

# HKASME APR-2024 MAIL PACK

< A charitable institution since 15 May 2010 under the Section 88 of the IR Ordinance. >  
 < Serving ALL teachers since 1964 ... >



## .. the 60<sup>th</sup> Anniversary



>>\* (since 1964)... With ongoing issue in **2024** – the Association 60<sup>th</sup> Anniversary (more about

“60<sup>th</sup> Corner” until 2024 ends ..... → ... whether you are New or Old members – think what you would contribute to the celebration 😊😊😊

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> Intn'l Year of 2024 (IYC) => Camelids :: >>

>>(\*)\* What is camelids? ... Why IYC? .....

The United Nations has declared 2024 the International Year of Camelids (IYC). The decision has been taken to highlight the significant importance of camelids in the lives of people across the world.



.... Check for more at

<https://www.fao.org/camelids-2024/en> ... !!!

You could explore and get prepare for your OWN students throughout 2024 from such updates! >>....

Items in this pack:

◆ **Council News** – 😊 **2024: More in the 60<sup>th</sup> year** ... 😊 (P.3-9)



◆ **“60<sup>th</sup> Corner”** – (60-12) Beyond the HKASME-60 (2)

◆ **“STEM Corner”** - (ST-1) A New Decking Material that fights global warming (P.10)

◆ **Awards for Excellence in Mathematics and Science Teaching** (P.11-18)

◆ **Science News** – (S-1) Tiny Dancers: A new era of light-driven micro machines. (P.19-22)  
 (S-2) **IYC 2024** – What is the link with your students? Why IYC in my class ?  
 (S-P1) Primary STEM Project Competition 2023-24 (常識百搭) – the final stage (Project presentation) will be held on 8-May at the Hong Kong Central Library with AM and PM sessions.

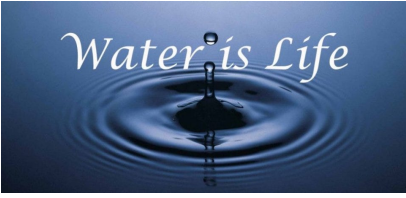
◆ **Chemistry News** – (C-1) Results of “Sustainability & Elements” Competition (P.23-33)  
 (C-2) “Water is essential for Life” ... (C-3) Chemistry Olympiad and Digi-Video Competitions

◆ **Biology News** – (B-1) Seasonal secrets unveiled: How wild animals’ hair changes to beat the Cold ... (B-2) Coral Survey of Lamma Island, HK – showcases of local biodiversity (“Green Hong Kong Green” (GHKG) program) -- you can also join their tours!!! (P.34-36)

◆ **Physics News** – (P-1) (P.36)

◆ **ETV News** (P.36-37)

◆ **Resources Collection** -- Stock is LOW! ... “Element Cubes” ! “Element Packs” ! New “Periodic Table items” ... (P.38-40)



*Water is Life*

◆ *Water is essential for life!?* Is  
*the water from our tap safe? ... Any changes in modern cities?*

>> ..... **Check relevant news in the Chem-News in this mailpack!**

➤ *Living in a pandemic means we have had to accept changes to many aspects of our daily routines*

*AND ISSUES of COVID19 still lingering... – including learning & teaching!*



## Council News

😊😊😊😊 **2024: More in the 60<sup>th</sup> year ...** 😊😊😊😊

Stepping into the first quarter of 2024, our 60<sup>th</sup> year, is the completion of the parallel loading of the 3 Science Subjects' Mock Exams! That involves the requirement of setting up and running of the Exam and Exam Centres -> then the marking and packing of all necessary stuff for all schools and issuing results with relevant statistics for all. With our limited office space, time and manpower, the completion of such is a record. On top of that involves the management of other activities (e.g. Fun Science, et al). Problems were solved one by one with call for helpers here and there. This is the first year with the 3 subjects' exam being organized at the same time!!!

