

SCIENCE

@ S A L E S I A N

Vol.5



Content

| | |
|-------------------------------------|-----------------|
| Our school | P. 3-4 |
| Science | P. 5-6 |
| Technology | P. 7-8 |
| Engineering | P. 9-10 |
| Mathematics | P. 11-12 |
| Our pride | P. 13 |
| List of Awards with students | P. 14-15 |

Acknowledgements:

- Gifted Education Team
- Physics, Chemistry, Biology, Integrated Science, Mathematics, Computer and Visual Arts Panels
- Robotics Team
- JSSE sub-committee
- Programming and Design Club
- Academic Affairs Committee

Science @ Salesian

Vol.5

Welcome to Salesian English School! Welcome to the world of science and mathematics! In this issue, we will show you how we inspire and equip our students in the world of **STEM (Science, Technology, Engineering and Mathematics)**! Let us share with you the happy moments of learning science in our school in the year 2018-2019. Enjoy!

A. The Learning Environment

1. Our Laboratories

Welcome to our laboratories! This is where we do the experiments and some interesting workshops in science.

Physics lab



Chemistry lab



Biology Lab



Integrated Science lab



Mobile learning lab

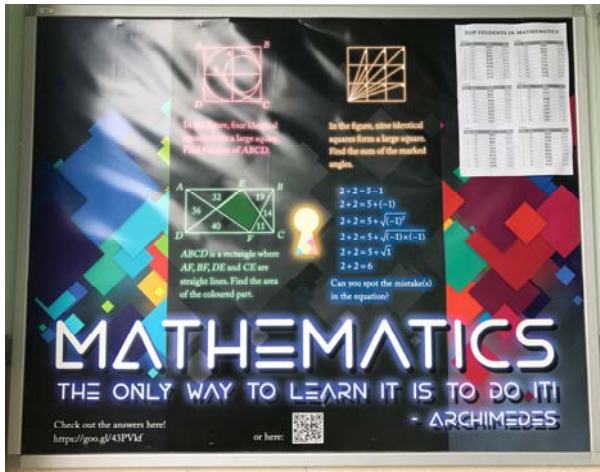


Computer lab



2. Campus

You can also find some interesting facts about science and maths in our campus. Do you know the answers?



3. Hardware

In order to support our STEM activities, we purchased different mobile learning devices facilitate learning. The students like to use them in their learning too.



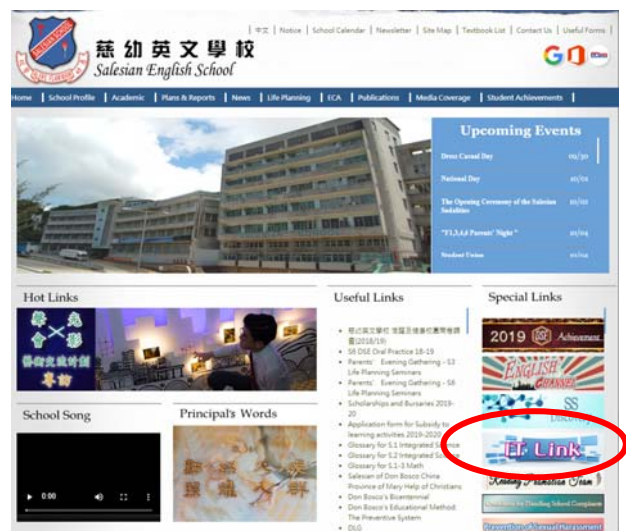
Students can use mobile devices in library for doing research



4. SS Discovery Channel

Our science teachers also prepared some video clips on interesting science for self-directed learning. Visit our website:

<http://www.ssshk.edu.hk/>
or scan the QR code on the right.



