



We're not talking trash - we're cleaning it up!

fll.sasbadi.com







What is FIRST?

FIRST (For Inspiration and Recognition of Science and Technology) is a not-for-profit organisation devoted to helping young people discover and develop a passion for science, technology, engineering, and math (STEM).

Vision

To transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology leaders.

Mission

To inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programmes that build science, engineering, and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.



FLL

FIRST LEGO League (FLL) is a project-based programme teaching students ages 9 through 16 about science, technology, and collaborative working. FLL is a partnership between the non-profit organisation FIRST and the LEGO Group. It had its first season in 1998. Now over 230,000 students from 80 countries take part.

"We want to change the culture by celebrating the mind. We need to show kids that it's more fun to design and create a video game than it is to play one." (Dean Kamen, Founder of FIRST)

"FLL encourages children to design, construct, and programme their own intelligent inventions. This allows them not only to understand technology, but to become masters of it."

(Kjeld Kirk Kristiansen, Owner and Deputy Chairman of the LEGO Group)















The FIRST[®] LEGO[®] League Malaysia : 2016 CHALLENGE

"Kids bring such a sense of wonder to the world. Having children be aware of how waste can be really valuable and shouldn't just be going to a landfill is a really great opportunity."

Christine Beling Project Engineer Environmental Protection Agency

"Kids have better answers than we do. They always do... They innovate unabashedly, with great exuberance, and the outcomes are fantastic."

Leesa Carter Executive Director Captain Planet Foundation

"Kids will walk away from TRASH TREK feeling empowered and knowing that they aren't really little. They can be as big as they want to be if they really put their minds to it."

Rian Bedard Chief Executive Composter Mr. Fox Composting



We're not talking trash – we're cleaning it up! In the 2015 *FIRST* LEGO League TRASH TREKSM Challenge, more than 230,000 children, ages 9 to 16[°] from over 80 countries will explore the fascinating world of trash. From collection, to sorting, to smart production and reuse, there is more to your trash than meets the eye. Join *FIRST* LEGO League teams on a TRASH TREK to discover the hidden (or not so hidden) world of trash!

*Ages vary by country

TRASH TREK Missions include:

- Demolish a building and salvage valuable materials from the debris
- Convert organic material into fertilizer
- Reuse methane produced in a landfill to power a truck and/or factory
- Clean up plastic bags jamming equipment and threatening animals' safety
- Reuse packaging from a toy plane as a flower box
- Fix a car by installing a new engine or prepare a car to be sold for scrap



Teams will:

- Choose a topic they are passionate about and have always wanted to learn.
- Create an innovative solution that makes less trash or improves the way people handle the trash we make.
- Share their solutions with others.
- Build, test, and program an autonomous robot using a LEGO MINDSTORMS[®] set to solve missions on an obstacle course.

FOR INSPIRATION AND RECOGNITION OF SCIENCE AND TECHNOLOGY



2015 MALAYSIA FACTS:

- 1,000 children nationwide
- 95 teams
- 16 states
- Theme : World Class
- 8-week design, build, and research period
- Over 50 Judges & 200 volunteers
- Over 10 sponsors & partners
- 1 National Competition



FIRST[®] LEGO[®] League (FLL[®]) created through a partnership between FIRST[®] (For Inspiration and Recognition of Science and Technology) and The LEGO Group, inspires future scientists and engineers.



FLL Children:

- Learn teamwork skills
- Build self-confidence, knowledge, and life skills
- Research challenges facing today's scientists
- Design, build, and program autonomous robots
- Use LEGO[®] MINDSTORMS[®] technologies
- Engage with their community
- Compete in tournaments and present their solutions to a panel of judges How FLL Works:
- Teams of up to 10 children, ages 9-16
- Adult coaches and mentors
- Schools, home schools, churches, civic groups, neighborhood groups
- Parents, teachers, community volunteers
- Corporate sponsors
- New real-world game challenge each year
- Sports-like tournaments with judges and awards

