# FIRST 香港 創意機械人大賽 2019/20
## FIRST Hong Kong Robotics Tournament

FIRST LEGO LEAGUE JR.

FIRST LEGO LEAGUE

FIRST TECH CHALLENGE

## FIRST 香港創意機械大賽 Hong Kong Robotics Tournament

香港青年協會（青協）於2005年引入國際FIRST LEGO League活動，並在香港舉辦「香港FLL創意機械人大賽」(FLL)。自推出以來，參與學校及機構超過200間，參加人數亦超過7,000人。為了給予小至高中的學生一個更全面的學習階梯，青協更於2019年引進FIRST LEGO League Jr. (FLL Jr.) 及 FIRST Tech Challenge (FTC)，並與FLL整合成為「FIRST香港創意機械人大賽」(FIRST HK)。透過FIRST HK一系列的活動，學生除了可以輕鬆愉快地學習科學、科技、工程及數學(STEM)的概念外，亦可以透過解難的過程，發揮他們無限創意、建立團隊合作精神及鍛練批判思維，以積極的態度面對及解決各項難題。

The Hong Kong Federation of Youth Groups (HKFYG) introduced FIRST LEGO League International Programme to Hong Kong in 2005. The local competition known as Hong Kong FLL Robotics Tournament (FLL) has been warmly received by local schools since its launch, with over 7,000 participants from 200 schools and organizations. In order to give a comprehensive learning platform to student from junior primary to senior secondary schools, FIRST LEGO League Jr. (FLL Jr.) and FIRST Tech Challenge (FTC) are integrated with FLL to form FIRST Hong Kong Tournament (FIRST HK). Through a series of programmes in FIRST, students not only could learn various concepts of Science, Technology, Engineering and Mathematics (STEM), but also develop their creativity, teamwork and critical thinking, as well as cultivate their positive mind to face and solve different problems.

### FIRST 香港創意機械人大賽 2019/20
### FIRST Hong Kong Robotics Tournament

解難能力 Problem Solving Skills

批判思考 Critical Thinking

創意思維 Creativity

STEM潛能 STEM Potentials

表達技巧 Presentation Skills

團隊合作 Teamwork

研究技巧 Research Skills

## 活動日程 Programme Schedule

| 活動 Activity | 日期 Date |
|---|---|
| 簡介會暨體驗日 Briefing Session cum Experience Day | 19th Oct 2019 |
| 截止日期 Enrollment Deadline | 11th Nov 2019 |
| 隊伍工作坊 Teams' Workshop | Nov 2019 - Jan 2020 |
| FIRST 香港創意機械人大賽 FIRST Hong Kong Robotics Tournament | 15th - 16th Feb 2020 |
| 海外比賽* Overseas Tournament* | Apr - Jul 2020 |

*成績優異的隊伍有機會獲邀代表香港參與海外比賽！Outstanding Teams have the opportunities to be nominated to join the overseas competitions Hong Kong Delegation

報名表格及更多資料
More Information

新參與FIRST的學校將有機會得到相關比賽的資助，詳情請向秘書處聯絡！
New schools joining FIRST have the opportunities to get the subsidies on the related programme. Please contact our secretariat for more information!

## 報名及查詢 Application and Enquiries

歡迎各學校及機構參加競賽。有興趣人士，可聯絡：
All schools and organizations are welcome to join. For further details please contact us at:
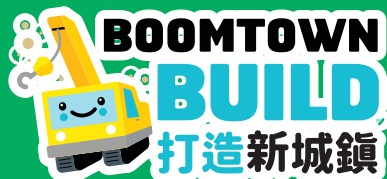
### 香港青年協會 — 創意教育組
The Hong Kong Federation of Youth Groups - Creative Education Unit

2561 6149    hkrt@hkfyg.org.hk

**BOOMTOWN BUILD 打造新城鎮**　探索世界議題，並透過搭建LEGO模型及海報設計分享研習成果！

Explore a world-side issue, share the innovative solution by building a LEGO model and designing a poster!

**CITY SHAPER 城市工匠**　發揮創意，透過實踐STEM概念及解難過程，鍛練批判思考及建立團隊精神！

Unleash the creativity; develop critical thinking and teamwork by practicing the STEM concepts and problem solving!

**SKYSTONE 穿蒼巨石**　PRESENTED BY Qualcomm　實踐科技、工程及數學知識，融合策略及組成聯盟的科技挑戰！

Application of the knowledge on technology, engineering and mathematics, an technologic challenge by integrating strategies and alliance formation!

## FLL Jr. 比賽內容 Content

■ 進行每年指定的主題研習，並探討相關的知識，然後使用WeDo2.0搭建一個以摩打推動的模型作品及一塊宣傳展板，以便向不同人仕分享學習成果。

According to an annually given topic, conduct a research and explore the related knowledge. Then, by utilizing the WeDo2.0, built a model with a motor-driven moving part and an exhibition board to share the idea to people.

■ 以隊制形式比賽，每隊由3-6位，年齡6至9歲之學生（在2020年8月1日前必須小於10歲）組成及由1-2位導師帶領。

It is a team-base competition. Each team comprises 3 to 6 students aged 6-9 years old (<10 years old before 1 August 2020) and should be led by 1 to 2 coaches.

## FLL比賽內容 Content

■ 以LEGO MINDSTORMS套件自行設計、搭建及編寫程式，控制NXT/EV3機械人完成4'x8'桌面上的場地任務。

By utilizing the LEGO MINDSTORMS kit, design, build and program a NXT/EV3 robot on their own in order to complete the missions on a table-top playing field.

■ 透過科學與工程解決一個每年指定的世界性問題（例如：食品安全及廢物處理），並以簡報及海報分享研究成果。

With the knowledge of sciences and technologies, conduct a research on an annually given real-world problem, such as food safety & trash recycling, and share the innovative solution by presentation and poster.

■ 挑戰一個即興任務，分享隊員間的合作經歷，表現團隊精神及互相尊重等核心價值。

Complete a spontaneous task and share their experience on their teamwork to show the Core Value of FIRST.

■ 以隊制形式比賽，每隊由5-10位學生組成及由1-2位導師帶領。

It is a team-base competition. Each team comprises 5 to 10 students and should be led by 1 to 2 coaches.

隊伍會分為兩個比賽組別：　小學組：　9至12歲之學生（在2020年8月1日前必須小於13歲）
　　　　　　　　　　　　　中學組：　12至16歲之學生（在2020年8月1日前必須小於17歲）

Teams will compete in two divisions:
Primary Division:　　　　for 9-12 years old (<13 years old before 1 August 2020)
Secondary Division:　　　for 12-16 years old (<17 years old before 1 August 2020)

## FTC比賽內容 Content

■ 按每年指定賽規搭建及編製一個機械人進行機械人競賽，當中包括未經加工的材料，兩部Android裝置、指定品牌之馬達及感應器 。

According to an annually given competition rule, build and programme a robot, with raw materials, two android devices, specific branded motors and sensors, to perform in the robotic challenge.

■ 參加評審環節，將整個預備工作、推廣活動、機械人設計等向評審匯報。

Join a Judging Session and present the entire preparation work, promotional affairs as well as the robot design to the judging panels.

■ 以隊制形式比賽，每隊由3-15位，年齡為18歲或以下之學生（在2020年8月1日前必須小於19歲）組成及由1-2位導師帶領。

It is a team-base competition. Each team comprises 3 to 15 students aged less than or equal to 18 years old (<19 years old before 1 August 2020) and should be led by 1 to 2 coaches.