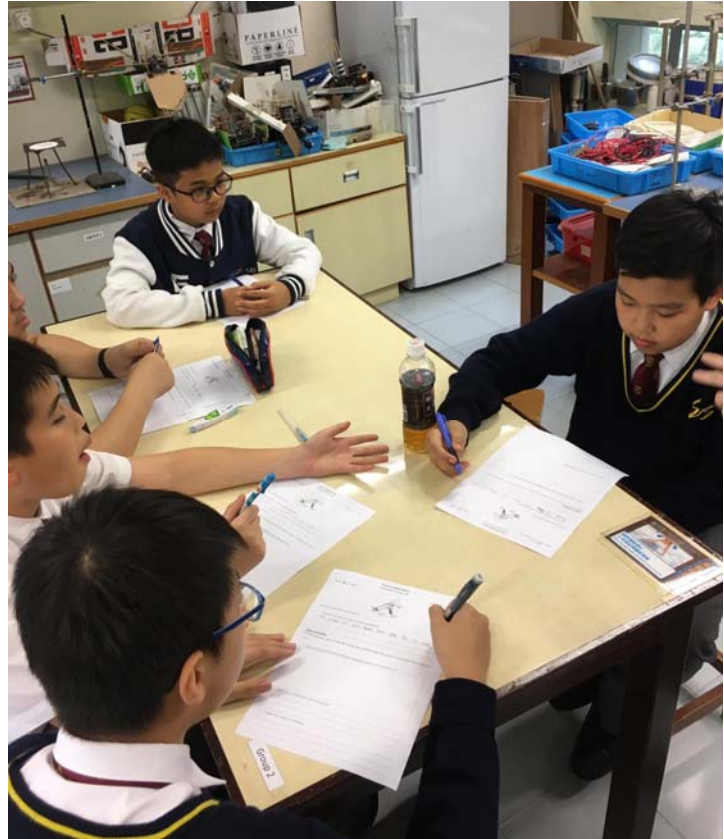
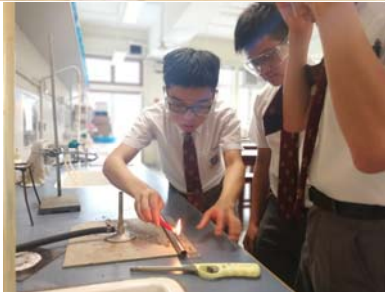
B. Science activities

I. Science

Creativity is the key to success in science. We organised different in-house workshops and competitions for our talented youngsters. We also nominate students to external tertiary institutes for more focused learning.

a. Science Ambassadors programme for Junior students 初中科學大使培訓課程

We organised Science Ambassadors programme for our selected junior students (S1 and S2) to foster their interests in science by doing some hands-on project and learn the theories behind. They have meetings for every cycle and there are different themes for each term to explore.



👉 Science ambassadors are coached to exercise their enquiry minds to explore theories behind their observations.

b. Science activities in classes and Science club

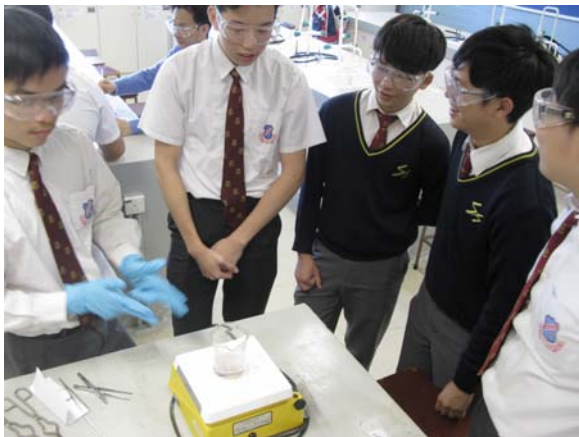
We have science club with different themes (Physics, Chemistry & Biology) for our students to participate after school. Come and see!



Water rockets competition for S2 students in IS lessons



One of the most favourite experiment in Biology lab – Dissection of frog



Students are doing the alchemy of turning zinc metal to “gold”.



Students are making battery motors in Physics lab



The senior students demonstrate their design in JSSE in our school hall to our junior students to arouse their interests in STEM.



c. Science Laboratory Workshop for STEM Education 2018 (1/12/2018 HKUST)

Three of our S5 students who study Chemistry have joined a STEM experimental workshop organized by the HKUST. Interesting experiments like “The Mystery of colourful fountains”, “The chemistry of egg” not only aroused students’ curiosity in Chemistry, but also boosted their understanding of some Chemistry topics.