What FLL Offers:

- Discovery of the fun in science and technology
- Real-world application of science and math concepts
- Hands-on problem solving
- Programming experience
- Research presentation project
- Adult role models
- Team activities guided by FLL Core Values
- Self-esteem and confidence

2014/15 WORLD FACTS:

- 230,000 children worldwide
- 23,000 teams
- 70+ countries
- Theme : World Class
- 8-week design, build, and research period
- 66,000+ volunteers
- Over 1000 sponsors
- 939 Qualifying Tournaments
- 124 Championship Tournaments
- 1 World Festival
- 2 Open Championships





TEAMS

FIRST[®] LEGO[®] League (FLL[®]) puts children in charge. Teams mix curiosity and imagination with LEGO[®] bricks, sensors, motors, and gears to invent unique, autonomous robots capable of completing various missions.



FLL Teams:

- Investigate, strategize, design, build, program, and test their robotic inventions
- Search the web, talk to scientists, visit the library, and develop compelling research presentations which relate to a problem or opportunity facing the world today
- Develop employment and life skills including critical thinking, time management, collaboration, and communication while becoming more self-confident
- Compete with peers in high energy sport-like tournaments

Getting Started

The annual Challenge is revealed in early September

Who can form a team?:

- A school classroom, after-school program, extracurricular group, learning centre, home school, neighborhood group, club or civic organization
- Up to 10 children, ages 9-16, and at least one adult coach





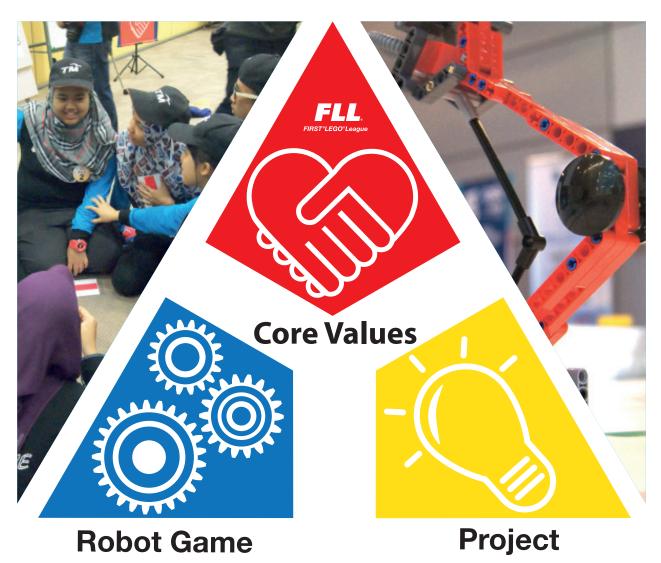


TEAM ACTIVITIES

- Build autonomous robot
- Program robot
- Research real-world challenge
- Deliver presentation project
- Compete at sport-like tournament



THREE ESSENTIAL PARTS



A FIRST[®] LEGO[®] League Challenge consists of three parts:

- A research assignment called '**The Project**' where students research and come up with innovative ideas for solving a defined, real-world challenge
- A '**Robot Game**' where students design and programme a LEGO MINDSTORMS robot to solve missions on a special obstacle course
- 'Core Values', the work process the students go through to obtain important life skills such as problem solving, critical thinking, creativity, and team-work.

FOR INSPIRATION AND RECOGNITION OF SCIENCE AND TECHNOLOGY



THEME (1998 - 2015)





FLL IN MALAYSIA

IMPACT: Growth FIRST® LEGO® League is a national program with teams



FLL IN WORLD

IMPACT: Growth *FIRST®* LEGO® League is also a worldwide program with teams in approximately 80 countries.





