

6. Technology Education

6.1 Computer Department

Mr. J. Ng

In the Technology Key Learning Area, the Computer Department aims to provide students with a body of essential knowledge and concepts related to the application of information, communication, and computer systems. We offer the following curricula at different levels to students.

- Information Technology (IT), a school-based curriculum which is compulsory for all students in S.1 - S.3
- Information and Communication Technology (ICT), an HKDSE elective subject for S.4 - S.6 students

The school year 2021-2022 was an exceptional year for both teachers and students. We had an unprecedented special vacation in March and April and a shortened summer vacation in early August. Lessons and activities had to be switched between online and face-to-face modes due to the pandemic development. Thankfully, the extra effort our colleagues put in, together with the tools that the school equipped both our staff and students with, made it possible for the teaching and learning activities to be conducted smoothly over the virtual platforms after making necessary adjustments. Despite these difficulties, all strategies of the Department's major concerns were implemented as planned. Under this environment, our S.6 students were able to achieve good results in the HKDSE 2022 ICT examination. 14% attained 5** and 57% attained Level 5 or above. As a reference, 1.1% and 10.4% of all ICT candidates in Hong Kong scored 5** and Level 5 or above respectively.

This year, our major concerns included the promotion of STEM education and a smooth phase-in of our new Computer teacher, with strategies being the following:

- (1) Fine-tune the S.1-S.3 IT curriculum to incorporate more programming and Artificial Intelligence (AI) contents.

Python Programming was firstly introduced in our S.3 IT curriculum. Building on this experience, we continued to offer the module of Python Basics to our S.3 IT students with further refinement. According to our student surveys of 2021-2022, almost 80% of S.3 students enjoyed studying the module and 89% of them found the module useful.

As in the past years, we continued to adapt the AI curriculum developed by the "CUHK Jockey Club AI for the Future Project" and incorporated them into our S.1-S.2 IT curriculum.

In S.2, two new modules on Drone Programming using MindPlus and A.I. Applications Development were introduced to give our students a better glimpse of the importance of coding as well as the application of the A.I. technologies. According to our student surveys of 2021-2022, almost 85% of S.2 students enjoyed studying the modules and over 90% of them found the modules useful.

- (2) Organise extra-curricular STEM workshops to better prepare our students for the upcoming AI era with the funding from the Office of the Government Chief Information Officer (OGCIO) "IT Innovation Lab in Secondary Schools" programme

- (a) AI Empowerment Courses

Starting from the school year 2021-2022, external tutors will be employed to run courses weekly after-school, on Saturdays or during long holidays to provide chances for enthusiastic students to acquire more in-depth knowledge of AI to solve problems and prepare for external AI competitions or further studies of AI in the future. A total of three courses were arranged during the time when face-to-face teaching and learning could be conducted.

(b) Elite Coding Class

Starting from July 2021, an external tutor has been employed to run on a weekly basis the Competitive Programming training for members of the DGS Programming Team to acquire more in-depth knowledge of coding for problem solving. It aims to prepare them for external coding competitions or future studies of related subjects.

- (3) Participate in the CUHK Jockey Club AI for the Future Project as one of the six Pioneering Schools to promote AI education.

We have been sponsored by the Jockey Club to employ one more Computer teacher for three years (2019-2022) so that we can have extra manpower to co-work with the CUHK Project Team and teachers from other Pioneering Schools to develop an AI curriculum for all junior secondary students in Hong Kong. Mr. J. Ng represented DGS to attend all the administration meetings while Mr. M Ho and Mr. M Nip took turns to attend all the curriculum meetings of the Project. We adapted and incorporated the different modules from the curriculum into our S.1-S.3 IT curriculum and received very positive responses from students.

This year, our students participated in many external STEM-related competitions and achieved outstanding results as follows.

