Head of School Coffee Morning

Summer Update
The Year Ahead @ ISF

Dr. Malcolm Pritchard – Head of School

7 September 2022

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ISF Gallery Project


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PRIMARY SCHOOL 小學部


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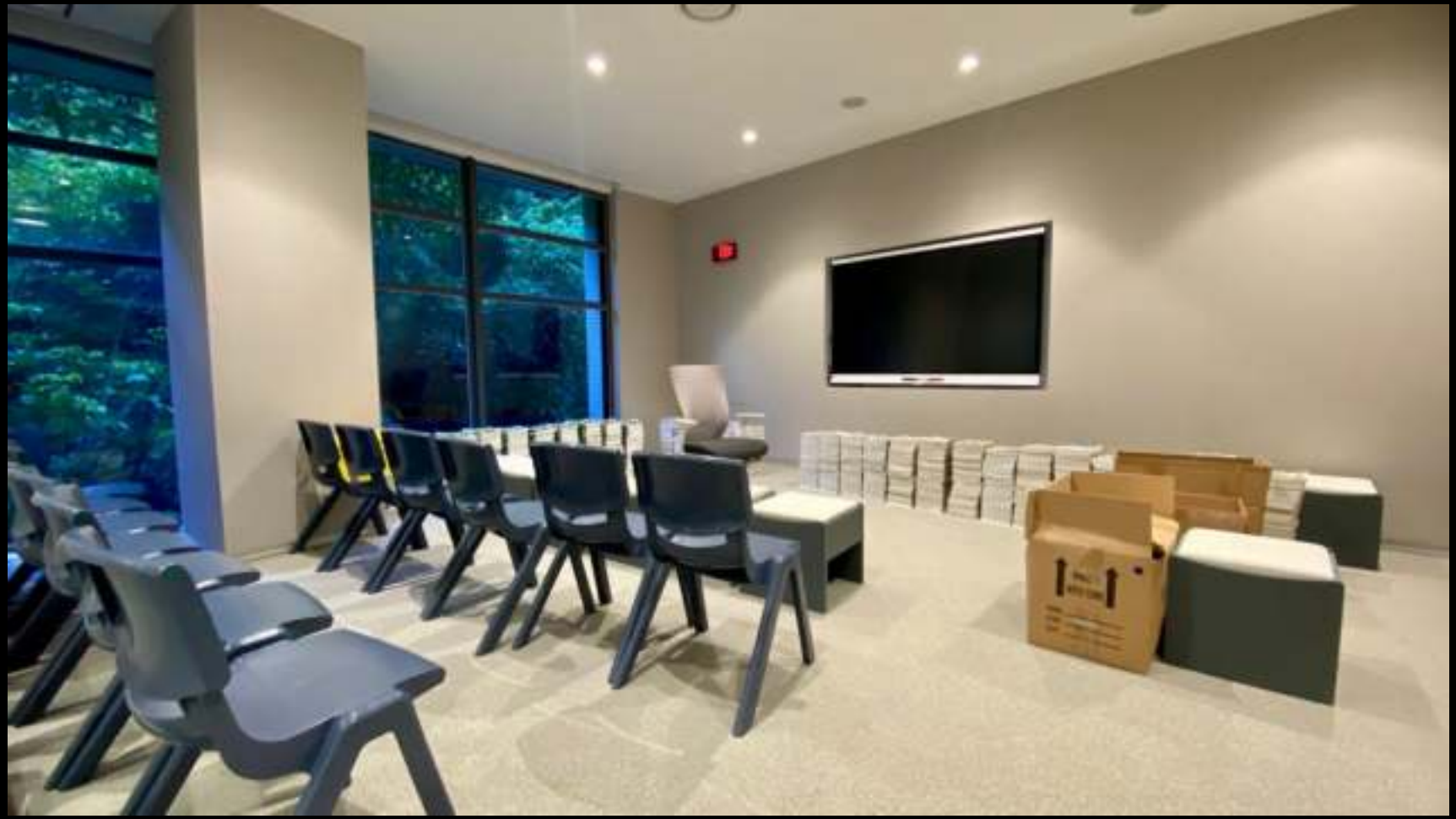

Summer Activities


我寫給讀者的話：
我是來自弘立書院的潘柏喜，很高興你打開這本由我拍攝，創作的攝影集。我覺得拍照是一件神奇的事情，因為


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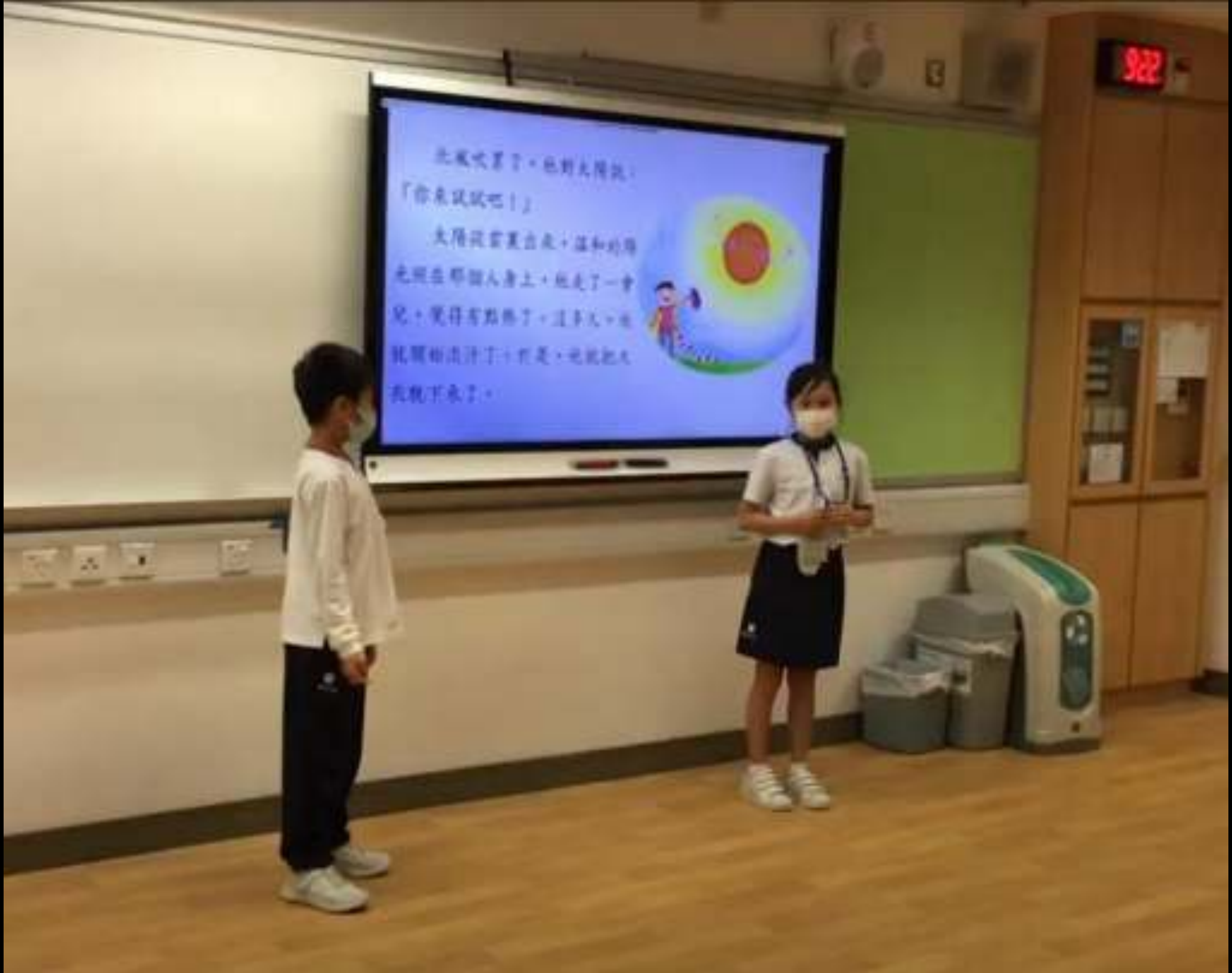


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Outdoor Exploration Society (OES)

Summer Programs & Activities: ELP, NRI, OES, ASM

x2488
Track: AES05
ASM Microbe
June 2023

Kluyvera sp. CRP a Cellulolytic Isolate from Red Panda Faeces (*Ailurus fulgens*)

Angus C.H. Wai, G. K. K. Lai, S. D. J. Griffin*, F. C. C. Leung

The ISF Academy, Hong Kong *Corresponding author: sgriffin@isfedu.hk

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Greener biofuels

Biofuels generated from food sources may be 'carbon neutral' but they also have negative consequences for economies and the environment. In contrast, second-generation biofuels from lignocellulosic biomass, such as industrial, agricultural and municipal waste, are more sustainable but require pre-treatment in order to release fermentable sugars.