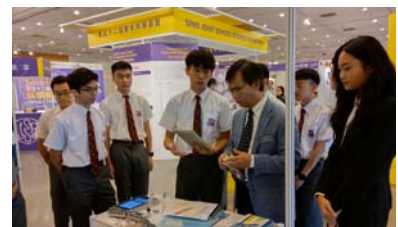
2. Technology

How can we make use of technology to make our world a better place to live in? One of the ways is to let them try it out. We also extend our efforts to integrate arts into our works to explore the possibilities of STEAM (Science Technology Engineering Arts Mathematics) in a practical way.

a. 52nd Joint School Science Exhibition (JSSE) 聯校科學展覽

Every year, our senior students participate in the JSSE, a platform for all youngsters to explore their imagination and creativity to solve daily life problems with the use of science.

This year, with the theme “Journey” (旅途), we have designed an app called 「鐵達嚟」 (*Teet Tat Lay*) for the Mass Transit Railway (MTR) system. With the use of Bluetooth technology and pressure sensor system, our app is able to help people find a more comfortable train compartment by knowing the crowdedness of the train before it arrives. The app also helps the user to locate their friends easily and receive real-time information of the forth-coming trains. With a group of committed students, we won **The Overall First Runner-up, Champion in Proposal, The Most Popular Booth and the Best Demonstrator!** This is also the fifth time we won the Most Popular Booth in five consecutive years!



The project holders and demonstrators with teacher supervisors, Mr. Man Chi-To (far left front row) and Mr. Leung Tsz Chung (2nd left front row)

Students explain our model and concepts patiently to the visitors



Our students are making and testing the hardware and software needed for the exhibition



Salesian English School
慈幼英文學校



A team of high-spirited youngsters striving for excellence in science!

b. Smart City Project Programme 2018-19 智慧城市專題研習計畫

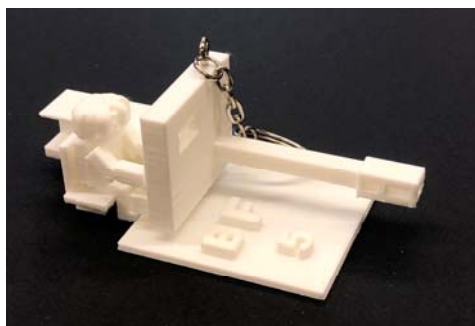
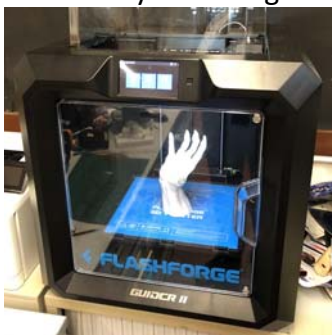
Four of our junior form students (1B 周浩義, 2B 陳明滙, 2C 劉凱泊, 3A 梁行健) represent our school to participate in the Smart City Project Programme organised by the Education Bureau.



Students receive training on coding before submitting their proposal. This was a very good experience to them.

c. 3D design workshop in Visual Arts

We also tried to integrated the use of STEM in Visual Arts lessons. Our students make use of their creativity and design skills to make their own models.



Key chains designed by our S1 students and printed by 3D printer to produce the real objects in VA lessons!

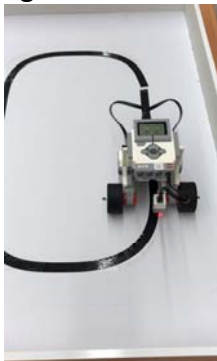
3. Engineering

How can we make use of technology to make our lives better? One of the ways is to make the robots to serve us. By using computer languages, we can control them to achieve our desired outcomes.



