



# NEWSLETTER

**FLL**® **FIRST**® **LEGO**® League MALAYSIA 2017



## Congratulations

Team #REVELS from SMJK Chung Ling, Ayer Itam, Pulau Pinang  
**1<sup>st</sup> Runner Up - Mechanical Design Award**  
at the FIRST LEGO League (FLL) World Festival 2016 St. Louis, USA



**UPCOMING  
CHALLENGE**

# ANIMAL ALLIES<sup>SM</sup>

**Get ready.  
Get set. ROAR!**



### What is FIRST®?

FIRST (For Inspiration and Recognition of Science and Technology) is a not-for-profit organisation devoted to help 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 age 9 to 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 2016/2017 Challenge:



Get ready. Get set. Roar! Or you could bark, quack, or squeak, because the 2016/2017 ANIMAL ALLIES season is all about our furry, feathered, finned friend. In the 2016 FIRST LEGO League Challenge, more than 28,000 teams of students age 9 to 16\* will look into the eyes of our ANIMAL ALLIES. What might become possible when we learn to help each other?

FIRST LEGO League challenges kids in over 80 countries to think like scientists and engineers. During the ANIMAL ALLIES season, teams will choose and solve a real-world problem in the Project.

They will also build, test, and program an autonomous robot using LEGO MINDSTORMS technology to solve a set of missions in the Robot Game. Throughout their experience, teams will operate under the FIRST LEGO League signature set of Core Values, celebrating discovery, teamwork, and Gracious Professionalism.

\*Ages vary by country

### Missions include:

- Shipping shark in tank.
- Distribute food to animals.
- Guide cows to cow’s cell to produce milk.
- Release panda back into the wild.
- Bring back bee to beehive for honey production.
- Install a wheel prosthesis to disabled animals.

### Teams will:

- Choose a topic they are passionate about and have always wanted to learn.
- Design a solution that makes the interaction better for animals, people, or both.
- Share their solutions with others.
- Build, test, and program an autonomous robot using a LEGO MINDSTORMS set to solve mission on an obstacle course.



### FLL 2015/16



We’re not talking trash  
We’re cleaning it up!

#### FLL 2015/16 WORLD FIGURES:

- 233,136 children worldwide
- 29,142 teams
- 88+ countries
- 8-week design, build, and research period
- 66,000+ volunteers
- Over 1,000 sponsors
- 784 Qualifying Tournaments

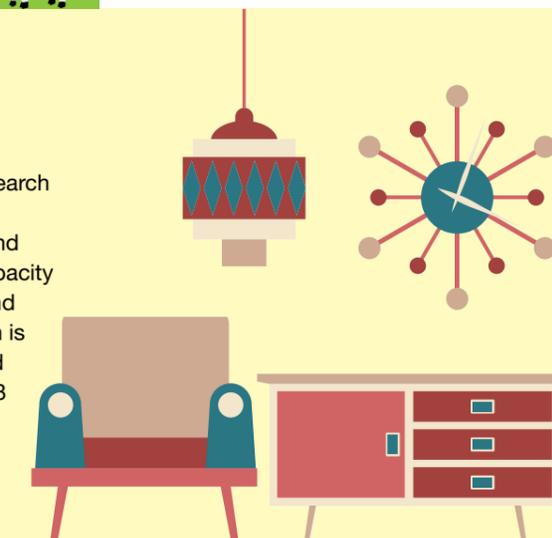
#### FLL 2016 MALAYSIA FIGURES:

- 1,000 children nationwide
- 89 teams
- 16 states
- 8-week design, build, and research period
- Over 40 judges & 100 volunteers
- Over 10 sponsors & partners
- 1 National Competition
- 102 Championship Tournaments
- 1 World Festival
- 2 Open Championships

## STEM INVENTION & INNOVATION 2017

The theme for STEM Invention & Innovation 2017 is ‘Smart Furniture’. A smart furniture is an innovative furniture that is capable of functioning in different ways without consuming a lot of space and is easy to move around for reallocation. Teams are required to invent a furniture that is portable and is able to transform to serve multiple purposes while also saving space.

STEM Innovation & Invention is a platform to uncover talents in research and development, invention and innovation. It is also to develop and enhance students’ intellectual capacity with respect to rational, critical and creative thinking. The competition is open to students age 9 to 14, and a team should comprises of 2 or 3 students and 1 teacher.