Biological pre-treatment with isolated enzymes or whole cells is cheap and energy-efficient, so that this project has looked for strongly cellulolytic bacteria in faeces of the Chinese red panda (*Ailurus fulgens*). This species uses bamboo as its major food source, and previous characterisation of its gut microbiota suggests extensive cellulose-degrading pathways [1].

Method:

Red Panda faeces were collected from Ocean Park Hong Kong. 1 g fresh faeces was serial-diluted in 0.9% saline to 0.1% w:v and a 100 µL aliquot spread onto carboxymethylcellulose (CMC) agar and incubated at 27 °C for 48 hours. Isolate CRP grew well on CMC agar and was passaged to purity on Luria agar before DNA extraction (Invitrogen PureLink® Genomic DNA Mini Kit). Cellulolytic activity was checked by incubation on CMC agar followed by staining with Gram's iodine. The complete genome of CRP was generated by hybrid assembly of MiSeq (Illumina) short-reads and MinION long-reads (Oxford Nanopore) using Unicycler v0.4.3 [2]. The sequence was submitted to PATRIC [4] and to NCBI PGAP v5.0 [3] for annotation. GenBank accession no. CP082841.

The complete genomic sequence of CRP totals 5.16 Mbp and Mash/MinHash using PATRIC found it closest to *Kluyvera* genomosp. 3 strain PO257 (CP050321) with an average nucleotide identity of 96.83%.

Cellulolytic pathways are strongly represented with four copies of beta-glucosidase, 10 copies of 6-phospho-beta-glucosidase (chbF/celF), together with multiple copies of cellobiose phosphotransferase and the bcs operon.

CRP shows resistance to ampicillin consistent with the presence of a CTX-M-40 beta-lactamase.

Disk diffusion assay of CRP on ampicillin

Segments of the chitin and GlcNAc utilization pathway

A complete chitin and GlcNAc utilization pathway [5], including a chb operon, was identified around the genome. Compared to the pathway in [5], ydeN and ydeM are in opposite strands in the genome.

Locations of the start and end of each segment of the pathway are squared with respective color.

Cellulose degradation pathway as identified in CRP

A complete cellulose degradation pathway was identified in CRP. A cellulase (*bcsZ*) in CRP sequence is nested within the bcs operon. Four copies of beta-glucosidase in CRP are spread around the genome and each have completely different sequences with no conserved regions. This suggests the four copies might come from different origins.

All four beta-glucosidase in CRP modelled by Phyre2 [7]

Cellulose Biosynthesis operon

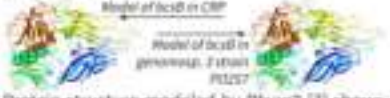
CRP on a CMC plate

A 9 enzyme long bcs operon [6] is present in the sequence. The presence of the *bcs* operon in CRP is consistent with activity shown on CMC agar plates.

Sequence alignment of the *bcs* operon present in genomosp. 3 strain PO257 showed a 99% identity (4534/4560 aligned) between the two.

Sequence alignment of CRP and genomosp. 3 strain PO257 between bcsA and bcsB by NCBI BLAST [8]

The most significant discrepancy is a gap of 10 acids at the start of *bcsB* in CRP, compared to genomosp. 3 strain PO257.



Protein structure modeled by Phyre2 [7] shows no significant difference in structure between the two proteins.

Conclusion:

Kluyvera sp. CRP shows strong activity with chitin and cellulose. Genomic analysis shows prominent chitin and cellulolytic pathways. These could give CRP an advantage in breaking down lignocellulosic waste.

References and supplementary info can be found at: bit.ly/3z24HBi

This work was funded under the ISF Shuyuan research program.

Abstract ID:
BG04-A002
Session: **D3-AM1**
AOGS Aug 2022

Isolation and Characterisation of Plant Growth Promoting Bacteria from Aerial Roots of Hong Kong Plants

M. Lam, K. M. Leung, G. K. K. Lai, S. D. J. Griffin, F. C. C. Leung

ISF 第立

Introduction

Similar to many other regions of Southeast Asia, rainfall in Hong Kong surpasses 2200 millimetres per year [1]. In addition, local granite-derived soils are poorly retentive of nutrients, creating oligotrophic conditions with soil total nitrogen concentrations ~0.04% in topsoil and negligible concentrations below [2]. Despite such challenges, numerous non-leguminous (and often lithophytic) plants such as *Ficus microcarpa* and *Glochidion hongkongense* are not only abundant but also grow to great size. These high levels of carbon sequestration suggest correspondingly large rates of nitrogen uptake that must depend largely upon microbial nitrogen-fixation.

Method

Aerial root tips ~20 mm in length were collected from common plant species in Hong Kong such as *Ficus microcarpa*. These samples were incubated in nitrogen-free (NF) broth medium for 7 days at 32°C after surface sterilisation using 1% (w/v) 8-hydroxyquinoline sulphate. The incubation was repeated with new NF broth. Next, the top layer was picked and passaged to purity on NF M710 media to identify potentially nitrogen-fixing bacteria. Complete genomes of *Klebsiella variicola* Rba2 (from *Philodendron erubescens*), *Gluconobacter thailandicus* ISBL3 (from *Syngonium podophyllum*), as well as *Kosakonia radicincitans* JS2a2 (from *Ficus microcarpa*) were generated by hybrid assembly, using both Illumina MiSeq and Oxford Nanopore MinION platforms. Genomic analyses were performed using NCBI BLAST [3], TYGS [4], PATRIC [5], Uniprot [6] and Clustal Omega [7].

Fig. 1 Roadside *Ficus microcarpa*, source of sample *Kosakonia radicincitans* JS2a-2

Results

Experimental results found that all three samples grow rapidly on NF medium, producing clear, mucoid colonies, and Gram staining revealed that all samples were Gram-negative. Genomic analysis found numerous genes suggesting endophytism, presented in Table 1. How an endophyte may use these genes is presented in the schematic below (Fig. 2).

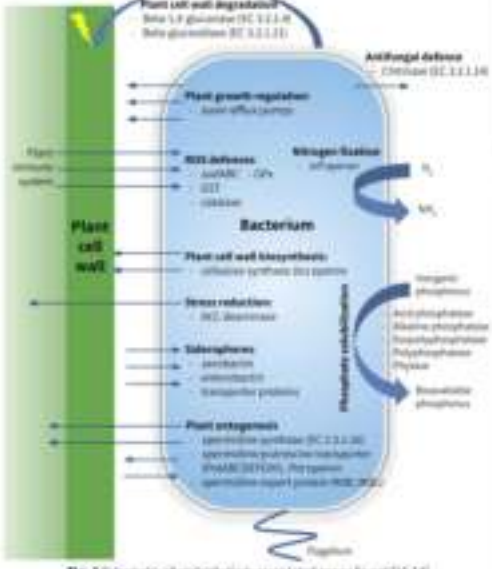


Fig. 2 Schematic of endophytism-associated genes found [10-14]

Genes that allow for both anabolic and catabolic modifications are particularly signifying for endophytism as it suggests host intracellular environment modification capabilities. Nitrogen fixing and phosphate solubilising capabilities in endophytes are also significant given that nitrogen and phosphorus are key limiting nutrients for plant growth [15]. These genes were highly conserved across genera.

Sample ID	Rba2	JS2a2	ISBL3
Taxonomy	*Klebsiella variicola*	*Kosakonia Radicincitans*	*Gluconobacter thailandicus*
Genome size (Mbp)	5.68	~5.26	3.31
G+C Content (%)	57.29	54.55	56.30
Source (aerial roots)	*Philodendron erubescens*	*Ficus microcarpa*	*Syngonium podophyllum*
Plant antagonism genes	Phz operon, auxin efflux pumps, spermidine export protein	Phz operon, auxin efflux pumps, spermidine export protein	Phz operon, auxin efflux pumps, ACC deaminase
Cell wall modification genes	Bca operon, 1 beta-1,4-glucanase	Acr operon, 3 beta-1,4-glucanases	2
Siderophore genes	10	10	2
nif gene operon	☑/☑	☑/☑	☒/☑

Table. 1 High counts of plant growth-promoting genes suggest endophytism

Discussion

This study has identified three likely endophytes, possessing genes such as the *nif* operon for nitrogen-fixation, *pho* operon for phosphate solubilisation and polyamine transporters for plant antagonism.

The presence of nitrogen-fixing microbes on dominant non-leguminous plant species in Hong Kong, such as *Ficus microcarpa*, may suggest an abundance of growth-promoting endophytes in this region.

Used *in situ* for crop species, such nitrogen-fixing microbes may present a sustainable method for plant growth promotion to reduce dependence on inorganic fertilisers. However, because endophytes are highly adapted to the internal environments of their hosts, the next step in our project will be to investigate pairings of growth-promoting bacteria with potential hosts. Are specific host-related bacterial genes essential for success?

Acknowledgements

This work is funded under the *ISF Shuyuan Research Programme*.