With the hindrance due to COVID-19 for the last few years, this year's "Fun Science" had a record high of more than 150 teams running in the morning. Due to the limited space of the Lecture Hall at Science Museum (2/3/2024), this forced us to limit the number of participants entering the Hall by different batches. Luckily, we still managed to complete the session on time with some rushes.

This year, there are still teachers calling up for late applications for various activities. As usual, we must remind teachers that are keen for certain activities (e.g. the Mock Exams) must check our WWW and be prompt at registering for the required places. As most of our application will be handled via online format, please check details online! Late applicants could not be handled.

The **60<sup>th</sup> Anniversary (1964 to 2024) Corner in this pack is (60-12)** which mentioned things beyond the 60<sup>th</sup>. See if you have something to contribute, for example, suggesting new activities and / or volunteer to help in some activities.

Again, we would like to thank our dedicated colleagues in helping and supporting different activities in the hard times and we hope the 60<sup>th</sup> Anniversary could come with something special in the days to come.

Afterall, just to remind teachers about the ordering of references and tools from the Office. We must alert all teachers that delivery time for many orders will be much longer than before due to the global viral impact on logistics. Hence, if you want to place orders for certain materials, please be patient.

For latest updates (including cancellation) of the SME activities, the usual channel is our web: [www.hkasme.org](http://www.hkasme.org) or phone the Office (23330096, 23337602) – we still open as usual.



Stay safe and be prepared for further outburst

The Council

Apr 2024

< *The Office will stay operation EXCEPT for serious incidence!* ≥

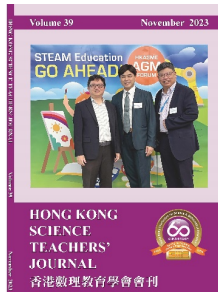
\* Thanks for all donations in the past 59 years that support the Association to this day.

Donations are welcome, either for specific event or for general support. The HKASME is a charitable organization under the section 88.

### **Calling for Articles of HKASME Journal (Volume 40)**

Dear all members,

The latest HKASME Journal (Volume 39) had been issued before. I hope you enjoy reading it and your teaching ideas can be inspired.



Meanwhile, please notice that the next HKASME Journal (**Volume 40**) will be published and issued in **September 2024**, as what we scheduled before.

We are now calling for articles from authors. Would all 'potential authors' grasp the valuable chance of sharing your research findings, teaching ideas, views or experiences on any aspects of the education sector? The following ideas are provided for your own thoughts for sharing:

- ✧ Sharing ideas / difficulties in STEM / STEAM education / implementation
- ✧ Difficulties encountered and techniques to overcome in NSS implementation
- ✧ Experiences on handling SBA tasks concerning Science subjects and Liberal Studies
- ✧ Issues concerning the HKDSE examination
- ✧ Teaching ideas on certain topics of Mathematics, Science subjects and Liberal Studies
- ✧ Experiences in organizing teaching and learning activities
- ✧ Book review / Website recommendation

The deadline for submission of articles is **30<sup>th</sup> June 2024**.

Articles, photos or any other stuff concerned can be sent through email to Miss Chu ([enquiry@hkasme.org](mailto:enquiry@hkasme.org)). Thank you for your help in advance. Thank you for your support to the HKASME Journal for years.

Best regards,  
HKASME

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... *Marching towards the 60<sup>th</sup>* ...>



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Update News at <http://www.icaseonline.net/>

( ICASE = "International Council of Associations for Science Education". **HKASME is one of the founding member of ICASE.** )

>> NEW:: **COVID-19 PHENOMENON-BASED LEARNING (PhBL) ENGINEERING CHALLENGE**

>> NEW resource can be downloaded at ... <http://www.icaseonline.net/coronavirus.pdf>  
**"GUIDANCE on active learning at HOME"** !!! <<< Grasp your copy NOW!

