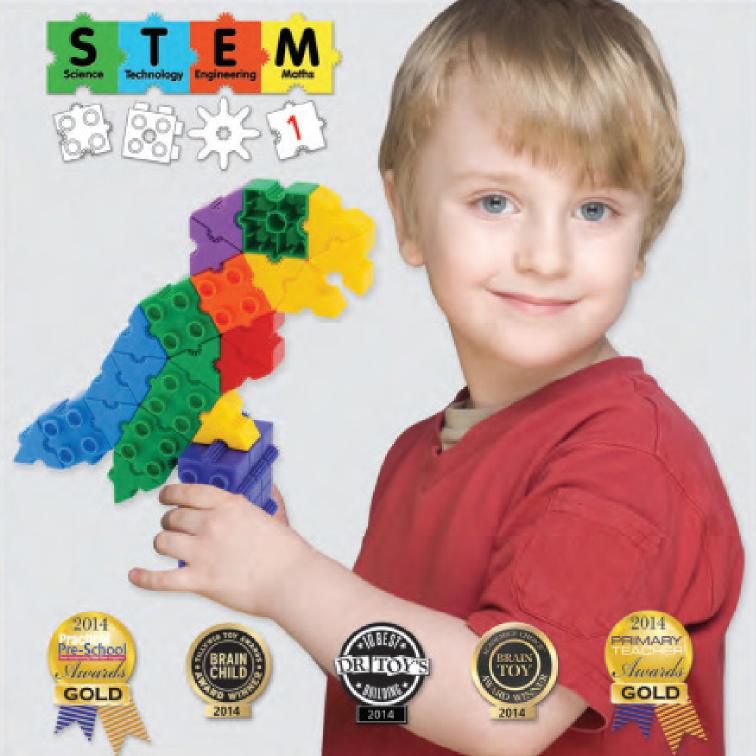
Help children develop the fine motion control needed for skills such as handwriting High level of structured guidance provided

Immense variety of models grouped in themes to cover the full academic year

Supported by inspiring videos and students manuals

Neatly packaged in an attractive portable tub







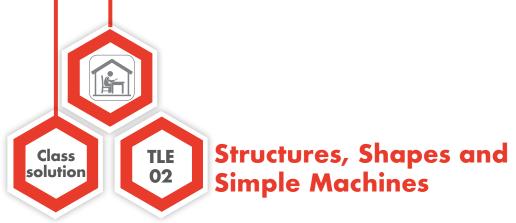
This solution will introduce students of grade1 and 2 to coding using scratch and blockly. Blockly is a visual coding language that allows users to create codes by stacking blocks together. These blocks are used to create "chunks of code" that can later be translated into professional textual code.



Create, Code, Learn

TLE 01 makes it easy to start at any level with a full comprehensive content in french & english to cover the whole academic year, engaging and retaining the interest of boys and girls in coding





This course features shapes, structures, simple machines, motion and forces. Students will construct different structures using smart bricks. In this course, students will learn more how to build, troubleshoot, and help understand real-life applications using gears, worms, racks, beams and more.

Unit 1: Shapes and structures

-Lesson 1: Quadrilateral -Lesson 2: Triangle -Lesson 3: Tall and inclined tower -Lesson 4: Structure of bridges

Unit 2: Simple machines

-Lesson 1: Lever -Lesson 2: Inclined plane -Lesson 3: Pulley -Lesson 4: Gear -Lesson 5: Worm -Lesson 6: Rack

Unit 3: Motion and Force

-Lesson 1: Gravity -Lesson 2: Elasticity -Lesson 3: Reaction force -Lesson 4: Magnetic force -Lesson 5: Centrifugal force







Motorized Simple & Complex Machines

Scissors Lift	Learn how to transform a rotation into a movement and that Lifting motion is obtained using a unique scissors mechanism.				
Hand driven generator	An introduction to the main components of the kit. This model introduces the concept of motors and generators and helps the learner to differentiate them.				
Wind-driven seesaw	Learn how body balance works and how lifting forces counterbal- ance with weight.				
Variable-Speed Car	Learn what are the tools that make gearboxes and cars change speed.				
Lifting Table	Learn the use of manual tools and how to translate motion into action.				
Carrousel	Learn how an entertainment machine is built, and how to combine gears to get a complex motion.				
Flag Raising Device	This project teaches students tow to use wires to move a flag up and down.				
Tower Crane	Learn how to build a tower crane to lift blocks using an elevated motor.				