# ABOUT FLL®

## HOW IT WORKS

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 to up of 10 children, ages 9-16
- Adult coaches and mentors
- Schools, home schools, churches, civic groups, neighbourhood 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



### TEAM ACTIVITIES

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



# 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, programme, 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:

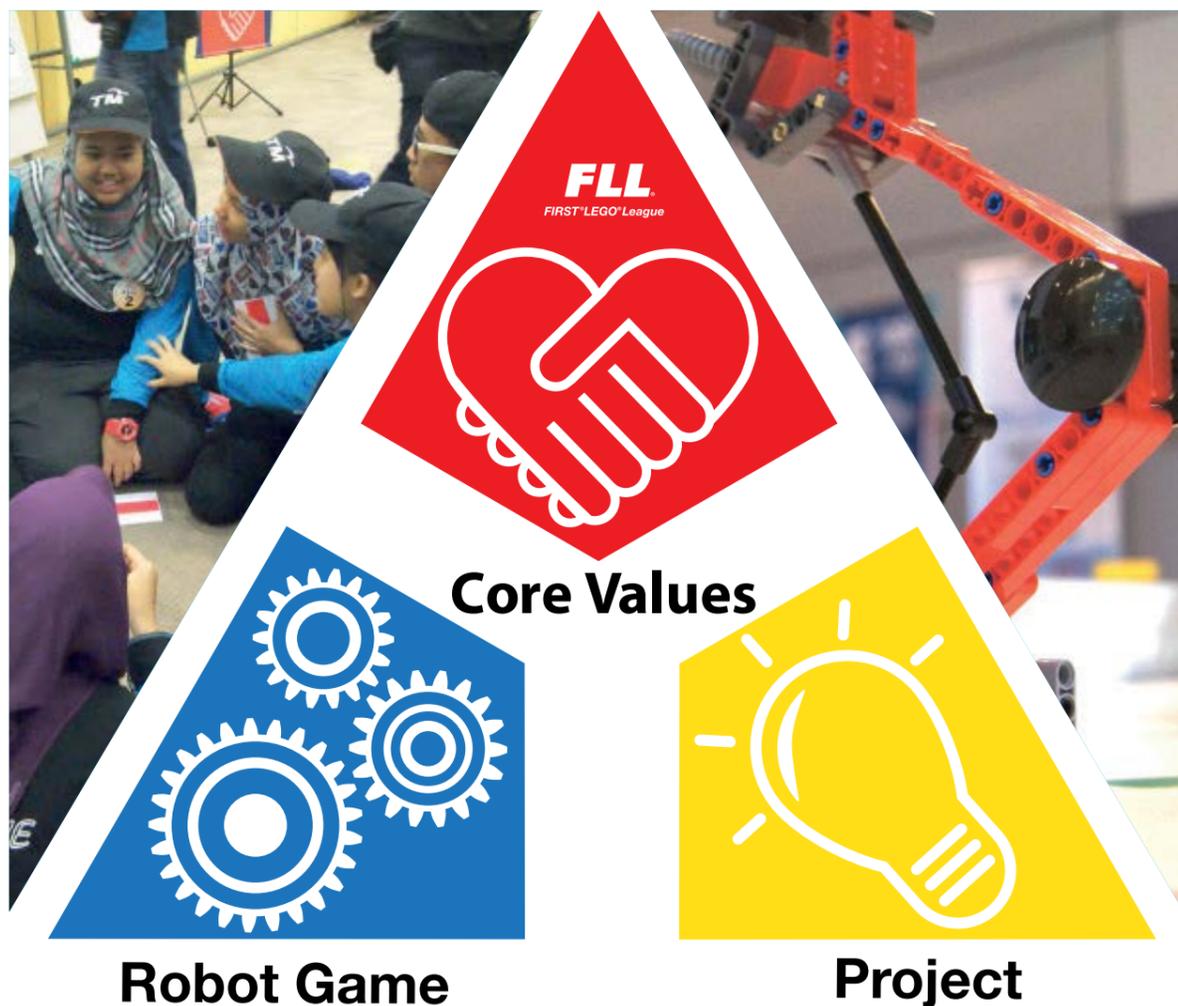
- The annual Challenge is revealed in early September