a. Robotics coding learning in regular computer lessons

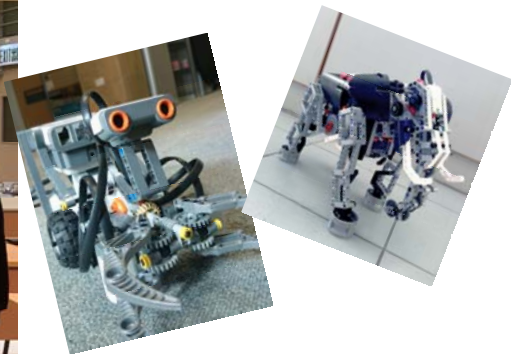
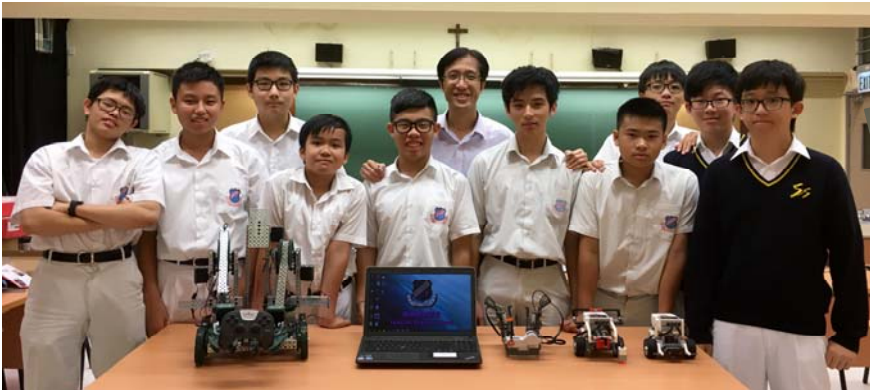
We integrate the Robotics and coding into regular computer lessons so that all S2 students have a chance to explore and learn how to control the robots to accomplish different tasks. For interested students, we also offer robotics teams for them to go further for interests and competitions.



☞ Students found the satisfaction when they are able to “teach” the robot to move as instructed.

b. Robotics Team

Our robotics team is the main force in putting forth the STEM education. We have regular meetings after school to learn coding and setting the LEGO robots and VEX robots. It is good fun!



Some of our members in the Robotics Team with our teacher supervisor, Mr. Chan Kong Wei (Centre)



The big brothers in the Robotics Team teach their junior schoolmates on the tips about robotics.

c. LEGO (WRO) 機械人比賽

This year, our junior forms students participated in the Speed Challenge (極速循環線) of the WRO and the **Gold LEGO Award** and also the **Best Performance Award!** Congratulations to them!



Our students are gearing their EV3 to their maximum performance for the competition.



Our team members (from right to left): Chan Kwun-shing, Ho Tsz-ho and Yeung Ho-tai together with our teacher advisor, Mr. Chan Kong-wei share the moment of joy of winning championship

d. Coding

Our Programme Design Club (程式設計學會) has organised a series of workshops to our students, such as the App Inventor workshop, students can create their own apps and use it on their own mobile devices. They also help in the school promotion day and workshop to introduce the concept of coding to parents and primary school students.



Our members of the Programme Design Club



Coding workshop held in our Computer lab



Our students are teaching the use of coding in writing an app



Our students act as tutors in the workshops for primary students in the Apps workshop

4. Mathematics

Our school has a good atmosphere in learning Mathematics. Can you imagine the joy of solving a maths puzzle?

a. Mathematics Olympiad (奧數訓練)

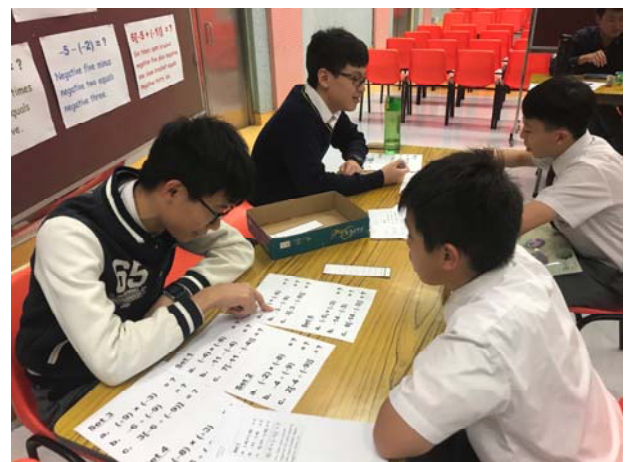
We have Maths Team for students who love solving mathematics puzzles. We participated in different competitions such as Greater Bay Area competition(大灣盃), Hong Kong Mathematics Creative Problem Solving Competition(香港數學創意解難比賽), The Hong Kong Youth Mathematical High Achievers Selection Contest (香港青少年精英數學精英選拔賽), AIMO(港澳盃), HKMO(香港數學競賽) and HKIMO(香港國際數學競賽). Students were divided into 5 groups based on their study level (S1-2, S3, S4 and S5) and trained by different mathematics teachers in our school. They have pretty good achievements too!