For Grade 4 learners.

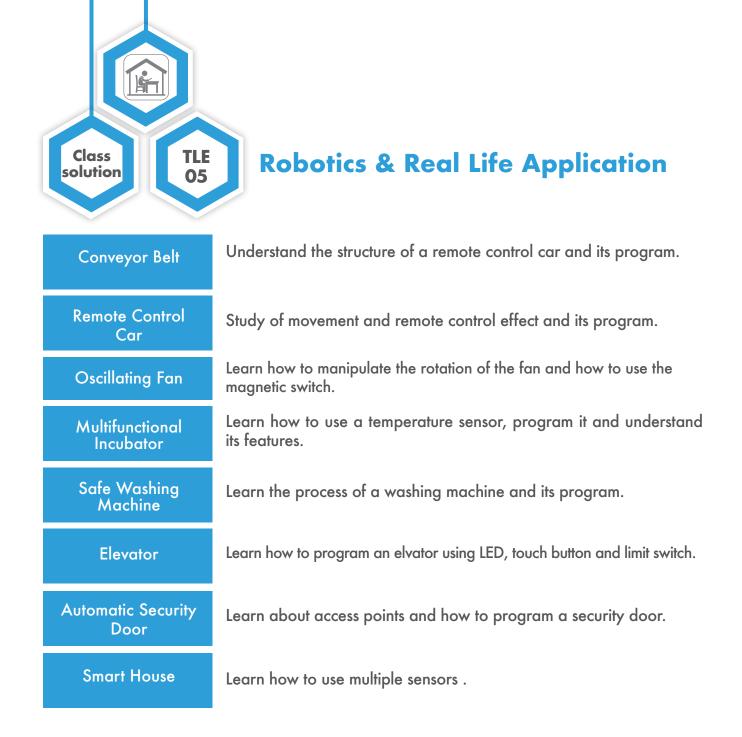
Students will work in teams of three to build and program several models of the **Amusement Park** using the blockly coding language. Each model simulates a game that is part of a real life amusement park.

The models are:



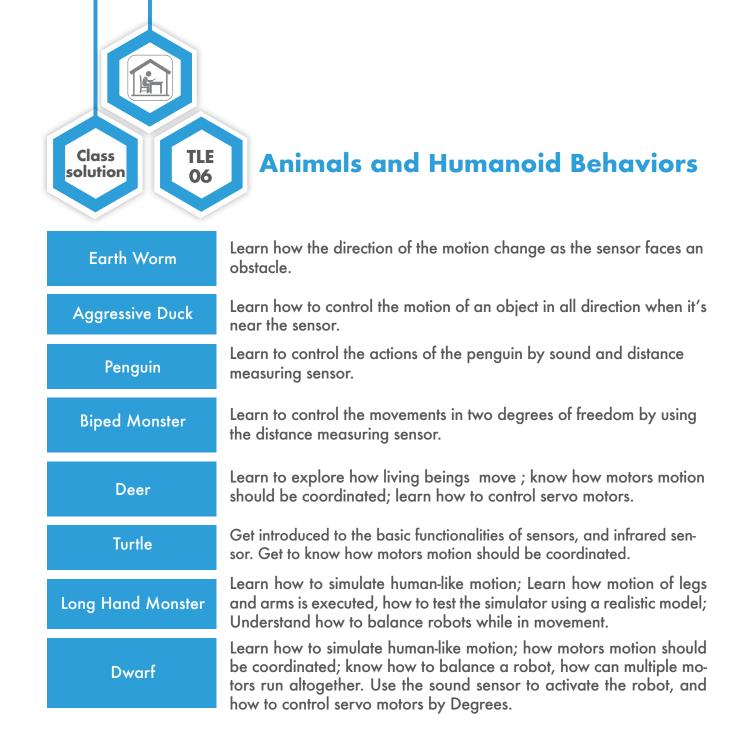
This course will close with a competition among learners to display the best amusement park built and programmed by young minds using blockly and scratch as programming languages.