### Who can form a team?

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



# THE THREE ESSENTIAL PARTS



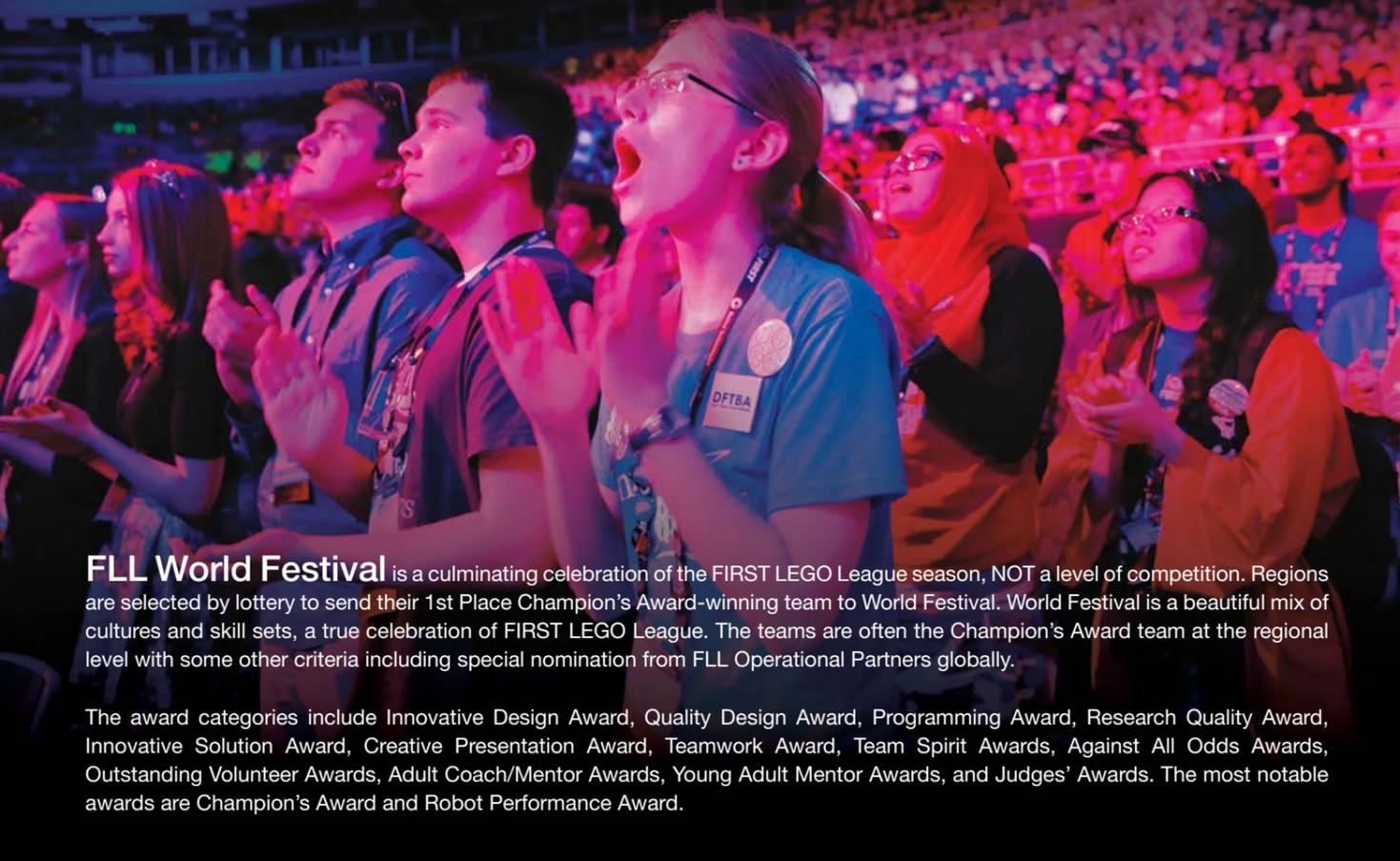
## A FIRST® LEGO® League Challenge consists of three parts:

- 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.

# THEMES (1998 - 2016)

<b>2016</b>  Making interactions better with animals <b>29,142 TEAMS</b>	<b>2015</b>  Finding better ways to manage our trash <b>29,142 TEAMS</b>	<b>2014</b>  Learning Unleashed The future of learning <b>26,500 TEAMS</b>	
<b>2013</b>  Exploring natural disasters <b>22,840 TEAMS</b>	<b>2012</b>  Quality of life for seniors <b>20,430 TEAMS</b>	<b>2011</b>  Keeping food safe <b>18,323 TEAMS</b>	<b>2010</b>  Explore cutting-edge world of biomedical engineering <b>16,762 TEAMS</b>
<b>2009</b>  Transforming transportation <b>14,725 TEAMS</b>	<b>2008</b>  Study and research of the climate <b>13,705 TEAMS</b>	<b>2007</b>  Energy management and conservation <b>10,941 TEAMS</b>	<b>2006</b>  Science at the molecular level <b>8,847 TEAMS</b>
<b>2005</b>  Health, diversity and productivity of the world's ocean <b>7,501 TEAMS</b>	<b>2004</b>  Address the needs of individuals with disabilities <b>5,859 TEAMS</b>	<b>2003</b>  Visit and explore the Red Planet <b>4,331 TEAMS</b>	<b>2002</b>  Challenges of urban planning <b>3,001 TEAMS</b>
<b>2001</b>  Impact of global climate change <b>1,902 TEAMS</b>	<b>2000</b>  Predict the timing and nature of volcano eruptions <b>1,540 TEAMS</b>	<b>1999</b>  Visit the international Space Station <b>960 TEAMS</b>	<b>1998 Pilot</b> <b>RACE AGAINST TIME</b> Robots race through mazes <b>200 TEAMS</b>

# 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.

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.