Prize presentation to our maths team members

b. The Maths week (數學周)

For the fun side, our mathematic society organised the Mathematic Week (數學周). The fun fair with plenty of games was held in the lunch time, in order to arouse the interest in mathematics and provide students a platform to show their abilities in problem solving. A talk on mathematics was also held for F.3 students after school, introducing M1 and M2 as their elective choice.



We have game stalls to sharpen our students in their problem solving skills.

c. Learning maths & science is fun! (勇闖鯊魚島) (@24th November 2018)

As a part of school promotion activities, the members of the mathematics club in our school designed a workshop for the visitors. Our students delivered a maths game in the form of drama and made lots of fun.



Our students shared the tricks on how to win in the game by using a mathematical mind.

d. S1 Orienteering Activities

As an activity of enhancing the communication skills in English, all S1 students had to visit 10 checkpoints and complete the tasks related to mathematics, science or English. S1 students were required to work as a team and solve the problems with creative ideas.



e. S1 Cross-curricular Project



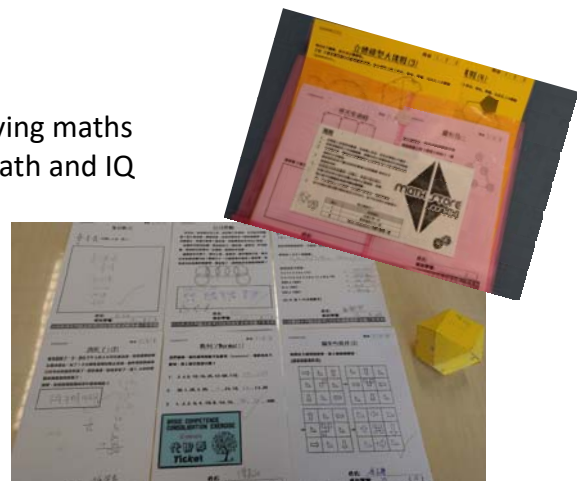
This was a statistical project for students which integrate the knowledge and skills learnt in English, Computer and Mathematics. The theme was about the food quality in school canteen. In English lessons, students were required to design questionnaires and deliver presentations. In computer lessons, students prepared the statistical figures and charts using computer software. In mathematics lessons, students learnt the uses and formats of different charts including the newly learnt *stem-and-leave diagram* and *scatter diagram*.

f. Summer Course for Elite Students

As a means of training up our elite students beyond the formal curriculum, advanced skills and questions at the DSE level would be discussed in the summer courses for those who are more keen in mathematics.

g. Maths Store

We always seek chances to promote the fun of solving maths problems. We placed a folder containing hundreds of math and IQ questions in S1 and S2 classrooms. Sudoku, Origami and Olympiad math questions were possible to be found. Students were free to try any of them in the recess, lunchtime and after school. Those answered correctly would be awarded with little gifts.



C. Our Pride

In the course of exploring all the possibilities and challenges in the fields of STEM, our students have tried their best to demonstrate their talents and diligence. Our students have gain not only prizes, but also valuable experience. We congratulate them on their success and are proud of their achievements. We hope they can continue their quest of science when they leave school.

1. 52nd Joint School Science Exhibition

We won the **Overall 1st Runner-up, Champion in proposal, The Most Popular Booth and the Best Demonstrator** this year!