References and Supplementary Materials

can be found at https://tinyurl.com/MLAMAOGS22

#2551
Track: AES06
ASM Microbe
June 2022

Identification of Two *Pseudomonads* with the Potential for Polyester Microfibre Bioremediation

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Introduction

Polyethylene terephthalate (PET) is a sophisticated and stiff plastic with a stable aromatic ring (Fig. 1). With its high tensile strength, PET is now the main ingredient for 60% of plastic for plastic bottles [1] and spun into fabric for polyester-based clothing worldwide, constituting to 42 million tons of microplastic waste per year [2]. In this investigation, aromatic substrates (toluene, sodium benzoate, benzyl benzoate and a suspension of PET microfibres in hexafluoro-2-propanol) were used as carbon sources to screen for polyester-degrading microbes.

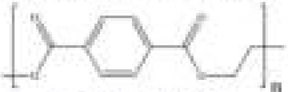

Fig. 1: Chemical structure of PET

Methods

Samples of PET fabric were buried in soil for three months (Fig. 2). After recovery, the fabric was rinsed with 0.9% w:v saline and an aliquot of each extract incubated in minimal medium (at 27 °C with shaking) with 10% v:v toluene as the sole carbon source (Fig. 3). After 7-10 days, viable bacteria (determined by streaking on Luria agar) were transferred to a minimal medium containing 5% w:v sodium benzoate (Fig. 4). Isolates with greatest turbidity were streaked to purity on Luria agar. PET-degrading activity was tested by growth on agar made with Zhang's medium [3] to which a thin layer of PET fibres dissolved in hexafluoro-2-propanol had been applied (Fig. 5). DNA was extracted from two selected isolates using a DNeasy PowerSoil Kit (Qiagen) [4] and sequenced via both Illumina MiSeq [5] and Oxford Nanopore MinIon platforms [6] to generate complete genomes by hybrid assembly (Unicycler v0.4.3) [7]. PATRIC [8], NCBI BLAST [9], Phyre2 [10] and Clustal Omega [11] were used for comparative genomic analysis.

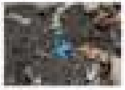

Fig. 2: Burial site of polyester

Fig. 3: Turbid toluene solution

Fig. 4: Turbid Sodium Benzoate solution

Fig. 5: Samples on Zhang's medium plate

Two *Pseudomonads* show potential for PET degradation

Sample ID	LS_1a	LS_2c
Estimated genome size	5.75 Mbp	6.35 Mbp
% G+C	63.08%	66.46%
Source	soil/leaf litter	soil/leaf litter
GenBank accession	*Pseudomonas* sp. LS.1a CP092827	*Pseudomonas aeruginosa* LS.2c CP092634
Closest genome Source ANI	- *Pseudomonas* sp. 43(2021) - *Oryza sativa* ssp. *japonica* rhizosphere (Italy) ANI 99.41	- *Pseudomonas aeruginosa* AZPAE15026 - clinical UTI (Colombia) ANI 99.99
Key genes for aromatic degradation	- Toluene tolerance proteins - Xylene and sodium benzoate degradation pathway - benzoate transport proteins - benABC operon - dmpK-P operon - Five copies of catechol-1,2-dioxygenase	- Toluene tolerance proteins - Xylene and sodium benzoate degradation pathway - Benzoate transport proteins - benABC operon

Table 1: Details of isolates LS_1a and LS_2c

Similarities with arysterlase

Both isolates possess an arylesterase similar to the PET-degrading enzyme reported by Haernvall *et al.* with the potential to degrade PET through enzymatic hydrolysis [12]. Protein structures found by Phyre2 (Fig. 6, 7, 8) showed similarities in the tertiary structure of enzymes, showing a potential relationship between arysterlase and both isolates.

Fig. 6: Sample LS_1a arylesterase structure

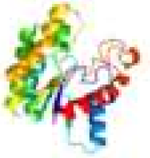

Fig. 7: Sample LS_2c arylesterase structure

Fig. 8: Arylesterase structure from *Pseudomonas* …

Comparing LS_1a with *Ideonella sakaiensis* ISF6_4831

Enzymes of the well-known PET-degrading pathway of *Ideonella sakaiensis* ISF6_4831, reported by Yoshida *et al.* [13], share some homology with proteins in LS_1a:

ISF6_4831	LS_1a
PETase (Serine hydrolase)	Dienelactone hydrolase (Cysteine hydrolase)
MHETase	Arylesterase
Terephthalate dioxygenase	Benzoate 3,4 dioxygenase
Terephthalate transporter	Benzoate transporter

Fig. 9: Enzymes in LS_1a share some homology with those of the PET degradation pathway of *Ideonella sakaiensis* (Yoshida *et al.*, 2016)

Although LS_1a can make use of PET to survive, its rate of PET degradation is very slow. Similarities in the enzymes (Fig. 9) of LS_1a and ISF6_4831, however, support the idea that a range of microbes might be actively evolving to make use of the increasingly abundant sources of environmental PET [14].

Fig. 10: Alignment of LS_1a PETase with the ISF6_4831 PETase through Clustal Omega. [illegible] of ISF6_4831 and [illegible] of LS_1a are amino acids serine and cysteine respectively

Further investigations of LS_1a

It is significant that LS_1a seems to be more effective than the other isolates in functional tests. Therefore, the next step in investigating the potential of PET degradation in LS_1a is to clone the relevant genes into *E. coli* to verify their activities. Additionally, a later step would be to look further at mutations (particularly within the LS_1a cysteine hydrolase) to see if PET-degrading activities can be enhanced.

Acknowledgements:
This work is funded under the *ISF Shuyuan Research Program*.

Scan QR code for **references** and **supplementary data**:

AES983
 # 2532
ASM Microbe
June 2022

Isolation and characterisation of copper-resistant microbes from a disused mine in Hong Kong

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Two isolates from sediment samples recovered from a disused tungsten mine in Hong Kong showed remarkable levels of copper tolerance and Cu(II) reduction. *Serratia ureilytica* E1, in particular, shows levels of growth in 80 mM Cu^{2+} only 20% less than control.

Methods

16 sediment samples were collected at different locations in and around the Needle Hill mine (22.307089°N 114.160486°E). Their metal content were determined by ICP-OES. 10 colonies from each plate were screened with 0.5 M $CuSO_4$, 0.5 M $Pb(NO_3)_2$ and 0.1 M $AgNO_3$ by disc diffusion. Isolates demonstrating the greatest metal resistance were passaged to purity before DNA extraction (Qiagen DNeasy PowerSoil Pro Kit) followed by sequencing via the Illumina Miseq platform. Comprehensive Genome Analysis by PATRIC 3.6.12 [1] was used to assemble and analyse the data. Identified metal tolerance genes and proteins were investigated using UniProt [2], NCBI BLAST [3] and Clustal Omega [4]. Phylogenetic trees were generated with AutoMLST [5] and PATRIC [1]. Isolates were exposed to 10 mM to 100 mM $CuSO_4$ and Cu(II) tartrate to study the level of resistance the genes and pathways provided on both Luria agar and Luria broth.

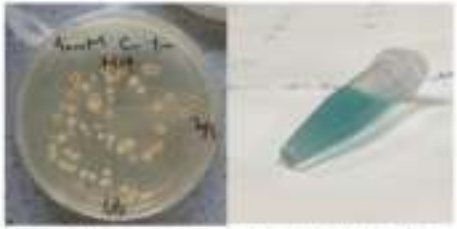

Fig. 1. Wild-type and E1 reducing copper ion agar plate and in Luria broth by Wild-type and E1 (right) respectively.

Results

Isolates E1 and M14 showed the highest level of tolerance to Cu^{2+}, Ag^{+} and Pb^{2+} in culture. They were revealed by BLAST to be strains of *Serratia ureilytica* (E1) and *Pseudomonas putida* (M14), with approx. genome sizes of 5 Mbp and 5.9 Mbp respectively.

Results from NCBI BLAST revealed extensive copper homeostasis genes and pathways. Both isolates contain Cup, Cpx, Cus and the Cut pathways, but E1 carries an extra Scs (suppressor for copper sensitivity) pathway. Both isolates carry cupric reductase genes.

Fig.2. Phylogenetic trees of the *S. ureilytica* E1 (blue box) and *P. putida* M14 (red box).

E1 and M14 were able to grow on agar infused with up to 90 mM $CuSO_4$ and Cu(II) tartrate. Cu(II) tartrate was more easily tolerated, with E1 and M14 producing 90% and 38% of their control-level growth in the presence of an 80 mM infusion. A red-brown precipitate – indicating Cu^{2+} reduction – was given when E1 was incubated in Luria broth containing up to 100 mM Cu(II) tartrate.