## FLL® FIRST® LEGO® LEAGUE WORLD FESTIVAL 2016



SMJK Chung Ling, Ayer Itam, Pulau Pinang  
Venue: St. Louis, United States of America  
Date: 21-30 April 2016

Winner Of The Mechanical Design Award **1<sup>ST</sup> RUNNER-UP**  
**Team name: #REVELES**

"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, its 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® ASIA PACIFIC OPEN CHAMPIONSHIP 2016



SMK Bintulu, Bintulu, Sarawak  
Venue: Sydney, Australia  
Date: 3-5 July 2016

Winner of The **BEST PRESENTATION AWARD**  
**Team name: Bintulu Hawks**

"With our team consisting of 7 boys and 3 girls, we structured our team in such a way that all of us can cooperate and accomplish tasks simultaneously without overloading ourselves. Three of us make up the Project team, researching, documenting and consummating the Waste Oil Transformer. Another five of us are in the Technical team, spending hours on end to complete the robot missions to accumulate the maximum amount of points attainable. Joining this competition was humbling, and it has opened our eyes towards the enormity that Mother Nature faces now due to our egoistic actions. As Julius Caesar once said, "Experience is the teacher of all things". Being crowned national champion and winning the Best Presentation Award at the Asia Pacific Open Championship has given all of us insurmountable knowledge that is both ubiquitous and worth its weight in gold."

**Mr. Ling Sim Hie & Ms. Yong Yee Yung, Coach for team Bintulu Hawks, SMK Bintulu, Bintulu, Sarawak**

## FLL® FIRST® LEGO® LEAGUE WORLD FESTIVAL 2014

Winner of The Strategy & Innovation Award **1<sup>ST</sup> RUNNER-UP**  
**Team name: JS Flawless**

"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, Bukit Mertajam, Pulau Pinang**



SMJK Jit Sin, Bukit Mertajam, Pulau Pinang  
Venue: St. Louis, United States of America  
Date: 21-30 April 2014

## FLL® OPEN EUROPEAN CHAMPIONSHIP 2012



SMK Bintulu, Bintulu, Sarawak  
Venue: Mannheim, Germany  
Date: 6-9 June 2012

Winner of The **CHAMPION'S AWARD**  
**Team name: Bintulu Hawks**

"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 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/I Subramaniam, Principal, SMK Bintulu, Bintulu, Sarawak**

# FLL® IN MALAYSIA

**FLL Malaysia** was held for the first time in year 2008 at Pusat Sains Negara. From 20 teams participating then in the inaugural competition, FLL Malaysia has seen a drastic increase of participants year after year. In the span of 9 years FLL Malaysia grew by leaps and bounds and by 2016, 89 teams took part in the competition.

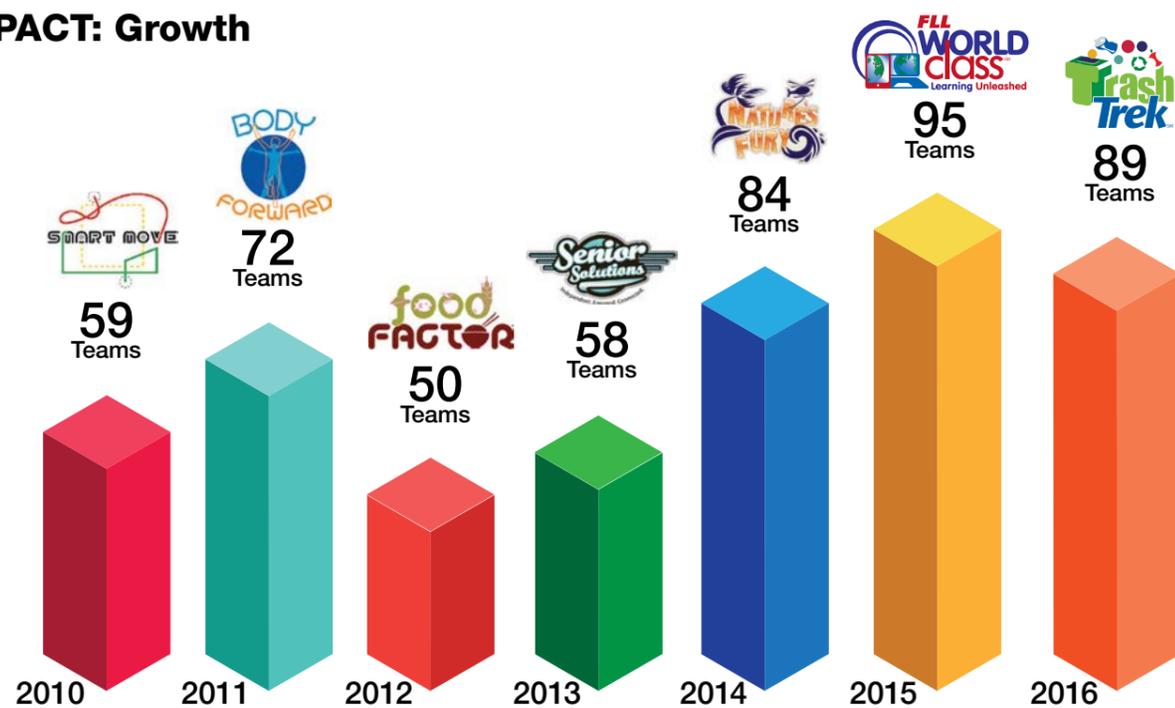
FLL Malaysia is a programme in line with the Ministry of Education's effort to promote STEM amongst Malaysian's students. Participating in the FLL