>>>===== <<<<

\*\* **Up-coming Events of HKASME ....** \*\*

**HKASME Coming Issues ... due to Impact of Coronavirus Infection ... may be..**

>> Always check updated news at [www.hkasme.org](http://www.hkasme.org)

Activity / Issue	Current situation	Remarks
<b>“60<sup>th</sup> Corner”</b> <b>NEW</b> > a NEW Column to recap important events in the Association history leading to 2024 -- the 60 <sup>th</sup> Anniversary	<b>(60-12) : Beyond the HKASME-60 (2) --&gt;</b> <i>{note: past articles (60-1) to (60-9) in Sep-2023 to Oct-2023 -Pack..}</i>	Members could contribute to this Column with notes, special items, blessings, etc.. Just email us: <a href="mailto:enquiry@hkasme.org">enquiry@hkasme.org</a>
<b>Awards for Excellence in Mathematics and Science Teaching</b>	現已接受報名	5月19日截止報名
Sales of equipment & references	Office still operate within our limits.	Phone (23330096, 23337602) ++ ONLINE data & order
<b>Digi Science Video Competition 2023/24</b> – Theme: “Sustainability in daily life”	<b>Video &amp; Reports due by Apr</b>	Final results & prize presentation by May ...
<b>Chemistry Olympiad for Sec. Schools</b> – Theme: “Chemistry of Fermentation”	<b>Report submission due by 28/3/2024</b>	Final Round and Prize presentation in June.
<b>NEW</b> 25 <sup>th</sup> <b>Primary STEM</b> project (2023-24) Competition (常識百搭)	➤ Final Exhibition at Central Public Library (8/5/2024 [Wed]) - AM & PM Sessions. Theme: “Climate Change”	Final Results will be posted online at <a href="http://hkedcity.net">hkedcity.net</a>
<b>Mock Exams of Bio, Chm &amp; Phy ..2024</b>	<i>ALL completed with results with certificates issued</i>	See you next year!
Fun Science (Mar-2024)	Completed on 2/3/2024 at Science Museum & Results online	Participants over 200 teams at record high. See you next year!

>> Though the spread of Coronavirus is diminishing, no one is sure of anything in the future. In case that the activities have to be cancelled, the most update information will be posted via our webpage: [www.hkasme.org](http://www.hkasme.org).

>>> For some routine activities, regret that they have to be cancelled or delayed!!! If you have

any suggestion that they could be handled safely, please forward to our managers for consideration in coming activities!!!

➔ **Resources for New Year (2023-24)**- “Element cubes”, “metal packages”, New “Periodic Table” items !!! ➔ Check details at end of this Mailpack. --- Ordering References / Materials -->> phone up the Office for order & enquiries. Check update catalogue at [www.hkasme.org](http://www.hkasme.org).  
 ➔➔ **Some books (Maths & Chem) are on sale .... about 50% OFF!** -->> CHECK at office!



**(60-12) Beyond the HKASME-60 (2)**

Last time (60-11), we have treasured the assets, both tangible and intangible, our seniors and pioneers that cultivate this Association from ground level to a more stable organization now.



What would the Association be for the coming 10 or 60 years? Of course, no one could predict everything. We could just collate what we get from the past experience and history and develop or prepare for something alternatives or new activities.

Amongst the past activities, some still continue, some changed, and some will be suspended. Here, we could just disclose those activities that had stopped. Amongst them are the Maths and Science Trail, the Science Assessment Test and the ICQ (previously “ANCQ” organized by the Australian Chemistry Society).

The suspension of the above had different reason(s). However, one very simple and common reason is the lack of manpower, or the “leader(s)” stopped to manage that activity. Especially, all knows that the Association is a NGO and all councils and

committee members are volunteers. The lack of manpower is one main reason why certain activity has stopped.

For the “Maths and Science Trail” (a very hot activity each year in the past), one very important reason that stopped is due to the lack of support from organization that could provide such a large space with important elements for maths and science measurements – usually the universities. Actually, it’s presentation is one record that we could maintain for about a thousand participants (students, teachers and organizers) in one day at certain venue! So, after the suspension of the grand running in university; some active teachers had organized a smaller run in certain region (e.g. West NT region). Even smaller group has been run by several schools. But the grand huge group activity had suspended.