2010

11,777

17,365

26,044 <u>9</u>9,0

15,389

23,748 681-6

14,559

20,430

7,421

13,009

2012

2013

2014

2015

18,323

3,959

11,364

2011

16,762

7.066

9,696

14,725

6,213

8,512

2009

13,705

6.086





FIRST LEGO LEAGUE (FLL) WORLD FESTIVAL

FLL World Festival is a culminating celebration of the FIRST LEGO League season, NOT a level of competition. Regions are selected by lottery to send their 1st Place Champion's Award-winning team to World Festival. World Festival is a beautiful mix of cultures and skill sets, a true celebration of FIRST LEGO League.

The teams are often the Champion's Award team at the regional level with some other criteria including special nomination from FLL Operational Partners globally. In 2016, there are about 85 teams that will join the festival with the theme Trash Trek.

The award categories include Innovative Design Award, Quality Design Award, Programming Award, Research Quality Award, Innovative Solution Award, Creative Presentation Award, Teamwork Award, Team Spirit Awards, Against All Odds Awards, Outstanding Volunteer Awards, Adult Coach/Mentor Awards, Young Adult Mentor Awards, and Judges' Awards. The most notable awards are Champion's Award and Robot Performance Award.



National Champion #REVELES SMJK Chung Ling, Ayer Itam, Pulau Pinang

Congratulation & Good Luck in Representing Malaysia to the FLL World Festival 2016 Venue : St. Louis, United State of America Date : 21 – 30 April 2016

"Our team which consists of 10 person had brainstormed for more than 6 months to prepare the competition. Teammates that are honest, reliable, hard working, cooperative, integrity and courteous allow us to gain many experiences and success in the competition.

Throughout the competition, we have learned that it isn't all about winning, it's about having fun together. We have discovered different ways to overcome those ups and downs we have faced throughout the journey to success. Members also feel thankful to each other for their contribution in the competition. We must also thank our mentors from the bottom of our hearts for their supportive guidance."

(Mr. Lye Tuck Sing, Coach for team #Reveles, SMJK Chung Ling, Ayer Itam, Pulau Pinang)



FLL FIRST[®] LEGO[®] LEAGUE WORLD FESTIVAL 2014



Winner of the Strategy & Innovation Award (1st Runner-Up) JS Flawless SMJK JIT SIN, BUKIT MERTAJAM, PENANG

Venue : Missouri, United States of America Date : 21– 30 April 2014

"The success of our team depended on the students' team work, commitment, time management, and problem solving skills. The success of a team is not only in gaining an award but also in the learning process experienced by the students. At the FLL World Festival in the USA, I was really proud and glad to see the students have a chance to compete with other teams from other countries whereby their knowledge has increased tremendously. Other than that, they also learnt cooperative, collaborative and communicative skills. They have acquired patience on top of passion, allowing them to persist until they have obtained satisfactory results through trial and error. I believe that this competition is definitely a stepping stone for students to be successful in their future career."

(Ms. Wong Pei Funn, Coach for team JS Flawless, SMJK Jit Sin)

FLL OPEN EUROPEAN CHAMPIONSHIP 2012 WORLD CHAMPION

World Champion BINTULU HAWKS SMK BINTULU, BINTULU, SARAWAK Venue : Mannheim, Germany Date: 6 - 9 June 2012





"Judges around the world were caught by surprise with our outstanding achievement despite our first appearance in FLL international competition. I would like to take this opportunity to encourage and urge all students to participate in FLL Championship and hope our students will share their success stories to their peers. Winning this competition proves our Malaysian education system is on the right track towards a developed nation. Besides, we learned that the American education system emphasizes on the learning process throughout the competition instead of focusing only on the final result. I believe our students have earned a lot of experiences over here and I am confident that the knowledge they gained will definitely aid them to success in their future career."