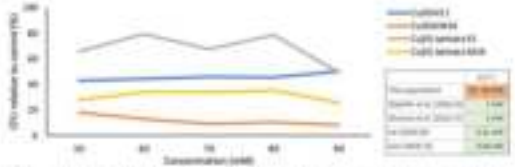

Fig. 3 Percentage difference of no number of colonies of E1 and M14 after exposure to $CuSO_4$ or Cu(II) tartrate on Luria agar plates. The survival rate of the lines were reduced after exposed to Cu^{2+} ions. The table showed the concentration used in other exposure experiments.

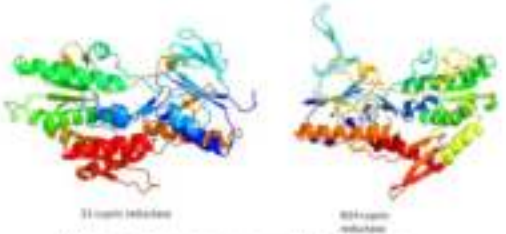

Fig 4. Predicted structure of cupric reductase in E1 (left) and M14 (right).

Conclusion

Serratia ureilytica strain E1 and *Pseudomonas putida* strain M14 appear able to survive under heavy copper stress, with E1 showed a higher level of copper tolerance under the same conditions. While this may be consistent with the additional Scs pathway carried by E1, the strong reductive activity is also significant.

The ability to tolerate high concentrations of Cu^{2+} and to reduce the ions to metallic may suggest a role for E1 in copper bio-remediation and bio-mining and this will be the focus of our ongoing work with these isolates. Further studies will also try to further elucidate the major mechanisms operated by E1 in order to understand its notably greater level of tolerance.

References and supplementary materials
can be found at shorturl.at/mszHX

Acknowledgements

This work is funded under the *ISF Shuyuan Research Program*.

Academic Update 2021-2022

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MYP Results 2022

- Passing rate: 100% (world: 83.3%*)
- Average score per student: 46 out of 56 (world: 37.7*)
- Average subject score: 5.8 out of 7 (world: 4.8*)
- Students receiving bilingual certificate: 73% (world: 35.1%*)
- Highest score in the cohort: 54 out of 56

* World figures taken from the Statistical Bulletin for 2021

Class of 2022 IB Diploma Results

- Average score: 41 (out of 45) (world: 32*)
- Students receiving the IB Diploma: 100 % (world: 85.9%)
- Students receiving bilingual Diploma: 78% (world: 28%)
- Students scoring ≥30 points: 100% (world: 66%)
- Students scoring ≥40 points: 73% (world: 14%)
- Students scoring ≥43 points: 35% (world: 5%)
- Average subject score: 6.4 (out of 7)
- Average core points score: 2.6

* World figures taken from the provisional Statistical Bulletin for 2022

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Class of 2022 Constellation of Success
2022年畢業班大學錄取榜

Class 2022: Key Analytical Data points

Total no. of offers	442
31 Scholarships	USD 1,144,100 CAD 450,500 HKD 720,500 GBP 9,425
% of students into their first-choice university (*Domestic applicants to Australia not included)	96.6%

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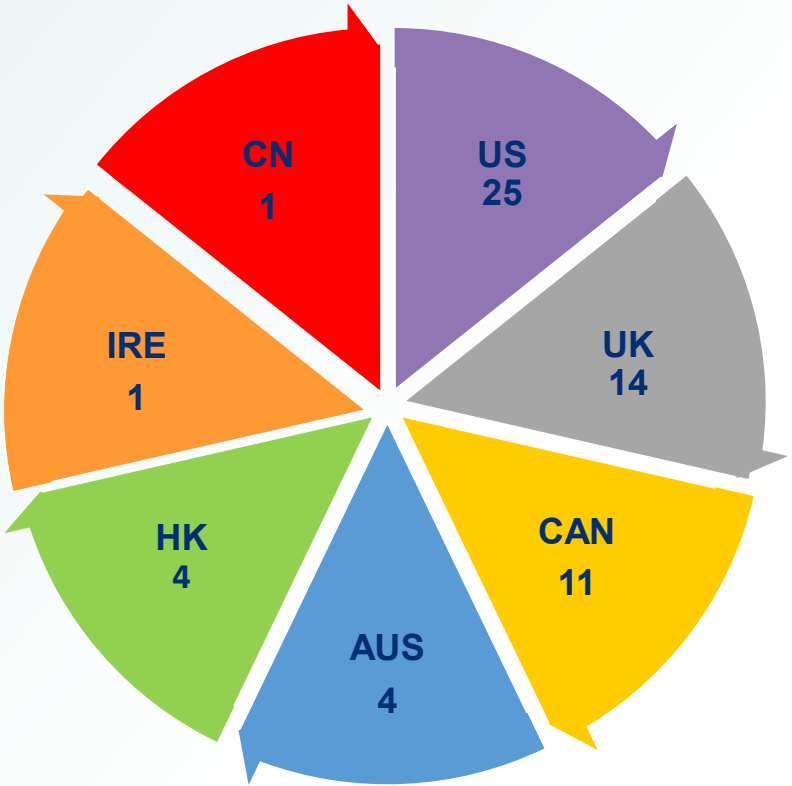
Class of 2022: Final Destination Country (as of 05 August 2022)