The ICQ (previous ANCO) is not suspended, but just that the organizer has tried a different mode of operation starting 2024. The organizer has assigned different regional co-ordinators online. Everyone will go online centrally. So, we can’t be the provider of the quiz for the territory. If you want to join them, go for the web.

For the Science Assessment Test, the main reason is about lack of manpower. And, this again highlights the importance of volunteers and supporters for all tasks that the Association need in order to maintain the routines to be active. Anyway, nothing could exist forever. Some sustain and some perish. That’s the real life.

Hence, we could just say that with the support of different areas and groups, we could strive in all different directions for the 60 years to come! So, would you contribute? You could simply email your interests / thoughts to us!!! Manpower is one of the most important we need for survival!

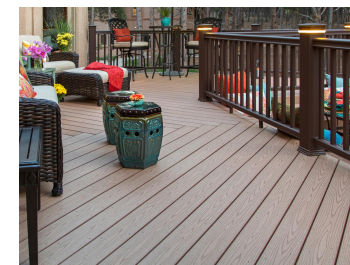
{{. Note: The first article of the “60<sup>th</sup> Corner” Series is (60-1) “1964? What happened? “ -- in the HKASME September-2022 Mailpack. }}

\*\*\* << **STEM Corner** >> \*\*\*

**(ST-1) A New Decking Material that fights global warming ... Composite & ...**



...//



David Heldebrant and his team have developed a new composite decking material that is both cheaper than standard options and **carbon-negative**. It’s design to store more carbon dioxide than its manufacturing process emits, providing a viable solution to one of the construction sector’s most significant challenges: high carbon emissions.

The new material incorporates low-quality brown coal and lightning as fillers, which are then treated with CO<sub>2</sub>. Not only does this composite meet international building codes for decking materials in terms of strength and durability, but it also offers a significant cost advantage, being 18% cheaper than its conventional counterparts.

This type of composite decking could play a pivotal role in reducing the carbon footprint of the building industry: replacing all US decking with this material could sequester the CO<sub>2</sub> equivalent of the annual emissions from 54,000 cars. As the team works towards commercialization, this carbon-negative decking presents a hopeful glimpse into a more sustainable solution for the construction industry. *For more, please check...*

[https://www.acs.org/pressroom/presspacs/2024/march/new-composite-decking-could-reduce-global-warming-effects-of-building-materials.html?utm\\_source=axial&utm\\_medium=web&utm\\_campaign=IC001\\_ST0001R\\_T003419\\_ACS\\_Spring\\_24\\_Hot\\_Topics&src=IC001\\_ST0001R\\_T003419\\_ACS\\_Spring\\_24\\_Hot\\_Topics](https://www.acs.org/pressroom/presspacs/2024/march/new-composite-decking-could-reduce-global-warming-effects-of-building-materials.html?utm_source=axial&utm_medium=web&utm_campaign=IC001_ST0001R_T003419_ACS_Spring_24_Hot_Topics&src=IC001_ST0001R_T003419_ACS_Spring_24_Hot_Topics)





Hong Kong Association for Science  
and Mathematics Education  
香港數理教育學會

## Awards for Excellence in Mathematics and Science Teaching



誠邀  
中小學老師  
參與

- 現已接受報名
- 5月19日 (日) 截止報名
- 5月20日至5月31日初評
- 6月1日至6月16日總評
- 6月27日頒獎



參賽老師無需出席初評，香港數理教育學會將按需要約見參賽老師參與總評。惟獲獎者必須出席頒獎禮

頒獎禮日期：2024年6月27日下午 地點：香港大學

親愛的校長及各位老師：

### 2024傑出數理教師獎

(Awards for Excellence in Mathematics and Science Teaching 2024)