(Mr. Anathan a/l Subramaniam, Principle, SMK Bintulu)



FLL MALAYSIA 2015 AWARD WINNERS

Universiti Teknologi PETRONAS (UTP) Seri Iskandar, Perak 8 - 10 May 2015









A1M Prince (ASRAMA 1MALAYSIA, W.P. KUALA LUMPUR)



BUZZER BEATERS (CREATIVE MINDS, W.P. KUALA LUMPUR)



WISSENSCHAFT (HIN HUA HIGH SCHOOL, KLANG, SELANGOR)



PTI LEGEND (MAAHAD TAHFIZ NEGERI PAHANG, KUANTAN, PAHANG)



Stealth Assassin (CR8 PENANG, PULAU PINANG)

Templar Assassin (CR8 PENANG, PULAU PINANG)





The Wavefront (SMK(P) TREACHER METHODIST, TAIPING, PERAK)





JENAN ROBOWHIZ (SM SULTAN ABDUL HALIM, JITRA, KEDAH)



SEMERBAK VALIDUS (SMK SERI GOMBAK, GOMBAK, SELANGOR)



YOLOGen (SMK SEAFIELD, SUBANG JAYA, SELANGOR)



SAKTI AVENGERS (SM SAINS KOTA TINGGI, KOTA TINGGI, JOHOR)



BERAPIT LIONS 1 (SMK BERAPIT, BUKIT MERTAJAM, PULAU PINANG)



VICTORY (TECHTRONIC, PAHANG)



13

6

i-Botz (ROBOTS2U LEARNING CENTRE, PULAU PINANG)



SUPER YC KIDZ (SJKC YUK CHAI, PETALING JAYA, SELANGOR)



THE GANG OF HL3 (SJKC HUA LIAN 3, TAIPING, PERAK)