Competition	Organiser	Awards
Hong Kong Secondary Schools Software Development Invitational Contest (SDIC) 2021	Hong Kong Association of Computer Education	Junior Group: Gold Medal: Chow Tsz Yau, Ip Wing Chun, Ng Hey Silver Medal: Ip Tsz Oi Senior Group: Silver Medal: Chan Tsz Ching
Hong Kong Olympiad in Informatics 2021/22	Education Bureau and The Hong Kong Association for Computer Education	Senior Group: Gold Medal: Ip Tsz Oi Bronze Medal: Tse Yan Wing Alvina Honourable Mention: Chan Tsz Ching Junior Group: Bronze Medal: Ng Hey, Chow Tsz Yau Honourable Mention: Ho Nga Chi
International Blockchain Olympiad	IBCOL Foundation	Gold Prize: Lam Chi Yau Theme Prize: Supply Chain Provenance: team comprising Ko Leong Ching Christie, Lo Nikkia, and Wong Sze Yan Nicole
Hong Kong Blockchain Olympiad	IBCOL Foundation and City University of Hong Kong, College of Business	Gold Medal : team comprising Lam Chi Yau and Liu Sophia Silver Medal and Best Prototype Award: team comprising Lam Wai Sum, Leung Chi Wai Natalie, So Wing Tung Abby, Wong Ka Yu, and Yu Sui Ki Rita Bronze Medal : team comprising Pak Hoi Man Chloe, Lai Ariel Sze Wing, Lam Yan Tung, Chan Kit Shan Vanessa, Chan Wing Chi Sarah, Cheung Wai Sum Award of Merit Team A: Chan Hei, Wong Evelyne Jade, Cheng Yunying, Wong Wan Yee Winnie, Yeung Hoi Yu Award of Merit Team B: Liu Hei Yuet

		Award of Merit Team C: Lam Isis, Tai Kiu Hei, Tang Cho Yi Emily, Cheng Wai Yan Josephine Award of Merit Team D: Chung Chui Tung, Cheung Alice Hiu Yu, Cheung Wan Chi Award of Merit Team E: Ko Leong Ching Christie, Lo Nikkia, Wong Sze Yan Nicole, Yee Adrian Karin
The Microsoft Office Specialist Championship HK 2022	AiTLE & Microsoft Hong Kong	Gold Award (Microsoft Excel 2019 Stream): Ho Nga Chi
STEM+E 2022	STEM+E Consortium: Hong Kong Cyberport Management Company Limited & Hong Kong Science and Technology Parks Limited	Winner: So Hoi Ting Most Valuable Player: So Hoi Ting, Wu Sum Ching Charmaine, Lam Ling Yui Adelina, Lam Yan Tung
Technovation Girls	Technovation	Global Semifinalists: Ho Nga Chi, Wong Tsz Tsun, Wong Lok Yung, Leung Man Sum
CUHK Jockey Club AI for the Future Secondary School Think and Create Competition 2021	CUHK & Jockey Club	Grand Prize - The Best A.I. Award: Fung Sze Ching Evelyn, Lam Hei Ting Alicia, Lee Hei Tung Christy, Lam Yan Tung
16th Soong Ching Ling Award for Children's Invention National Competition	China Soong Ching Ling Foundation and China Invention Association	Gold Prize: Fung Sze Ching Evelyn, Lee Hei Tung Christy
The Greater Bay Area STEM Excellence Award 2022 (HKSAR) 大灣區 STEM 卓越獎 2022(香港)	Hong Kong New Emerging Technology Education Association	Gold Prize (Art Tech): Chan Ki Yi Charlotte, Chan Tsz Nam Ding Chin Hang, Ng Hiu Tung, Leung Chung Man Jasmine, Luk Cheuk Yiu Sylvia
ICT Awards	The Office of the Government Chief Information Officer The Government of the Hong Kong Special Administrative Region	Bronze Award Chan Ki Yi Charlotte, Chan Tsz Nam Ding Chin Hang, Ng Hiu Tung Leung Chung Man Jasmine, Luk Cheuk Yiu Sylvia
Hong Kong Science Fair	Hong Kong Science Fair	Merit: Chan Kit Shan Vanessa, Lai Ariel Sze Wing, Pak Hoi Man Chloe, Lam Yan Tung
24th Hong Kong Youth Science & Technology Innovation Competition 2021	Hong Kong New Generation Cultural Association Science Innovation Centre	Merit: Fung Sze Ching Evelyn, Lee Hei Tung Christy
Regeneron International Science and Engineering Fair	Society for Science	Finalist: Fung Sze Ching Evelyn, Lee Hei Tung Christy
首屆香港青少年航天創新大賽	香港新一代文化協會	初中組 - 二等獎: Chan Tsz Nam