Closing With a Competition





Aspire to Inspire





Robotics & Renewable Energie Closing with a National Competition

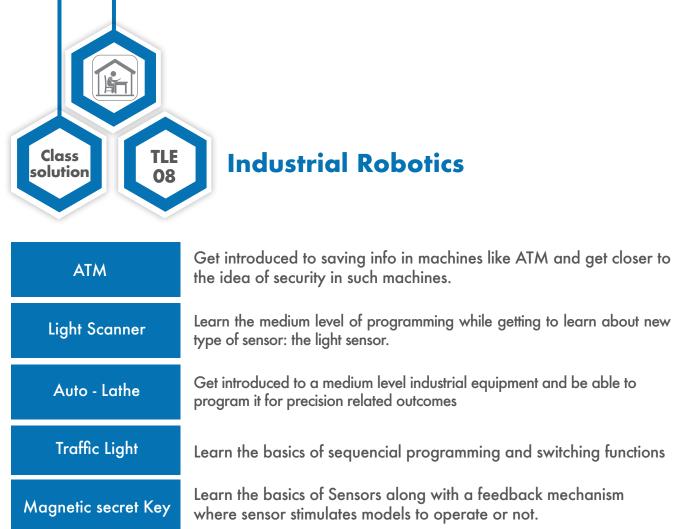
Robotics	Learn how to program a robot using multi gray sensers to solve some problems using following the line techniques.
Sustainable Development	Learn about global warming and the negative impact of human activity on the Planet. Think about different projects that could be implemented to solve these issues.
Solid Waste	Get introduced to the process of Managing Solid Waste in Lebanon
Wind Turbine	Understand the mechanism used by wind turbines to generate electricity.
Solar Panel	Learn about the functionality of PV solar panels and how electricity can be produced from them.
Solar Heater	Learn about how solar energy can be harnessed to heat water.
Water Turbine	Understand the mechanism used by water movement to generate electricity.

Sustainable Countries



Today's Youth Tomorrow's Workforce





Rotat

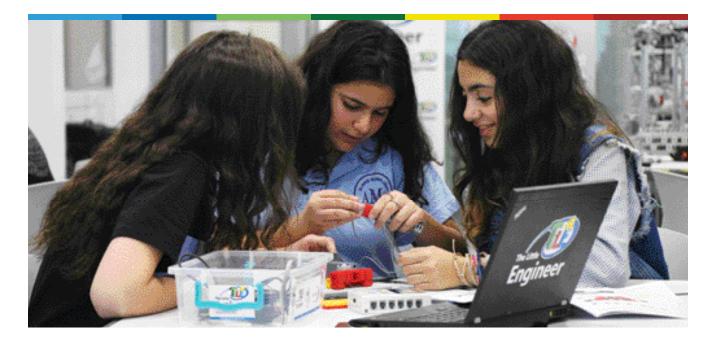
Washing Machine

Learn about home appliances and how they get to work through a real life example.