PHOTO GALLERY



FIRST LEGO LEAGUE MALAYSIA 2015 8 - 10 May 2015

Universiti Teknologi PETRONAS (UTP) Seri Iskandar, Perak

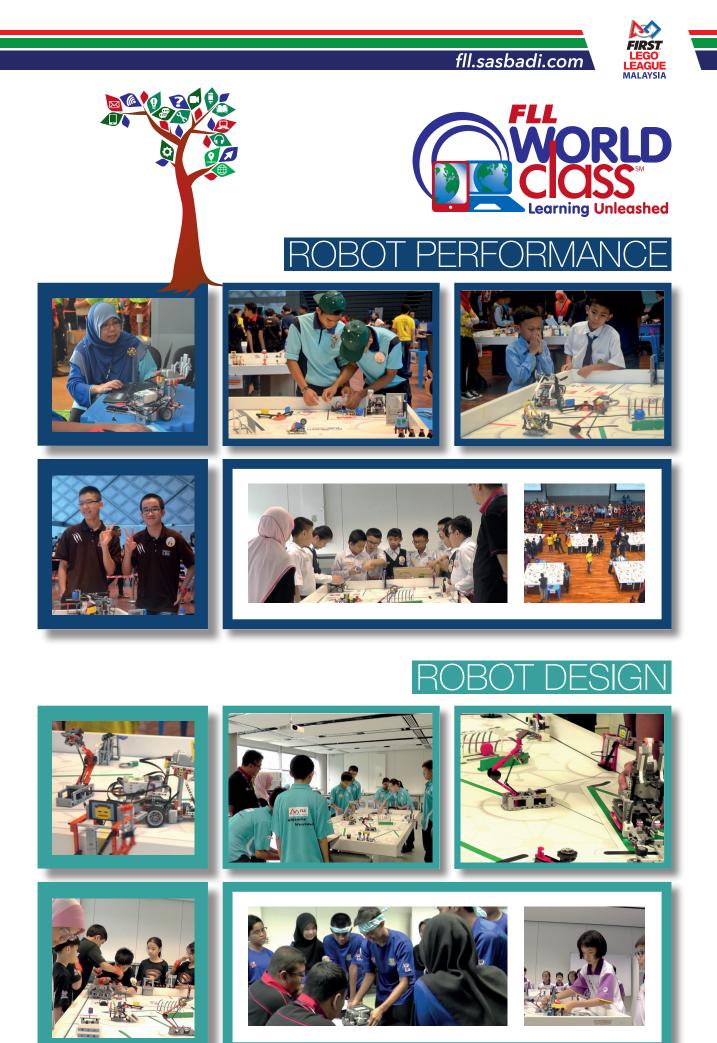














CONGRATULATIONS TO 2015

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1 MRSM JOHOR BAHRU, JOHOR BAHRU, JOHOR	2 SM SAINS KOTA TINGGI, KOTA TINGGI, JOHOR	3 SK SRI TEBRAU, JOHOR BAHRU, JOHOR	SMK INFANT JESUS CONVENT, JOHOR BAHRU, JOHOR
TEAM : JOBARIAN	TEAM : SAKTI AVENGERS	TEAM : STARBOT	TEAM : INFINITY
5 SMK TINGGI BATU PAHAT, BATU PAHAT, JOHOR	6 SMK TINGGI BATU PAHAT, BATU PAHAT, JOHOR	SMK TINGGI BATU PAHAT, BATU PAHAT, JOHOR	8 SMK TINGGI BATU PAHAT, BATU PAHAT, JOHOR
TEAM : THE LAST STAND	TEAM : LEGION COMMANDER	TEAM : DREAM BUILDER	TEAM : MEGA MINDS
9 CR8 ALOR SETAR, KEDAH	SK DATO' SRI SYED AHMAD, AYER HITAM, KEDAH	1) SK DATO' SRI SYED AHMAD, AYER HITAM, KEDAH	12 SK SERI MUDA, AYER HITAM, KEDAH
TEAM : BUBALUS BUBALIS	TEAM : TECHNO POWER KIDS	TEAM : 1MALAYSIA FUTURE GENERATION	TEAM : LEGO MANIA
3 SK SERI MUDA, AYER HITAM, KEDAH	SJKC TONG YUH, ALOR SETAR, KEDAH	5 SJKC TONG YUH, ALOR SETAR, KEDAH	16 SJKC TONG YUH, ALOR SETAR, KEDAH
TEAM : LEGO MASTER	TEAM : TONG YUH 1	TEAM : TONG YUH 2	TEAM : TONG YUH 3
17) SK KELIBANG, LANGKAWI, KEDAH	18 SM SULTAN ABDUL HALIM, JITRA, KEDAH	ASRAMA 1MALAYSIA, W.P. KUALA LUMPUR	20 SMJK KATHOLIK, PETALING JAYA, SELANGOR
TEAM : ISLANDARS	TEAM : JENAN ROBOWHIZ	TEAM : A1M PRINCE	TEAM : WINIONS SPARK
21 CREATIVE MINDS	22 CREATIVE MINDS	(23) KOLEJ YAYASAN SAAD, JASIN, MELAKA	24 ROBOCOM SOLUTION
TEAM : BUZZER BEATERS	TEAM : DIGIMINDS	TEAM : VENCEDORA	TEAM : ROBOT GENERATION
25 SK CONVENT INFANT JESUS 1, MELAKA	26 TRANSFORMERS 5	27 INTERNATIONAL SCHOOL OF KUANTAN, KUANTAN, PAHANG	(28) MAAHAD TAHFIZ NEGERI PAHANG, KUANTAN, PAHANG
ТЕАМ : ЈС ВОТ	TEAM : TRANSFORMER 5	TEAM : ALPHA	TEAM : PTI FUTURE
MAAHAD TAHFIZ NEGERI PAHANG, KUANTAN, PAHANG	30 SBP INTEGRASI TUN ABDUL RAZAK, PEKAN, PAHANG	3) SMJK HWA LIAN, MENTAKAB, PAHANG	32 SMK ABDUL RAHMAN TALIB, KUANTAN, PAHANG
TEAM : PTI LEGEND	TEAM : FRANXIUMMAX REVOLUTION	TEAM : REVOLUTION EVOLUTION DEFIANCE (RED)	TEAM : SMART 1
33 SMK ORANG KAYA HAJI, KUALA LIPIS, PAHANG	34 TECHTRONIC	35 MRSM FELDA TROLAK, TROLAK, PERAK	36 ROBOTOP EDUCATIONALIST
TEAM : SEMARAK 15	TEAM : VICTORY	TEAM : EXPLORER 15	TEAM : ULTIMATE WARRIORS
37) SK MARIAN CONVENT, IPOH, PERAK	38 SJKC HUA LIAN 3, TAIPING, PERAK	39 SMK CHENDERIANG, TAPAH, PERAK	40 SMK MENGLEMBU, IPOH, PERAK
TEAM : VICTORIOUS MARIAN	TEAM : THE GANG OF HL3	TEAM : ERISED	TEAM : TWILIGHT LEGACY
41 SMK SERI MANJUNG, MANJUNG, PERAK	5MK SERI MANJUNG, MANJUNG, PERAK	43 SMK(P) TREACHER METHODIST, TAIPING, PERAK	THE MALAY COLLEGE KUALA KANGSAR, KUALA KANGSAR, PERAK
TEAM : TRIPLE B	TEAM : DE' CREATIVE ROBOTIC CREW	TEAM : THE WAVEFRONT	TEAM : RADICAL X
45 UNIVERSITI TEKNOLOGI PETRONAS	46 SK PANGGAS, KANGAR, PERLIS	47) SEKOLAH RENDAH ISLAM III, KANGAR, PERLIS	(48) SK SERI PERLIS, KANGAR, PERLIS
TEAM : UTP ROBOHOLIC JR	TEAM : SK. PANGGAS	TEAM : STRIVE FOR PERFECTION	TEAM : OPTIMUS PRIME
49 SK TITI TINGGI, PADANG BESAR, PERLIS	50 CR8 PENANG		
TEAM : SK TITI TINGGI, PERLIS	TEAM : NEMESIS ASSASSIN	J	