「智在 bit 得」micro:bit 創意裝置設計比賽	eClass	Silver Award: So Hei Tung, Lau Yan Yu
2022 CodeCombat Competition	Caprikon Education	Outstanding Coder: Lau Yi Fei, Yuen Faith
Ampower Talent Institute Career Planning App (Proof of Concept) Design Competition	Ampower Talent Institute	STEM Ambassador School Award (Competition) STEM Ambassador School Award (Master Class)
Career Compass & Skills Ladder Progression Mapping Competition	Ampower Talent Institute	Winner: Chan Tsz Hei, Ho Nga Chi
Essential Skills & Personality Traits X-Ray Competition	Ampower Talent Institute	Winner: Chan Tsz Hei, Ho Nga Chi
Graphical User Interface & Design Competition	Ampower Talent Institute	Winner: Lam Yan Tung 1st Runner-up: Cheung Alice Hiu Yu, Chui Cheuk Ying 2nd Runner-up: Chan Tsz Hei, Ho Nga Chi

To conclude this report, we would like to thank Mrs. CP Ho, who retired in August 2021, for her contributions and leadership in the past decade to both the Computer Department and the IT development of the school over the years. Sincere thanks must be extended to the Headmistress for her continuous support and to all Computer teachers for their professionalism and dedication throughout the year.

6.2 Technology and Living

Ms. P. Ho

The challenge of this academic year was the curriculum revamping and shortening of contact hours in S1 and S3 that resulted in a need to adjust the course content as well as learning and teaching activities. The lesson arrangement in S1 was changed from a bi-weekly double lesson of cooking and sewing to five cooking sessions for three classes (1U, 1W and 1X) only. As for S3, they attended either a double lesson of FST (Food, Science and Technology) or FCT (Fashion, Clothing and Textile) once every four weeks. In spite of the reduction in contact hours in face-to-face practical lessons brought by the ongoing pandemic, the department introduced the steps of the design process and implemented blended learning to enhance learning and teaching. Students showed effort and interest in doing cooking and sewing practice. Many girls showed their enthusiasm and demonstrated brilliant skills in the “S2 Meal Planning Project” and “S3 Food Product Design Project”, and they were able to share some happy and valuable moments when doing home cooking with their family.

Thankfully, our hospitality and service projects had not been affected by the limitation of contact hours. “Get Redressed Month” was held in October 2021. Special thanks to the Redress Limited, organising related activities for the students and the enthusiastic participation of the girls, hundreds of garments were collected and donated. We succeeded in raising the community’s awareness about sustainable fashion. This year, we have committed ourselves to the “Angel Clothes” sewing service project and sewing service project for Queen Elizabeth Hospital. These two new projects will be implemented in the FCT curriculum in the next academic

year. After class resumption, the Hospitality Committee headed by Hayley Lo and Mavis Tsang as well as the Chairlady of Food Technology Club Agnes Chiu assisted in the preparation of the tea reception for the PTA Annual General Meeting and Speech Day. The committee members from both teams demonstrated fabulous skills and put in extraordinary effort to make the events fruitful.

The Food Technology Club also helped in planning and organising five OLP sessions including Chinese dim sum and pastry making, as well as western cake and pastry making. The activities were successfully held, attributed to the team's spectacular performance as leaders. This treasurable experience has enlightened and enabled them to acquire useful skills for the future. A cooking competition was held in July right after the examination. A group of girls from 2Y comprising Chan Wing Tung Hayley, Sum Hei Ue Kareen, Chan Ka Lam, Wong Zi Yuet Rie and Lee Chloe Tsz Yee was the champion as they demonstrated marvellous skills and creativity in interpreting the theme "Fusion food for refreshment" through their recipe adaptation as well as the dish prepared and presented.