Learning
Analytics
System

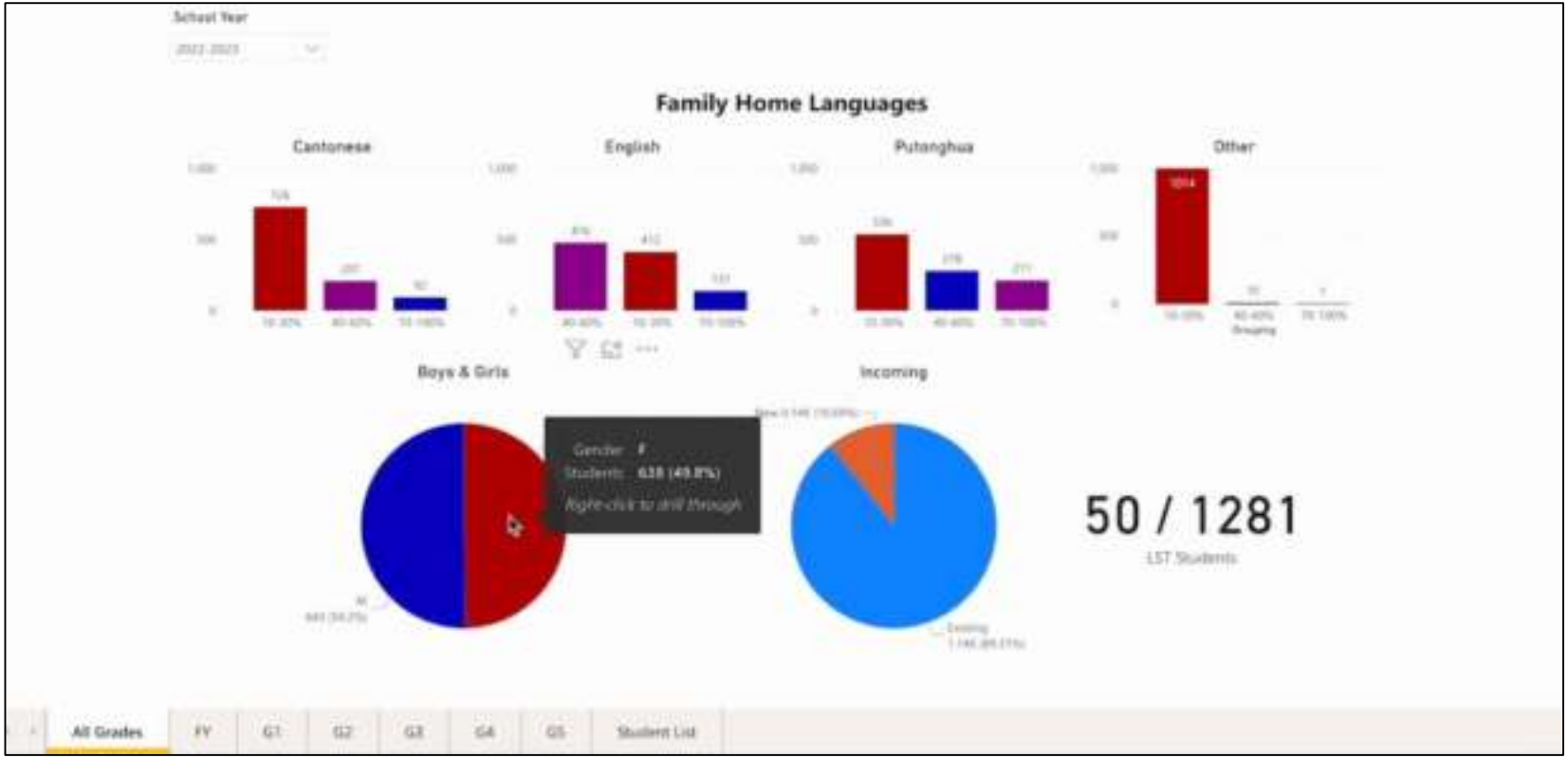
Using data for understanding

LAS Objective

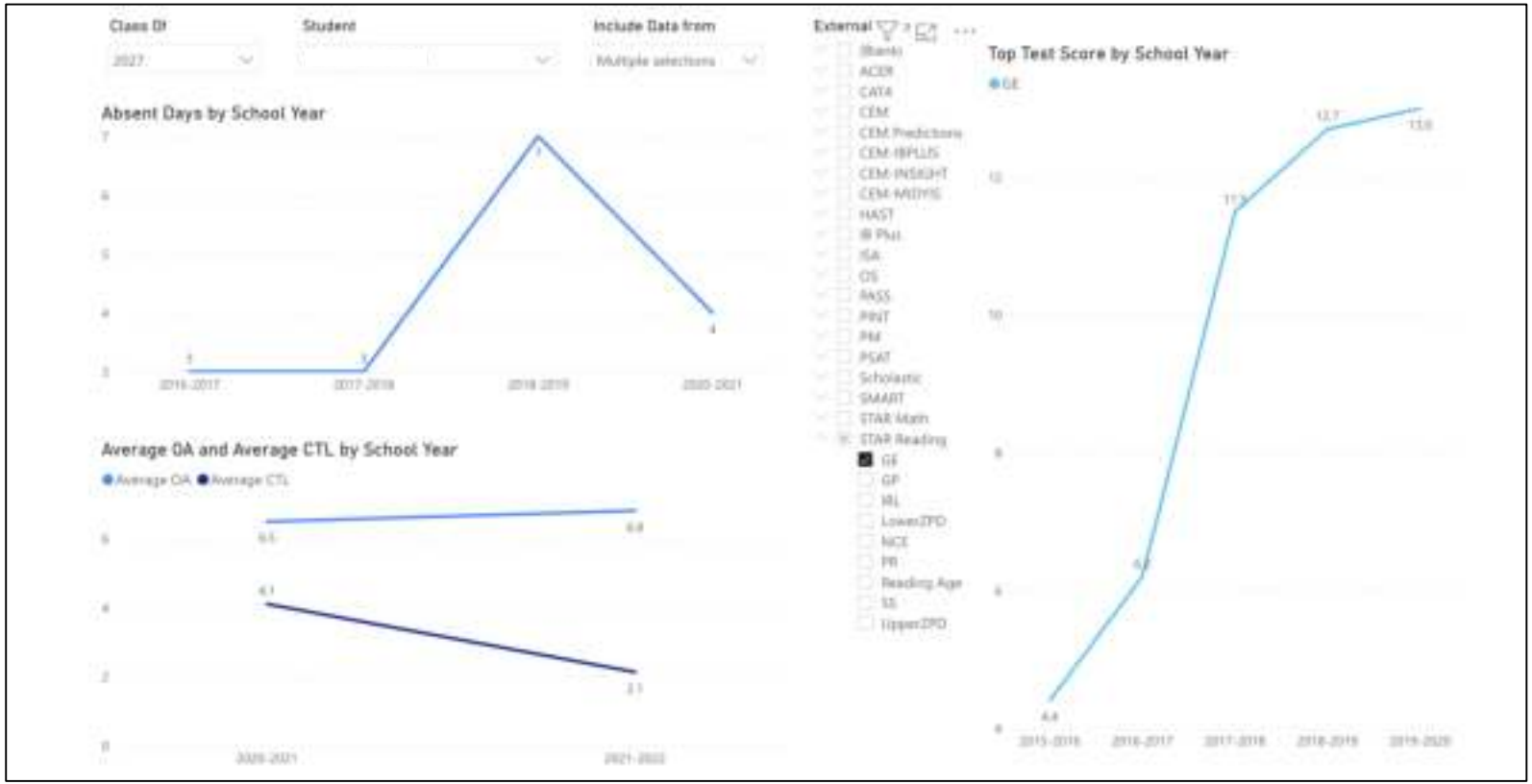
Leverage the extensive body of data and information generated and collected for, on, and by students to understand their growth, development, and individual needs and to use this to inform actions.

This tool is in development, and with input from stakeholders, it will be utilized to support our school's growth.

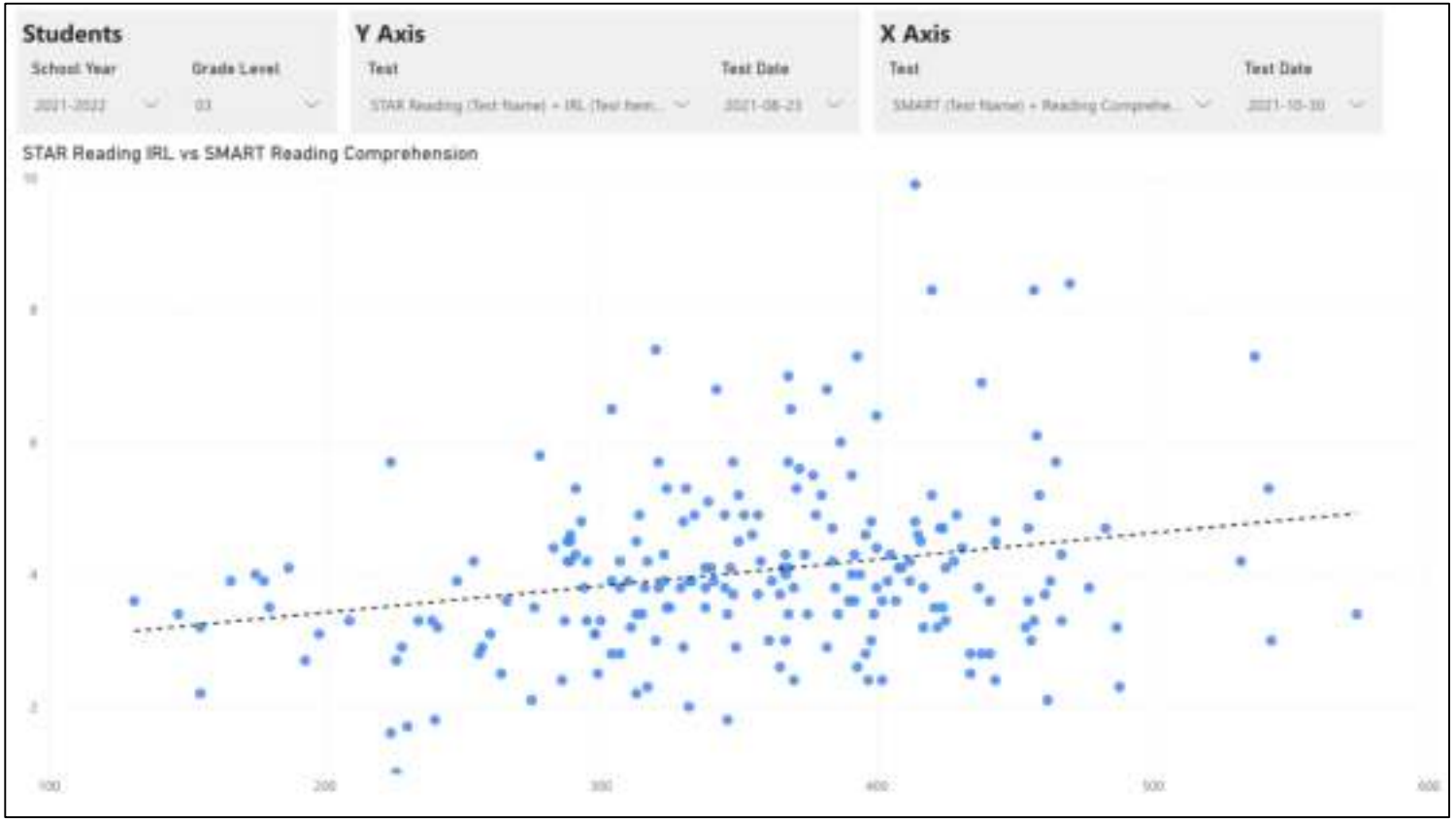
Live Interactive Tool



Individual Student Information



External Data



Subject Area & Year Level Information

Applied Life Skills
應用生活技能

Creative Arts
創意藝術

Nurturing Health and Resilience
培育健康與抗逆能力

Empowering Global Stewardship
有能力成為地球護育者

Exploring History, Language and Culture
歷史、語言及文化探索

Science, Technology, Engineering and Mathematics (STEM)
數理科工 (STEM)