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		FLL WO CCO Learning	RLD SS Unleashed
51 CR8 PENANG TEAM : STEALTH ASSASSIN	52 CRB PENANG TEAM : NERUBIAN ASSASSIN	53 CR8 PENANG TEAM : TEMPLAR ASSASSIN	CR8 PENANG TEAM : NXY ASSASSIN
55 HAN CHIANG HIGH SCHOOL, GEORGETOWN, PULAU PINANG TEAM : HAN CHIANG	56 ROBOTS2U LEARNING CENTRE TEAM : I-BOTZ	5 SK CONVENT GREEN LANE, GEORGETOWN, PULAU PINANG TEAM : SKCGL	58 SK PENANTI, BUKIT MERTAJAM, PULAU PINANG TEAM : TECNOTEENS
59 SJKC CHONG CHENG, RELAU, PULAU PINANG TEAM : CCR TEAM	60 SJKC KWANG HWA, SUNGAI NIBONG, PULAU PINANG TEAM : SUN RIDER	6) SJKC MIN SIN, SUNGAI NIBONG, PULAU PINANG TEAM : AMAZING 10	SK BUKIT GAMBIR, GEORGETOWN, PULAU PINANG TEAM : BOYS OF HILL
63 SK PERMATANG TOK MAHAT, NIBONG TEBAL, PULAU PINANG TEAM : CATALYZER	SMJK CHUNG LING, BUTTERWORTH, PULAU PINANG TEAM : ROBODES	65 SMJK CHUNG LING, AYER ITAM, PULAU PINANG TEAM : #REVELES	66 SMJK CHUNG LING, AYER ITAM, PULAU PINANG TEAM : IMMACULACY
SMJK UNION, GEORGETOWN, PULAU PINANG TEAM : UNION	SMK BERAPIT, BUKIT MERTAJAM, PULAU PINANG TEAM : BERAPIT LIONS 1	69 SMK BERAPIT, BUKIT MERTAJAM, PULAU PINANG TEAM : BERAPIT LIONS 2	SMK PENANG FREE, GEORGETOWN, PULAU PINANG TEAM : ROBOFREES
(7) SMK SIMPANG EMPAT, SIMPANG AMPAT, PULAU PINANG TEAM : BIONICLE HEROES	Team : INFINITE GAYS	SMK TINGGI BUKIT MERTAJAM, BUKIT MERTAJAM, PULAU PINANG TEAM : MY_HSBM	Team : T3SLA
75 ENTERPRISE KIDS TEAM : TECH KNIGHTS	TEAM : FIGHTING FALCONS	HIN HUA HIGH SCHOOL, KLANG, SELANGOR TEAM : WISSENSCHAFT	78 KLINIK PAKAR KANAK-KANAK JUNINA JUNINA TEAM : ROBORUNNERS
79 KLINIK PAKAR KANAK-KANAK JUNINA JUNINA TEAM : EVOLUTION	80 KOLEJ PERMATApintar UKM TEAM : PERMATA INSURGENT	81 REAL INTERNATIONAL SCHOOLS, CAHAYA CAMPUS TEAM : LIGHT FUSION 2.0	82 ROBOWIS ROBOTICS CENTRE TEAM : DESIGNATED THINKERS
83 ROBOWIS ROBOTICS CENTRE TEAM : ONE HIT WONDERS	84) SJKT KAJANG, KAJANG, SELANGOR TEAM : CYBERTRON	85 SEKOLAH MENENGAH SRI SEMPURNA, W.P. KUALA LUMPUR TEAM : ENSEMBL3	860 SJKC YUK CHAI, PETALING JAYA, SELANGOR TEAM : SUPER YC KIDZ
87 SK LEMBAH BERINGIN, KUALA KUBU BARU, SELANGOR TEAM : BERINGIN RANGER	88 SK TAMAN MEGAH, PETALING JAYA, SELANGOR TEAM : SKTM RAPTORS	89 SMK MUNSHI ABDULLAH, SABAK BERNAM, SELANGOR TEAM : WINIONS SPARK	SMK SEAFIELD, SUBANG JAYA, SELANGOR TEAM : YOLOGEN
SMK SERI GOMBAK, GOMBAK, SELANGOR TEAM : SEMERBAK VALIDUS	SMK SUBANG BESTARI, SHAH ALAM, SELANGOR TEAM : THE MATRIX ROBOTICS	SRI KUALA LUMPUR SCHOOL, SELANGOR TEAM : SKL ROBOB335	93 SM SAINS SULTAN MAHMUD, KUALA TERENGGANU, TERENGGANU TEAM : VALOUXTROVIAN
SK & SMK BUKIT RAHMAN PUTRA, GOMBAK, SELANGOR			