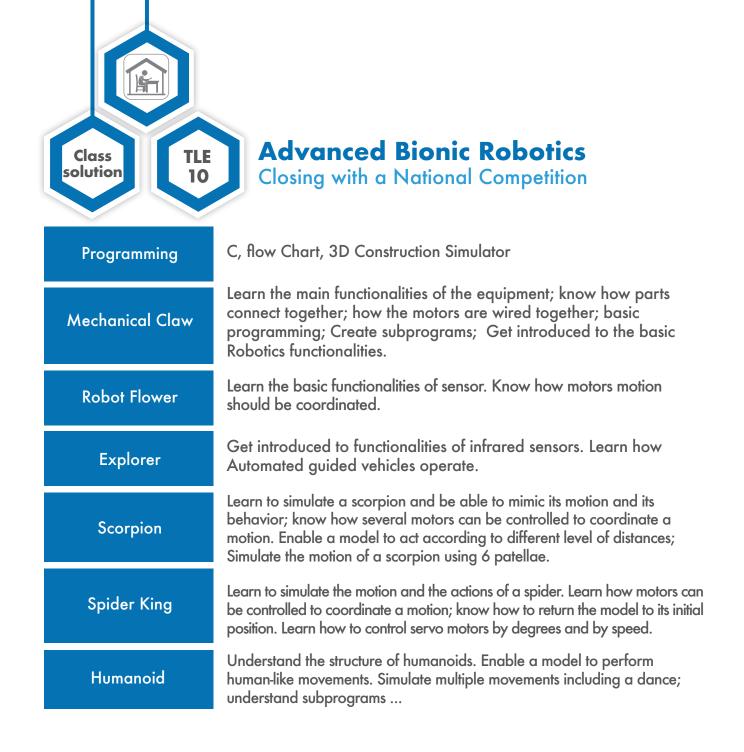
Industrial Robotics

ATM	the idea of security in such machines.
ght Scanner	Learn the medium level of programming while getting to learn about new type of sensor: the light sensor.
uto - Lathe	Get introduced to a medium level industrial equipment and be able to program it for precision related outcomes
raffic Light	Learn the basics of sequencial programming and switching functions
netic secret Key	Learn the basics of Sensors along with a feedback mechanism where sensor stimulates models to operate or not.
ing Workbench	Pushing forward on industrial equipment and challenge the learner to extend the model to be more efficient.
Blender	Learn about the home appliances and how they get to work through a real life example.
	Leave about home appliances and how they get to work through a

Grade 8 to 12 and Vocational Schools







Suitable for Grade 11 & Grade 12

GET READY FOR THE WORLD OF ENGINEERING

BE PART OF INTERNATIONAL COMPETITION







16 Hours on Hands-on Learning Activities

We Build Capacities of the teachers in **STEAM** field to support their learners in schools Book your seat on our website







Dedicated R&D

Research & Development team working round the clock to innovate and update the content of our curicculums to align with the evolving technology.

Technical Support to sustain your operation

On site reinforcement for teachers Online support Offline support



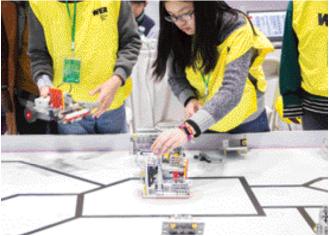


Wind Challenge

Save Lebanon Challenge

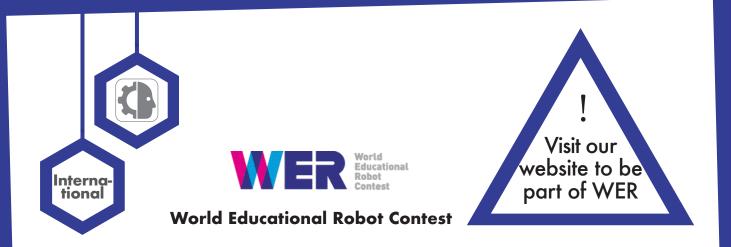






Solor Car Race





WER is acronym for World Educational Robot Contest. It was founded and organized by World Educational Robotics Society (WERS).

WER is an international robot contest for teenagers from 4 to 18. Annually, more than 500,000 contestants from 50 countries participate in WER contests.

With the expansion of influence, winners of WER world championships will bring great honors to their countries, schools as well as to themselves. categories for more details visit our Website





Represent Your Country In China





TLE® Imprints locally, **Regionally and Globally**



France

Germany

TLE® Academic Partners



TLE® Corporate Partners



TLE® NGO Partners



Strategic Partner AIRBUS FOUNDATION Little Engineer

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AND PROPERTY.

Contact Form

School:	 •
Phone:	 • •
e-mail:	 •

School Visits	At School						-
	Car Assembly						1000
	Amusement Park			Train the			
				Trainers			
Class Solutions	TLE KG1	TLE 04					
	TLE KG2 🗌	TLE 05					_
	TLE кдз 🗌	TLE 06		Competition	WER		
	TLE A	TLE 07			National		1
	TLE B	TLE 08			Sumo		
	TLE 01	TLE 10			Solar Car Race		
	TLE 02				Wind Challenge		
	TLE 03				Dancing Robot		

To serve you better

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