Malaysia provides children with a novel opportunity to gain strong grounding in robotics as well as the thinking, problem-solving and creative skills. The rich learning experience afforded by the competition is not only aligned with the Malaysian government's aspirations but also shapes the participants' future. The skill set being exposed to children will be deeply engraved as they take it with them through their future endeavours. Indeed, the FLL Malaysia is helping to shape Malaysia's tomorrow for the better.

FLL Malaysia 2016 was successfully held at the Institut Pendidikan Guru Kampus Bahasa Melayu, Lembah Pantai, Kuala Lumpur on 27 - 29 May 2016. There were 89 teams of children aged 9 till 16 participated in the competition. The theme for 2016 - **Trash Trek** requires the teams to do research and solve real-world problems about the current system of trash and garbage disposal by proposing innovative ideas that can conserve and preserve the environment. These ideas are presented with an understanding and application of science, technology and robotics. Team Bintulu Hawk from S.M.K. Bintulu, Bintulu, Sarawak was announced as the Champion's Award - Gold winner.



## IMPACT: Growth



Number of participating teams across 16 states in Malaysia

# FIRST® LEGO® LEAGUE MALAYSIA 2016



## AWARD WINNERS

Institut Pendidikan Guru Kampus Bahasa Melayu,  
Lembah Pantai, W.P. Kuala Lumpur  
27<sup>th</sup> to 29<sup>th</sup> May 2016