Hao Xue Courses 2022-23

金庸作品及影視劇賞析
Playwriting - ScriptLab
Making Theatre
Ceramics
華語歌曲歌詞賞析課程
中國藝術與文化
Fashion
Vocal
Piano
Chinese crosstalk 相聲趣多多
From Pen to Print: Creative Writing Workshop for Beginners
思辨萬花筒
Physical Geography & Environmental Management
Film and Literature
Introduction to Spanish
Pop Lit:
Competitive swimming
Squash
Digital Design Pro
Global Politics
Film vs. Novel: What Makes Them Different?
The Beauty of Mathematics
Experimental Portrait Painting
中醫小學堂 Chinese Medicine
普通話播音主持 Putonghua Broadcast Hosting
Marketing and Advertising
Digital Art and Design
Film & Filmmaking
日劇教我們的事
Makerspace
Digital Art and Graphic Design
An Introduction on Guangdong Mahjong
Global Challenges
Exploration of Environmental Science Topics
Home Science
Metallic Jewelry Masterclass
Our Universe: Science, History, and the Way Forward
Enriching Hearts and Minds
The Art of Graphic Novels
Underwater Robotics
中國女紅傳承
Service Learning
Jazz / Popular Music / improvisation Workshop
Wind Ensemble
One Act Play Production.
戲劇人生
Glass enameling
Write perform a pantomime
Project Journeys
Hands-on Photography!
iLEAD / AYP Silver Expedition Course
Living Seas
故事新編：基於經典的創意寫作
中華文化學會（高級）：宋元明清的藝術、生活與科技
中華文化學會（中級）：魏晉隋唐的藝術、生活與科技
中華文化學會（初級）：先秦兩漢的藝術、生活與科技
閱讀與藝術創作（和諧粉彩）
Reading and artistic creation(Pastel Nagomi Art)
The House Science
Chinese Fashion of Life 中式生活時尚
Basketball; Netball; Squash; Swimming
Aesthetics and Design in Film
Sports Leaders
思辨萬花筒
Marketing Ideas
Movie and Literature電影與文學
Theatre
Global issues: discussing the world around me
Makerspace HX
Theatrical Stagecraft
Athens vs. Sparta
Science Fiction Publishing and Editorial
Ancient Greek Mythology
Student-athlete; Netball
Student-athlete; Basketball
String ensemble
Starting a Business (Group 1)
Starting a business (Group 2)

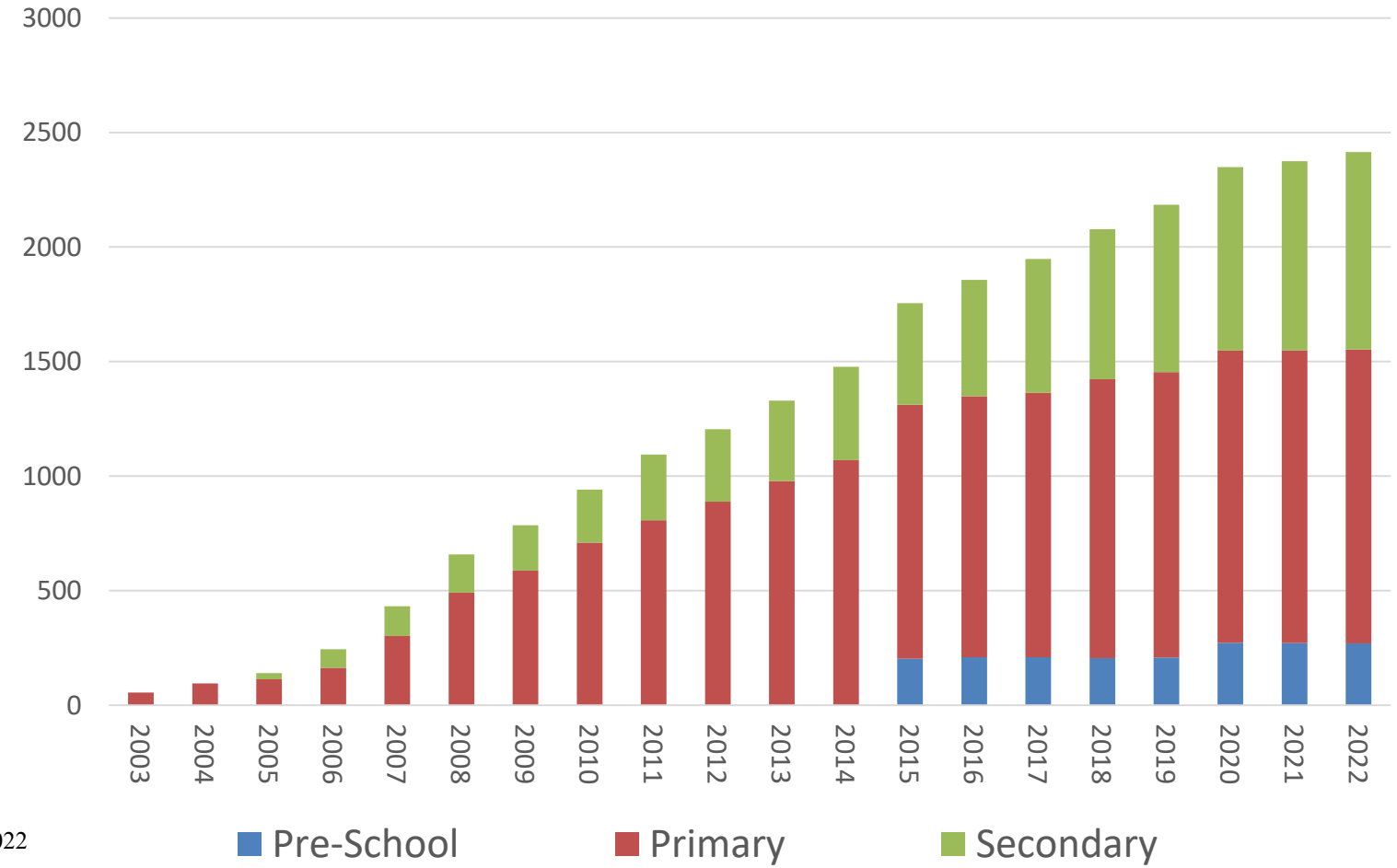
School Operations

Enrolments: Academy

Academic Year	Primary	Secondary	Total
2022/23	**1,283**	**862**	**2,145**
2021/22	1,277	826	2,103
2020/21	1,275	801	2,076
2019/20	1,245	731	1,976
2018/19	1,215	655	1,870
2017/18	1,154	584	1,738
2016/17	1,138	512	1,650
2015/16	1,100	444	1,544
2014/15	1,063	413	1,476
2013/14	960	347	1,307
2012/13	884	314	1,198
2011/12	808	289	1,097
2010/11	705	226	931

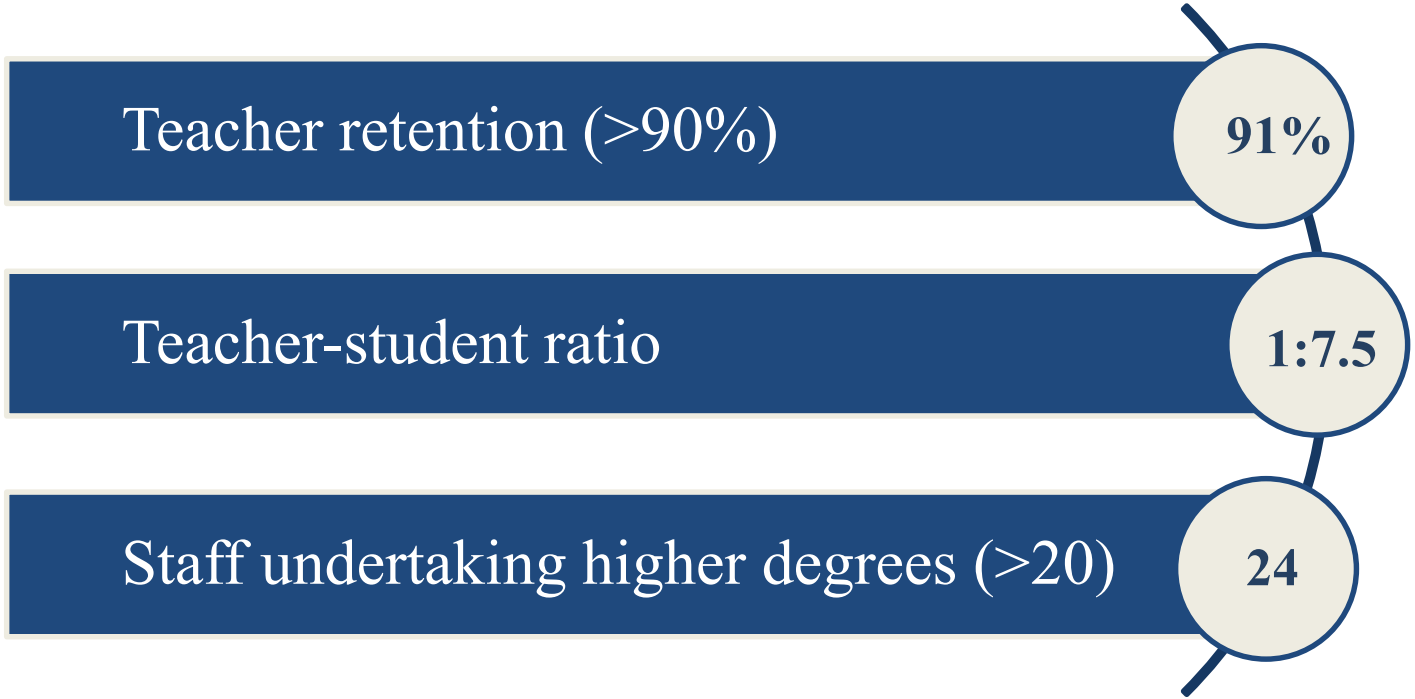
As of Aug 1, 2022

ISF Enrolments : 2003-2022



As of Aug 1, 2022

Major Objectives: Human Resources




No Stopping 切勿停留
No Parking 不准泊車
No Right-Hand Turns 不准右轉
資訊道 Information Crescent
艾美酒店
Le Meridien
數碼港道 Cyberport Road
數碼港
Cyberport
1座
Tower 1
2座
Tower 2
C
B
A
ISF弘立
銅鑼灣道 Kong Sin Wan Road
資訊道 Information Crescent
No Parking at Primary Gate
小學閘門前不准泊車