*The Best Demonstrator
(5C Lam Yik Hei)*



*52nd JSSE – Overall 1st Runner-up,
Most popular booth and the Best Demonstrator prizes presented
by the Museum Director of the Science Museum, Ms. Chan Shuk-
man, to our students*



The joy shared by our project holders and our teacher advisors

2. WRO Gold LEGO Award 2019

Our team **Flash (閃電)** participated in the WRO Speed Challenge this year. The team consists of three S3 students. Being the only team to complete the mission successfully, we won the **Gold LEGO Award** and also the **Best Performance Award** this year! Congratulations to them!



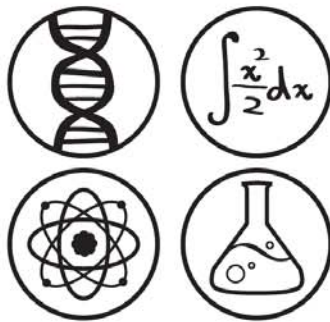
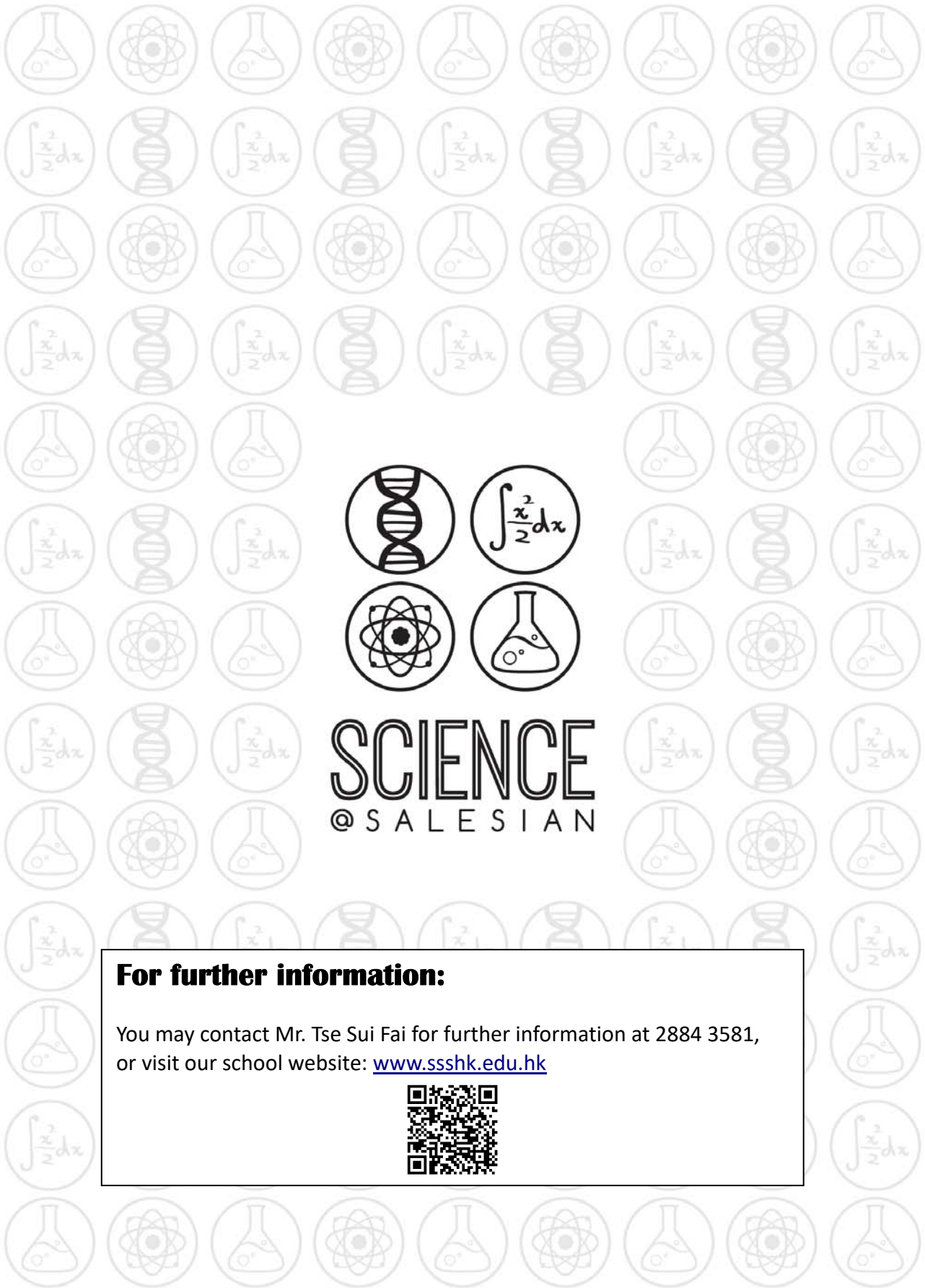
Our alumnus & assistant, Poon Wai-ho (2nd from right), who is also a former team member, share the joy of championship