為表揚本地教師對數學或科學(物理科/化學科/生物科)教學的貢獻，本會將舉辦「2024傑出數理教師獎」。活動詳情如下：

#### 目的

- 表揚本地教師對數學或科學教學的貢獻
- 鼓勵教師互相分享數學或科學教學的心得及實踐

#### 報名資格

- 候選教師須為根據香港法例第279章《教育條例》註冊的檢定教員或准用教員

#### 報名方法

- 候選教師須填妥報名表格及簡述教學反思。
- 每份提名須由一位提名人以個人名義提出。提名人應為候選教師任教學校的校長和同事，以及同儕或資深教育工作者。教師亦可自我提名。
- 截止報名日期：2024年5月19日

#### 評選規則及方法

- 邀請教育局的官員、校長、大學學者以或知名的社會人士組成評選委員會。
- 評選原則包括教師的教學法、對學生的指導、個人專業發展以及對社會的貢獻等等。
- 由評選委員會根據短文的内容，以決定候選教師是否獲頒發獎項。如有需要，評選委員會將

邀請候選教師及提名人士進行面見。

如有任何查詢，歡迎電郵至enquiry@hkasme.org與本會聯絡。

香港數理教育學會

2024 傑出數理教師獎

Awards for Excellence in Mathematics and Science Teaching

候選教師請於 2024 年 5 月 19 日或之前，把報名及提名資料以單一 pdf 附件形式電郵至香港數理教育學會 ([enquiry@hkasme.org](mailto:enquiry@hkasme.org))。

如有任何查詢，歡迎以下列方式聯絡香港數理教育學會：

電話：2333 0096 / 2333 7602

電郵：enquiry@hkasme.org

郵寄：九龍深水埗保安道一號寶安閣一樓一一四室

香港數理教育學會  
2024傑出數理教師獎  
Awards for Excellence in Mathematics and Science Teaching

報名表格

A. 候選教師的個人資料

1. 擬參選的主題

數學教育學習領域 ( 小學 /  中學)

科學教育學習領域 ( 物理科/  化學科/  生物科/  科學科/  常識科)

2. 候選教師姓名：( 中文 ) \_\_\_\_\_ 博士 / 先生 / 女士 \*

( 英文 ) \_\_\_\_\_

3. 任教學校名稱： \_\_\_\_\_

4. 學校地址： \_\_\_\_\_

5. 電話號碼： \_\_\_\_\_

6. 傳真號碼： \_\_\_\_\_

7. 電郵地址： \_\_\_\_\_

\* 請刪去不適用者

香港數理教育學會  
2024傑出數理教師獎  
Awards for Excellence in Mathematics and Science Teaching

## 報名表格

## B. 候選教師的教學反思(由候選教師填寫)

## 1. 請於教學反思中說明下列各項：

- (a) 就教學實踐和教學理念或理論架構，闡述對「數學教育學習領域」或「科學教育學習領域」的教學反思。
- (b) 就四個評審範疇(附件一)，闡釋其教學成效。
- (c) 獲獎後，將會推廣有關教學實踐的內容及其推廣形式。

香港數理教育學會  
2024傑出數理教師獎  
Awards for Excellence in Mathematics and Science Teaching

## 提名表格

## A. 提名人的個人資料(由提名人填寫)

每份提名須由一位提名人以個人名義提出。提名人必須為候選教師任教學校的校長和同事，以及同儕或資深教育工作者。教師亦可自我提名。

若屬自我提名，只需填寫下列第 1 項。

1. 自我提名：· 是            · 否（請在適當的空格內加上“√”號）
2. 姓名：(中文) \_\_\_\_\_ 博士 / 先生 / 女士 \*  
(英文) \_\_\_\_\_
3. 任職機構： \_\_\_\_\_
4. 職位： \_\_\_\_\_
5. 與候選教師的關係： \_\_\_\_\_
6. 與教育相關的專業資歷（如適用）：  
\_\_\_\_\_
7. 通訊地址： \_\_\_\_\_
8. 電話號碼： \_\_\_\_\_
9. 傳真號碼： \_\_\_\_\_
10. 電郵地址： \_\_\_\_\_