**CHAMPION'S AWARD  
GOLD**

**BINTULU HAWKS  
SMK BINTULU,  
BINTULU, SARAWAK**



**CHAMPION'S AWARD  
SILVER**

**ROBODES  
SMJK CHUNG LING,  
BUTTERWORTH, PULAU PINANG**



**CHAMPION'S AWARD  
BRONZE**

**NEMESIS-X ASSASSIN  
CR8 PENANG,  
PULAU PINANG**





## OTHER AWARDS



**BEST ROBOT PERFORMANCE**  
*Champion*

**SILENT-X ASSASSIN**  
CR8 Penang, Pulau Pinang



**BEST ROBOT PERFORMANCE**  
*2nd Runner-Up*

**STEALTH-X ASSASSIN**  
CR8 Penang, Pulau Pinang



**BEST ROBOT PERFORMANCE**  
*1st Runner-Up*

**PHANTOM-X ASSASSIN**  
CR8 Penang, Pulau Pinang



**BEST CORE VALUES**  
AWARD

**SMKSG GRYFFINDOR**  
SMK Seri Gombak, Gombak, Selangor



**INSPIRATION**  
AWARD

**WISSENSCHAFT**  
Hin Hua High School, Klang, Selangor



**TEAMWORK**  
AWARD

**Huffaz Geniuses**  
Maahad Tahfiz Negeri Pahang, Kuantan, Pahang



**GRACIOUS**  
**PROFESSIONALISM™**  
AWARD

**INFINITY**  
SMK Infant Jesus Convent, Johor Bahru, Johor



**BEST PROJECT**  
AWARD

**SUPER YC KIDZ**  
SJKC Yuk Chai, Petaling Jaya, Selangor



**INNOVATIVE SOLUTION**  
AWARD

**ENSEMBL3**  
EDU360 Academy, Selangor



**BEST ROBOT**  
AWARD

**PHANTOM-X ASSASSIN**  
CR8 Penang, Pulau Pinang



**STRATEGY & INNOVATION**  
AWARD

**SCRAP FORCE**  
CR8 Alor Setar, Kedah



**RISING STAR**  
AWARD

**PUTRA ROBOTIC TEAM**  
SK Bukit Rahman Putra, Gombak, Selangor



**RESEARCH**  
AWARD

**XENON**  
SMK Tinggi Batu Pahat, Batu Pahat, Johor



**PRESENTATION**  
AWARD

**JOBARIAN FORCE**  
Maktab Rendah Sains Mara, Johor Bahru, Johor



**MECHANICAL DESIGN**  
AWARD

**IBOTZ**  
ROBOTS2U Learning Centre, Pulau Pinang



**PROGRAMMING**  
AWARD

**TEMLAR-X ASSASSIN**  
CR8 Penang, Pulau Pinang



**AGAINST ALL ODDS**  
AWARD

**COLISTRIAN**  
SMK Convent Lebu Light, Georgetown, Pulau Pinang

# PHOTO GALLERY



## FIRST® LEGO® LEAGUE MALAYSIA 2016

Institut Pendidikan Guru Kampus Bahasa Melayu,  
Lembah Pantai, W.P. Kuala Lumpur  
27<sup>th</sup> to 29<sup>th</sup> May 2016

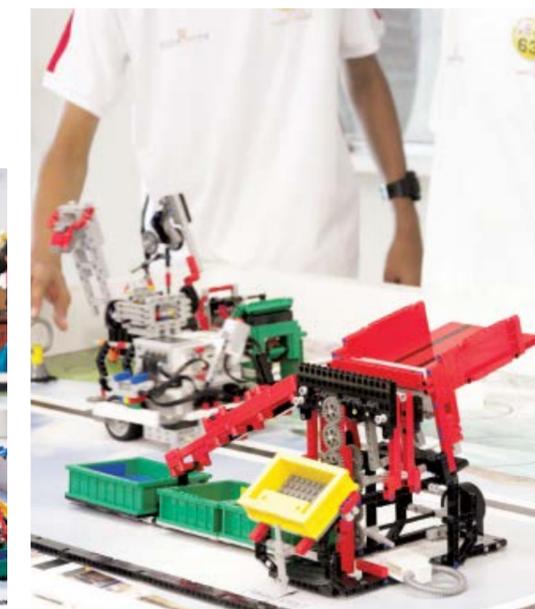
## PROJECT

Participating teams are required to choose a problem, research it, and design their own innovative solution to the problem. Each team will have 5 minutes to summarize their project in a presentation to the judges.



## ROBOT DESIGN

For Robot Design Award, judges will review some parts of the programming. There may be a competition table with mission models and teams should be prepared to demonstrate their solution to at least one of the missions.



## ROBOT PERFORMANCE

The Robot Performance Award recognizes teams that score the most points in the Robot Game. Winners will be determined by the number of points the robot scores during scheduled matches.



## STEM Invention & Innovation

**THEME: DAILY LIFE HACKER**

Introduced for the first time in FLL Malaysia 2016, STEM Invention & Innovation Category requires teams to create innovative inventions by applying STEM knowledge & skills according to the theme.