As for FCT related activities, 2U Wo Hoi Yiu Richelle won the Fabric Pattern Design Competition obtaining the highest votes. 3U Li Tsz Yau came second and 3Y Lee Fei Er Josephine came third. In collaboration with the Visual Art Department, we joined the Cheongsam Course of "The Jockey Club's Intangible Cultural Heritage Education Programme" Intangible Cultural Heritage Arts. All the 23 participating students from our school exhibited their enthusiasm and talent. As the finale for the course, an exhibition of the Cheongsam designs was held in late July and early August at the Hong Kong Art Centre.

I wish to congratulate the subject prize winners, namely 2U Yuen Faith and 3Z Cheung Hoi Ying. They have performed outstandingly throughout the year.

To close, I would like to express my sincere thanks to members of the department including Miss C. Au, Miss J. Lau, Ms. A. Sy, Miss Z. Law as well as Janitor Yuk for all their hard work. Finally yet importantly, I would like to thank our Headmistress Mrs. Lau for her guidance and unwavering support.

6.3 Business and International Studies Department

Mr. A. Ebrahim

The Business and International Studies department aims to equip students with life-long skills and practical knowledge to thrive in a dynamic and complex global market.

The department's primary responsibility lies with delivering the Business, Accounting and Financial Studies (BAFS) HKDSE elective to senior school students. As its name suggests, this comprehensive subject consists of a broad array of topics, ranging from investment analysis, preparation of accounts and financial statements, to marketing skills, investment concepts and knowledge of our business environment. Students actively learn about the world of business and develop skills applicable to all professional walks of life.

This past year, students continued to excel in this subject. The HKDSE results for BAFS were commendable with several students receiving 5* or above. Alvina Yiu in S5 received the HKICPA Scholarship for Secondary Schools. Additionally, many BAFS students continued to sit and achieve excellent results in other related external examinations.

Activities and competitions outside of the classroom are equally important to achieving our objectives. Despite the disruption caused to schools this academic year, several girls were still able to explore business-related knowledge and skills. For instance, 12 students joined the Business Excellence Contest 2021/2022 organised by the Hong Kong Polytechnic University. They analysed a real corporation in Hong Kong and made use of their creative and critical thinking skills, to develop a new product / service using the concept of green innovation. Two groups were rewarded with the Silver Award and the Judges Commendations Award

respectively. Furthermore, students also joined the Qianhai-Guangdong-Hong Kong-Macao-Taiwan Youth Innovation and Entrepreneurship Competition and the S.T. Yau High School Science Award (Asia) 2022, Economic and Financial Modelling. These experiences were all educational and rewarding, as girls were able to utilise their research, creative and problem-solving skills in the process of producing their work.

Additionally, we continued to encourage junior students to expose themselves to the business world. Some joined the HSBC Young Financial Planners programme organised by the Boys' and Girls' Clubs Association of Hong Kong. Throughout the whole year of activities, students learned interview and presentation skills and how to analyse data. They met with experts from different industry sectors and gained a thorough picture of the economic development of Hong Kong. As part of the programme, the girls were also split into different groups to conduct in-depth research on a particular social issue and to propose recommendations. They were given the rare opportunity to meet directly with Mr. Paul Chan Mo-po, the Financial Secretary, to give advice on the fiscal budget from their perspective as teenagers.

The success of the department would be impossible without the support of others. Firstly, Mrs. Lau has steadfastly supported our plans and been a consistent source of guidance. Mrs. M. Cheng has proven herself to be an enthusiastic member of the department, and one who can capably educate and develop the students. All our partner organisations have also provided opportunities, their time and their resources to our students, and we owe them all a debt of gratitude.