\* 請刪去不適用者

## B. 提名原因

請以不超過 500 字簡述你提名候選教師參選的原因。這部分可用中文或英文填寫。(如有需要，請另加紙補充，並於附加紙上簽署。)

提名人簽署：\_\_\_\_\_ 日期：\_\_\_\_\_



香港數理教育學會  
2024傑出數理教師獎  
Awards for Excellence in Mathematics and Science Teaching

個人資料的收集及使用

1. 本表格內所填報的個人資料會供香港數理教育學會、評審團、獲香港數理教育學會委任的任何人士、機構或代理人評審傑出數理教師獎提名之用。如候選教師獲獎，所有提交用作評審的資料可能被香港數理教育學會及其委任或授權的機構或代理人使用、分發、發布、印行及 / 或複製，用作推廣優良教學實踐。
2. 在本表格內填報個人資料，純屬自願。所提供的資料，將有助評審工作。若候選教師及提名人未能提供充足資料，可能會令評審工作無法進行。
3. 本表格內所填報的個人資料（如候選教師及提名人姓名），或會向公營、直接資助或私立學校、其他學院或機構及有關人士或團體（包括獲授權的代理人或代表）披露，用作上文第 1 段所述用途。
4. 根據香港法例第 486 章《個人資料（私隱）條例》的規定，候選教師及提名人有權要求查閱和改正有關的個人資料，如欲改正或查閱本表格內所填報的個人資料，可向香港數理教育學會提出申請（地址：九龍深水埗保安道一號寶安閣一樓一一四室）。如有查詢，請致電 2333 0096 / 2333 7602。

香港數理教育學會  
2024傑出數理教師獎  
Awards for Excellence in Mathematics and Science Teaching

附件一

四個評審範疇

評審將集中在四個範疇，即「專業能力」、「培育學生」、「專業精神」及「對社區的承擔」。評審團將會以學與教為焦點，採用整體評審方法來評審每份提名。

1. 專業能力
  - 掌握學科/專業知識、技巧及溝通能力；
  - 有效結合教育或學習理論與教學實踐；
  - 根據主題的學習目標訂定適切的課堂學習重點、有效的課堂組織及教學計劃，確保學生達至學習目標；
  - 以學生為中心的教學策略，設計與日常生活有關的學習活動，提供不同的學習經歷讓學生建構知識，建立正面的價值觀和態度；
  - 有效評估學生學習，及適當運用評估資料。
2. 培育學生
  - 因應校本或生本需要，恰當地調適課程，使學生達至預期的學習成果；
  - 對學生的全人發展及共通能力的培養發揮正面影響；
  - 建立互信關係，與學生相處融洽。
3. 專業精神
  - 致力持續自我改進和追求專業發展；
  - 掌握教育實踐和教育政策的最新發展，如最新的課程發展方向和內容；
  - 以身作則，樹立榜樣。
4. 對社區的承擔
  - 積極為社區專業發展提供支援，如參與交流活動、分享教學經驗，以及社區服務等；
  - 製作可作示例的教材、參與教育研究及/或發表與教學有關的文章。

**\*\* SCIENCE NEWS \*\* --****(S-1) Tiny Dancers: A new era of light-driven micro machines .....**

Researchers have now developed molecular motors that mimic this flowing movement when exposed to light, similar to microscopic organisms. The latest study from Rabih et al have worked for more than two decades on photomechanical crystals -- tiny materials that can convert light energy into mechanical motion. The first version of these molecular motors required multiple wavelengths of light for activation, but the researchers have now achieved a more advanced result that can operate with just a single light source.

The team's ongoing work aims to further understand and control the self-assembly and movement of these motors, opening the door for innovative solutions in medical and technological fields. They could one be used in precision drug delivery, operating as tiny machines within the human body. They also have potential applications in technologies such as microsatellites due to their durability, resistance to corrosion, and immunity to electromagnetic interference.