# CONGRATULATIONS TO THE **FLL**® MALAYSIA 2016 GRADUATES



89 Teams / 890 Young Engineers & Scientists /  
170 Coaches / Over 40 Judges & 100 Volunteers

MRSM JOHOR BAHRU, JOHOR BAHRU, JOHOR TEAM : JOBARIAN FORCE	SMK DATO SYED ESA, BATU PAHAT, JOHOR TEAM : ASTRADSEAN	SK SRI TEBRAU, JOHOR BAHRU, JOHOR TEAM : STARBOT	SMK INFANT JESUS CONVENT, JOHOR BAHRU, JOHOR TEAM : INFINITY
SMK TINGGI BATU PAHAT, BATU PAHAT, JOHOR TEAM : XENON	CR8 ALOR SETAR, KEDAH TEAM : BUBALUS BUBALIS	SM SULTAN ABDUL HALIM, JITRA, KEDAH TEAM : ROBOTER SENKRECHTSTARTER	SMK IBRAHIM, SUNGAI PETANI, KEDAH TEAM : FINIS CORONUT OPUS
MRSM BALING, BALING, KEDAH TEAM : 1	MRSM TUMPAT, TUMPAT, KELANTAN TEAM : EMARESEM TOO-4	ASRAMA 1 MALAYSIA, W.P. KUALA LUMPUR TEAM : A1M PRINCE	CREATIVE MINDS TEAM : BUZZER BEATERS
CHONG HWA INDEPENDENT HIGH SCHOOL, W.P. KUALA LUMPUR TEAM : CHKL	SMK SEKSYEN 5, WANGSA MAJU, W.P. KUALA LUMPUR TEAM : SVIAN ROBOTIC TEAM	TELEKOM MALAYSIA BERHAD TEAM : SMK MUNSHI ABDULLAH	KUEN CHENG HIGH SCHOOL, W.P. KUALA LUMPUR TEAM : ECLIPSE LEGACY
SK CONVENT INFANT JESUS 1, MELAKA TEAM : JC BOT	KOLEJ YAYASAN SAAD, MELAKA TEAM : VENCEDORA	ROBOCOM TEAM : ROBOCOM SUPREME	SMJK HWA LIAN, MENTAKAB, PAHANG TEAM : REVOLUTION EVOLUTION DEFIANCE (RED)
TECHTRONIC TEAM : VICTORY	CR8 PENANG TEAM : STEALTH-X ASSASSIN	SMK SERI MANJUNG, SERI MANJUNG, PERAK TEAM : TRIPLE B	SJKC HUA LIAN 3, TAIPING, PERAK TEAM : THE HL3
SMJK HUA LIAN, TAIPING, PERAK TEAM : HUA LIAN	SK SERI AMPANG, IPOH, PERAK TEAM : IGO D'SAINS	ROBOTOP EDUCATIONALIST TEAM : ROBOTOP	SJKC KWANG HUA, SUNGAI NIBONG, PULAU PINANG TEAM : SUN RIDER
HAN CHIANG HIGH SCHOOL, GEORGETOWN, PULAU PINANG TEAM : TEAM INSPIRE	SMJK PHOR TAY, BAYAN LEPAS, PULAU PINANG TEAM : PEKKA	SMK TAMAN PERWIRA, BUKIT MERTAJAM, PULAU PINANG TEAM : TEAM PERWIRA	SJKC CHONG CHENG, RELAU, PULAU PINANG TEAM : CCR TEAM
SMK BERAPIT, BUKIT MERTAJAM, PULAU PINANG TEAM : BERAPIT LIONS	SMJK CHUNG LING, AYER ITAM, PULAU PINANG TEAM : IMMACULACY	SM SAINS KEPALA BATAS, KEPALA BATAS, PULAU PINANG TEAM : SWAT TEAM	SMJK CHUNG LING, BUTTERWORTH, PULAU PINANG TEAM : ROBODES
ROBOTS2U LEARNING CENTRE TEAM : IBOTZ	SMK SIMPANG EMPAT, SIMPANG AMPAT, PULAU PINANG TEAM : BIONICLE HEROES	SK BUKIT GAMBIR, GEORGETOWN, PULAU PINANG TEAM : BOYS OF HILL	SMK PENANG FREE, GEORGETOWN, PULAU PINANG TEAM : ROBOFREES
SMK CONVENT LEBUH LIGHT, GEORGETOWN, PULAU PINANG TEAM : COLISTRIAN	SK PERMATANG TOK MAHAT, NIBONG TEBAL, PULAU PINANG TEAM : CATALYZER	CR8 SABAH TEAM : THE UNIQUE LEGEND OF US	SMK BINTULU, BINTULU, SARAWAK TEAM : BINTULU HAWKS
SK BUKIT RAHMAN PUTRA, GOMBAK, SELANGOR TEAM : PUTRA ROBOTIC TEAM	SMK SERI GOMBAK, GOMBAK, SELANGOR TEAM : SMKSG ASSIDUOUS	SMK DARUL EHSAN, BATU CAVES, SELANGOR TEAM : EHSAN MECHATRONICS	EDU360 ACADEMY TEAM : GEN3SIS
ROBOTECH EDUCATION CENTRE TEAM : ELITE REC'S	REAL SCHOOLS CAHAYA CAMPUS, SHAH ALAM, SELANGOR TEAM : HAZARDOUS HACKERS		