D. List of awards with students

| Items 項目 | Achievements 成就 | Students 獲獎同學 |
|---|--|--|
| 52nd Joint School Science Exhibition 第 52 屆聯校科學展覽 | 1. First Runner up 全場總亞軍 2. Most popular booth (5 consecutive years) 最受歡迎攤位 (連續五年) 3. Champion in Proposal 計劃書冠軍 4. Best Demonstrator 最佳示範員 | 負責人/Project holders : 5C 吳博熙 5C 林奕熙 5C 徐偉倬 5D 陳俊熙 5C 林奕熙 |
| World Robotics Olympiad 2019 -- Speed Challenge 世界奧林匹克機械人競賽 2019 – 極速循環線 | 1. Golden Lego Award 極速循線 – 金樂高獎 2. Best Performance Award 全場最佳表現獎 | 3A 楊皓添 3B 何梓灝 3C 陳冠誠 |
| Greater Bay Area Mathematical Olympiad Preliminary Round 2019 大灣盃初賽 2019 (數學) | 一等獎 二等獎 三等獎 優異獎 | 1B 梁俊然 1B 周浩義 2B 陳明滙 2B 小峯啓司 3B 劉繁哲 3B 謝家耀 5E 梁煒然 1B 林少雄 1C 周浚鴻 2A 陳永濤 2B 朱政衡 4D 馮銘業 4D 施楓茗 5D 楊毅恒 5E 汪才惇 1C 周健 4D 陳逸康 |

| | | |
|--|---------------------------|--|
| Greater Bay Area Mathematical Olympiad Final Round 2019 大灣盃選拔賽 (數學) | 一等獎 二等獎 三等獎 優異獎 | 1B 梁俊然 2B 陳明滙 2B 小峯啓司 1B 林少雄 |
| Hua Xia Bei 華夏盃 (數學) | 一等獎 二等獎 三等獎 | 1B 周浩義 2A 劉字俊 1B 余天佑 2B 陳明滙 |
| Hong Kong Mathematics Creative Problem Solving Competition 創意解難比賽 (數學) | 銅獎 | 1A 方柏徒 1B 林少雄 1B 梁俊然 2B 梁永灝 |
| 港澳盃 (數學) (HKMO Open) | 金獎 銀獎 銅獎 | 1B 周浩義 1B 梁俊然 2B 陳明滙 3B 何梓灝 5D 林子軒 1B 林少雄 1C 周浚鴻 2B 朱政衡 2B 梁永灝 3A 張貿景 3A 黃朗賢 3B 謝家耀 4C 趙俊然 4D 陳逸康 4D 李德禎 5E 蔡榮煌 |
| HKIMO (國際奧林匹克數學比賽) | 金獎 | 1B 梁俊然 |
| Chemists Online “Self-study Award Scheme 2019 「化學家在線」自學獎勵計劃 2019 | Diamond | 5B Pan Chit Kit 5D Chui Hoo Yot |
| | Bronze | 5B Tse Ching Pan 5E Chan Hon Cheung |
| Smart City Project Programme 2018/19 智慧城市專題研習計畫 2018/19 | Participating team | 1B 周浩義 2B 陳明滙 2C 劉凱泊 3A 梁行健 |



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or visit our school website: www.ssshk.edu.hk