The Government of
the Hong Kong Special Administrative Region

Local Situation Dashboard | Latest News | News Videos | What is COVID-19 | Clarifications | Useful Information |
Updates on Infection Situation | Health Tips | Resource Centre | Community Involvement

Latest Epidemic Situation of 5th Wave | Analysis on Death Cases

हिन्दी| नेपा ली| اردو| ไทย| Bahasa Indonesia| Tagalog| සිංහල භාෂාව| বাংলা ভাষা| Tiếng Việt

繁 简 Text Size Search keyword(s)

2019冠狀病毒病第5波數據

(2021年12月31日至2022年9月5日00:00)

Statistics on 5th Wave of COVID-19 (from 31 Dec 2021 up till 5 Sep 2022 00:00)

截至2022年9月5日 00:00 統計數字

Statistics are compiled based on data up to 5 Sep 2022 00:00

資料來源：衞生署衞生防護中心和醫院管理局

Source: Centre for Health Protection of the Department of Health and the Hospital Authority

於過去24小時新增的本地感染／輸入個案數目* Number of additional locally acquired / imported cases in the past 24 hours*	9,869 / 152
• 經核酸檢測／快速抗原測試的本地個案 Local by nucleic acid tests / rapid antigen tests	2,682 / 7,187
• 經核酸檢測／快速抗原測試的輸入個案 Imported by nucleic acid tests / rapid antigen tests	134 / 18
於過去24小時新呈報之死亡個案數目~ Number of deaths newly reported in last 24 hours~	8
目前住院個案數目^† Current number of hospitalised cases^†	2,915
目前於深切治療部情況危殆的個案數目† Current number hospitalised in ICU with critical condition†	16
累計呈報個案數目（經核酸檢測/快速抗原測試） Cumulative number of reported cases (by nucleic acid tests / rapid antigen tests)	890,250 / 689,539
累計死亡個案數目~ Cumulative number of deaths~	9,519
在香港接種第一針的人口*§ Population with 1st vaccine dose taken in Hong Kong*§	6,823,209
在香港接種第二針的人口*§ Population with 2nd vaccine dose taken in Hong Kong*§	6,605,497
在香港接種第三針的人口*§ Population with 3rd vaccine dose taken in Hong Kong*§	5,008,700
在香港接種第四針的人口§ Population with 4th vaccine dose taken in Hong Kong§	342,650

https://www.covidvaccine.gov.hk/pdf/5th_wave_statistics.pdf

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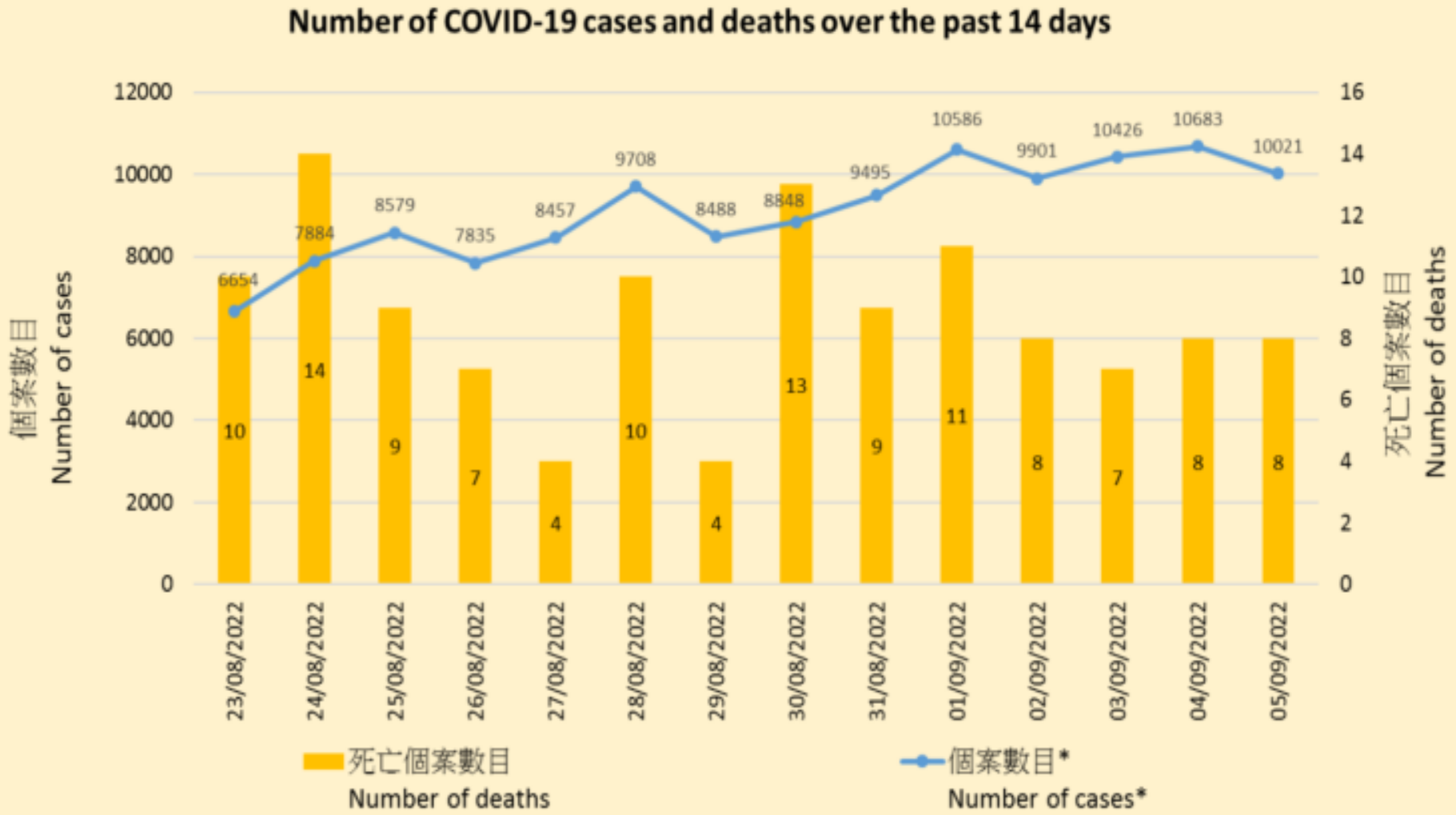

https://www.coronavirus.gov.hk/eng/index.html

3 Doses
1/10/22

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CHP Matters

- Daily temperature check: <37.5
- Daily Rapid Antigen Test: NEGATIVE or POSITIVE
- Observe health of child: unwell, sore throat, cough?
- If in doubt, call a doctor!
- RATs at school: nurse to administer if needed
- Cleaning protocols: FM and Waihong
- CHP protocols on closure: class, grade, division: 5% of school or 10% of class

Reporting RAT Results

- Report results by 7:30
- ISF report submitted to CHP by 10:00
- Legal responsibility rests with parent
- CHP advice always followed on isolation matters
- CHP may report class suspensions to media

Daily Reporting of New COVID-19 Cases at School

Start Now

Daily Reporting of New COVID-19 Cases at School

Line Listing

Submission

Daily Reporting of New COVID-19 Cases at School

* Questions that are required to be answered

Save for Later

Please refer to EDB School Lists by District for all school details.

CLICK HERE to access EDB School Lists by District

School No. *

654321

School Name *

Please input full name according to EDB School List

Tropical Cyclone Warning

Updated at 09:45

TC Movements

Latest TC News

With Ma-on moving away from Hong Kong, the prevailing local winds will gradually weaken. Depending on the degree of weakening of local winds, the Observatory will consider issuing the Standby Signal, No.1, or cancelling all tropical cyclone warning signals.