HIN HUA HIGH SCHOOL, KLANG, SELANGOR TEAM : WISSENSCHAFT	SK SEAFIELD, SUBANG JAYA, SELANGOR TEAM : CFIELD	SAM BESTARI, SUBANG JAYA, SELANGOR TEAM : BESTTECH	ROBOWIS SDN BHD TEAM : THE RE-USER
SJKC YUK CHAI, PETALING JAYA, SELANGOR TEAM : SUPER YC KIDZ	SMK JALAN EMPAT, BANDAR BARU, BANGI, SELANGOR TEAM : JESSTRONIANS	SMK DAMANSARA JAYA, PETALING JAYA, SELANGOR TEAM : SWIFT DJ ROBOWIS	CREATIVE MINDS TEAM : TRASH BANDICOOT
KOLEJ PERMATApintar NEGARA, UKM TEAM : PERMATA ACE	SMA ATAS SULTAN ZAINAL ABIDIN, KUALA TERENGGANU, TERENGGANU TEAM : KIZARS 2	PEJABAT PENDIDIKAN DAERAH KEMAMAN, KEMAMAN, TERENGGANU TEAM : ULTRA KEMAMAN	LITTLEBOTZ ACADEMY TEAM : STAROC
SK TAMAN MEGAH, PETALING JAYA, SELANGOR TEAM : SKTM RAPTORS	ST JOHN INSTITUTION, W.P. KUALA LUMPUR TEAM : ATOMIC RUSH	MAAHAD TAHFIZ NEGERI PAHANG, KUANTAN, PAHANG TEAM : HUFFAZ GENIUSES	LFKL - FRENCH SCHOOL OF KUALA LUMPUR, W.P. KUALA LUMPUR TEAM : LFKL TIGERS
CONFUCIAN PRIVATE SECONDARY SCHOOL, W.P. KUALA LUMPUR TEAM : LITTLE WOLF	SMK TINGGI BATU PAHAT, BATU PAHAT, JOHOR TEAM : RADON	CR8 ALOR SETAR, KEDAH TEAM : SCRAP FORCE	TELEKOM MALAYSIA BERHAD TEAM : SMK ARAU
ROBOCOM TEAM : ROBOCOM JUNIOR	CR8 PENANG TEAM : NEMESIS-X ASSASSIN	SMJK CHUNG LING, AYER ITAM, PULAU PINANG TEAM : #REVELES	SMK SERI GOMBAK, GOMBAK, SELANGOR TEAM : SMKSG GRYFFINDOR
EDU360 ACADEMY TEAM : QUANTUM	ROBOWIS SDN BHD TEAM : GOAL R US	KOLEJ PERMATApintar NEGARA, UKM TEAM : PERMATA TREACHEROUS	SMA ATAS SULTAN ZAINAL ABIDIN, KUALA TERENGGANU, TERENGGANU TEAM : KIZARS 2
PEJABAT PENDIDIKAN DAERAH KEMAMAN, KEMAMAN, TERENGGANU TEAM : KEMAMAN WARRIOR	ST JOHN INSTITUTION, W.P. KUALA LUMPUR TEAM : SAMURAI NAKAL	MAAHAD TAHFIZ NEGERI PAHANG, KUANTAN, PAHANG TEAM : PTI INVICTUS	TELEKOM MALAYSIA BERHAD TEAM : SMK CHENDERANG
ROBOCOM TEAM : ROBOCOM ULTIMATE	CR8 PENANG TEAM : PHANTOM-X ASSASSIN	EDU360 ACADEMY TEAM : ENSEMBL3	ROBOWIS SDN BHD TEAM : GOLDEN HAND
CR8 PENANG TEAM : TEMPLAR-X ASSASSIN	CR8 PENANG TEAM : SILENT-X ASSASSIN	CREATIVE MINDS TEAM : WILDSTORMS	

# HOW TO PARTICIPATE IN FLL<sup>®</sup> Malaysia

## FORM A TEAM



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.

## GET THE KIT



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.

## REGISTER



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 one more information.

## PRACTICE



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 real competition day.

## BE THERE



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](http://fll.sasbadi.com)

# OFFICIAL COMPETITION KIT



45544 LEGO<sup>®</sup> MINDSTORMS<sup>®</sup> EDUCATION EV3 CORE SET



45560 LEGO<sup>®</sup> MINDSTORMS<sup>®</sup> EDUCATION EV3 EXPANSION SET

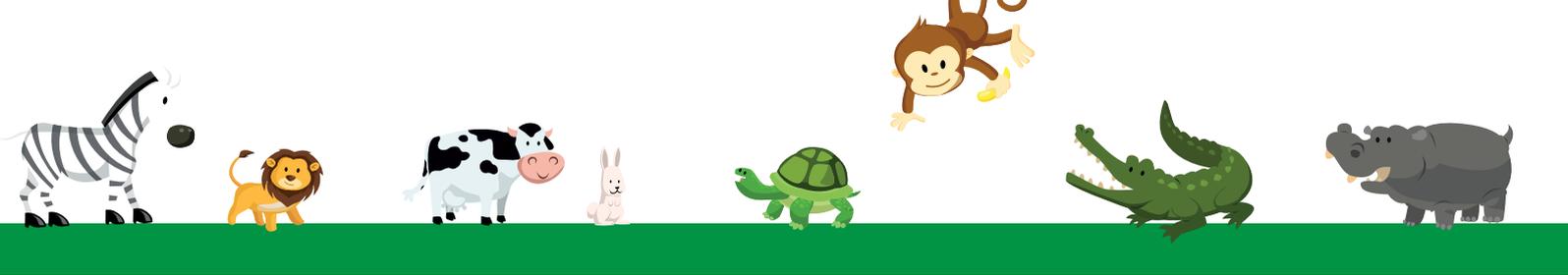
## SIMPLE & POWERED MACHINES



39143 TETRIX<sup>®</sup> BASE SET



9686 SIMPLE & POWERED MACHINES SET



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