TEAM : PUTRA ROBOTICS TEAM





How to Participate in FLL?



Form a Team

fll.sasbadi.com

A team is made up of 2 to 10 students and a Coach (two Coaches are also possible). Team members can come from different schools and ages. but they must be within the age of 9 and 16. The FLL is open to students from all types of schools - national, private, international, and etc. The Coach must be an adult and may be a teacher, professor, parent, college student, or even an ex-FLL participant.

The LEGO MINDSTORMS robotics set is required for the Robot Game. It is recommended for teams to have at least two robotics sets to allow more flexibility when testing different robot designs. The LEGO MINDSTORMS set can be purchased from Sasbadi.



All participating teams must register with Sasbadi. Fill up the registration form and submit it to Sasbadi before the registration deadline. Participation is limited and registration is on a first-come, first-served basis. Please refer to the registration form for more information.



Get the kit

The Challenge kit will be delivered to registered teams for practice. There will be ample time for teams to work on the Project and to practice on the Robot Game. The Challenge will be the same as the one in the real competition day.



The event will be held at a local venue. All teams will gather and compete at the national level competition for three days. Please refer to Sasbadi for venue information and competition date.

For additional information, please contact Sasbadi or visit:

fll.sasbadi.com



LEAGUE MALAYSIA

OFFICIAL COMPETITION KIT









39143 TETRIX® BASE SET



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SASBADI HOLDINGS BERHAD (1022660-T)

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