There will still be occasional gale force winds offshore and on high ground over the southwestern part of the territory at first. Seas will be rough with swells. Members of the public are advised to stay away from the shoreline, and not to engage in water sports.

In the past hour, the maximum sustained winds recorded at Cheung Chau, Green Island and Waglan Island were 73, 65 and 64 kilometres per hour with maximum gusts 85, 81 and 85 kilometres per hour respectively.

Tropical cyclone track information - GIS version

Tropical Cyclone: MA-ON

✔ Potential Track Area | Forecast Time Label | Satellite Image | Radar Image

Name: Severe Tropical Storm MA-ON
Date: 25 Aug 2022 **Time:** 09 HKT
Position: 21.1 N, 111.8 E (about 280 km west-southwest of Hong Kong)
Maximum sustained wind near centre: 110 km/h

Ma-on will move in the general direction of the coast of western Guangdong today.

EDB

Special Announcement

Thursday, August 25, 2022 09:20

Facilitation for Hong Kong students studying in Mainland higher education institutions in entering the Mainland

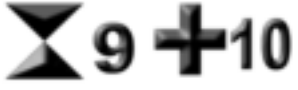
Hong Kong students who intend to enter the Mainland in August and September 2022 and need assistance from the HKSAR Government may **click here** to access the electronic form.

Note: the electronic form is in Chinese only. Please send us an email to nbs@edb.gov.hk if you need special assistance.

Classes of kindergartens, schools for children with physical disability and schools for children with intellectual disability, AM and whole-day schools will remain suspended today. Classes of PM primary and secondary schools and classes of evening schools will resume today.

Online Learning Arrangements during School Closure

<table>
<tr><th>Activation</th><th>Pre-School</th><th>Primary School</th><th>Secondary School</th></tr>
<tr><td>Day 1</td><td>Optional independent learning activities in both languages will be posted on Moodle. No Google Meet lessons</td><td>Modified timetable will be offered however optional attendance for students. School Office will notify parents/students through email to check Google Calendar</td><td rowspan="3">The normal timetable will be followed and lessons will be taught online. Student attendance is mandatory</td></tr>
<tr><td>Day 2</td><td>Follow the online learning schedule on meet.google.com for optional Google Meet lessons. Lessons will not be assessment-based. Student accounts should be used to access Google Meet lessons</td><td rowspan="2">Modified timetable will be offered and student attendance is mandatory</td></tr>
<tr><td>Day 3 onwards</td><td>Full online learning provision where attendance is mandatory and taken</td></tr>
</table>

Typhoon Signal No. 1 	School operates as normal, unless advised otherwise by the EDB		
Typhoon Signal No. 3 	**Pre-School & Foundation Year:** Face-to-face classes will be suspended **Grade 1-12:** Classes will continue as normal	School operates as normal, unless advised otherwise by the EDB	**Pre-School & Foundation Year:** CCA program will be canceled **Grade 1-12:** CCA program will continue as normal
Typhoon Signal No. 8 or above   	All face-to-face classes are suspended. Students should remain at home for online learning	All face-to-face classes are suspended. Students going home by school bus are dismissed as soon as the buses become available. Other students should be picked up by their parents/guardians at the normal meeting place as soon as possible	CCA program will be canceled

Warning Status	Before School	During School	CCA
Amber Rainstorm Signal 	School operates as normal, unless advised otherwise by the EDB		
Red Rainstorm Signal 	All face-to-face classes are suspended. Students should remain at home for online learning	Students should remain in school until the end of school hours and return home when conditions are safe for them to do so. Parents do not need to pick up their child immediately. School bus service will resume when signals are lowered and road conditions are safe	CCA program will be canceled
Black Rainstorm Signal 			

EDB

Suspending Classes without Suspending Learning

https://www.edb.gov.hk/tc/about-edb/press/insiderperspective/insiderperspective20200212.html

ISF 弘立

“Class suspension does not mean extended school holiday. Students should make good use of their time and keep learning to achieve "suspending classes without suspending learning" ”

Mr. Kevin Yeung
Secretary for Education

The Year Ahead: 2022-23

September

- Back to School events: 1, 2, 8 September
- Coffee Mornings (HOS, Primary, Secondary)
- Mid-Autumn Festival: 12 September

October

- National Day Holiday/Mid-Term Break: 1-4 October
- Tri-conferences
- ELP1 (Secondary)
- Coffee Mornings (HOS, Primary, Secondary)

November

- ELP1 (Primary G4-5)
- Jam 2022
- Professional Development Day
- Report 1 (Primary)

December

- ISF Book Fair
- Winter Celebrations
- American Geophysical Union
- Winter Break: 19 December – 2 January

January

- Semester 2 commences: 3 January
- CCA Session 2 starts: 3 January (Secondary/*Shuyuan*); 9 January (Other)
- Lunar New Year Break: 16-27 January
- Teacher recruitment (whole school)
- University and college visits

February

- Teacher recruitment (whole school)
- University and college visits
- G12 Parent-Teacher-Student Conferences

March

- Coffee Mornings (HOS, Primary, Secondary)
- Report 2 (Primary)
- G6-10 Parent-Teacher-Student Conferences
- Student-led Conferences (Primary)

April

- Easter/Spring Break: 3-10 April
- Coffee Morning
- CIS/WASC Preparatory Evaluation

May

- IB Diploma Examinations
- MYP eAssessment
- ELP 2 (Primary)
- G11 Parent-Teacher-Student Conferences
- Professional Development Day

June

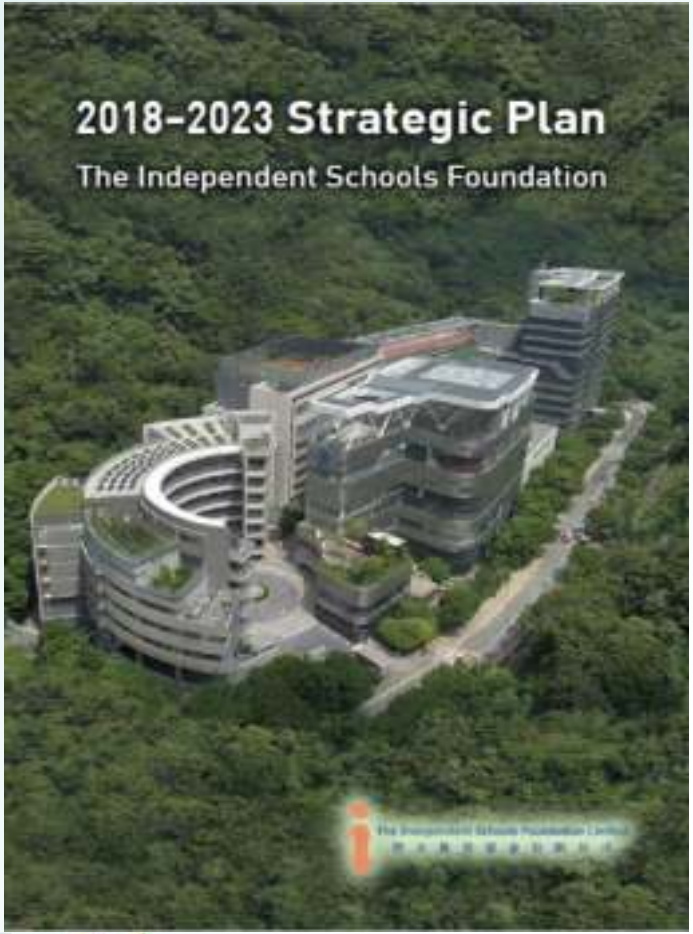
- CCA Registration
- ELP 2 (Secondary: 29 May – 2 June)
- Grade 12 Graduation & Advancements
- End of Academic Year
- Summer Extension

July

- Summer Activities
- NRI Cambridge
- Oxford Comparative Philosophy
- Columbia

August

- Commencement 2023-24



2024-2029 Strategic Plan

ISF弘立

Key Strategic Directions

- Chinese-English - bilingual, biliterate, bicultural
- *Eight Virtues + One*
- IB Diploma & MYP
- *Shuyuan* (STEM, Classics, Studio, partnerships)
- Experiential Learning (Shek Pik base)
- Eight Virtues Curriculum Framework

SAVE THE DATE!

HEALTHY FASHION
2022
康健・新尚
FASHIONABLY HEALTHY

約定您！

ISF ANNUAL SCHOOL FAIR
弘立校園遊藝會

Community & Celebration ｜ 社群和慶典

A fun filled day of games, activities & food galore!

屆時有一連串的攤位遊戲及豐富的食物，為您帶來歡樂的一天！

Saturday, November 19, 2022
11:00a.m. - 4:00p.m.

2022年11月19日(星期六)
上午11:00 - 下午4:00

For ISF Community Only

[illegible]

JAM ON!

1 Kong Sin Wan Road, Hong Kong

ISF 弘立

香港鋼綫灣道1號

Thank you!

Next HOS Coffee Morning:
Wednesday, 12 October 2022