Check for more at ....

[https://www.acs.org/pressroom/presspacs/2024/march/molecular-crystal-motors-move-like-microbes-when-exposed-to-light.html?utm\\_source=axial&utm\\_medium=web&utm\\_campaign=IC001\\_ST0001R\\_T003419\\_ACS\\_Spring\\_24\\_Hot\\_Topics](https://www.acs.org/pressroom/presspacs/2024/march/molecular-crystal-motors-move-like-microbes-when-exposed-to-light.html?utm_source=axial&utm_medium=web&utm_campaign=IC001_ST0001R_T003419_ACS_Spring_24_Hot_Topics&src=IC001_ST0001R_T003419_ACS_Spring_24_Hot_Topics)

**(S-2) IYC-2024 .....**

2024 = the International Year Of Camelids (IYC).

The International Year of Camelids 2024 aims to build awareness of the untapped potential of camelids and to call for increased investment in the camelid sector, advocating for greater research,

What could be learnt...?

capacity development and the use of innovative practices and technologies.

>> How much do you know about Camels ?? --

- They have been roaming the Earth since long before human arrive
- They are referred as heros of deserts and highlands as they could survive the toughest of climates...
- Live in 90 countries & are crucial to livelihoods of millions. As part of people's cultures, livelihoods and identities. As working animals, supporting different tasks of people in different continents.

For more details, check <https://www.fao.org/fao-stories/article/en/c/1675257/>

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● **(S-P1) Primary STEM Project Competition 2023-24 (常識百搭)**, the 26<sup>th</sup>!

- With the first stage of screening in Dec-2023 completed, the final stage of the competition (Project presentation) will be held on 8-May at the Hong Kong Central Library with AM and PM sessions.
- Theme of this year : "Climate Change"

For details, please check <https://www.hkedcity.net/pspe/>

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**2024 趣味科學比賽《風馳電掣》－ 比賽結果**

由香港學者協會、香港數理教育學會、香港教育工作者聯會和康樂及文化事務署香港科學館合辦・田家炳基金贊助的 2024 趣味科學比賽【風馳電掣】已於 3 月 2 日(星期六) 在香港科學館舉行。

高級組的參賽隊伍共有 110 隊・而低級組則有 146 隊參賽隊伍。經過一輪激戰後，低級組在『低班組標準組』、『低班組挑戰組』及高級組在『高班組標準組』、『高班組挑戰組』的比賽結果如下：

**低年級組標準組**

學校	隊員 1	隊員 2	獎項
廠商會中學	吳嘉鎔	黃子謙	一等獎
香港道教聯合會圓玄學院第三中學	李一航	王曦宇	一等獎
嘉諾撒書院	鄭可兒	王栩瑜	一等獎
基督教香港信義會信義中學	吳卓昊	夏君駱	一等獎
迦密愛禮信中學	張世灝	陳聖諾	二等獎
佛教何南金中學	童靚匡	蔡嘉聰	二等獎
恩主教書院	鄧諾然	潘栢翹	二等獎

恩主教書院	陳朗天	梁正彥	二等獎
香港仔工業學校	張家俊		三等獎
陳瑞祺(喇沙)書院	朱慶濤	李以樂	三等獎
港島民生書院	黎向晴		三等獎
順德聯誼總會梁詠琚中學	謝千逸	王筱伶	三等獎
博愛醫院陳禧紀念中學	林子堯	袁知行	最佳設計圖獎
佛教何南金中學	張穎琪	陳鴻杰	最佳工藝獎
香港道教聯合會圓玄學院第三中學	黃子桓	黎俊輝	最佳設計獎

## 低年級組挑戰組

學校	隊員 1	隊員 2	獎項
天主教郭得勝中學	陸心朗	林宇恒	一等獎、最佳工藝獎
嘉諾撒聖方濟各書院	李芍霖	吳卓雯	一等獎、最佳設計獎
香港中國婦女會馮堯敬紀念中學	梁宇軒	簡詠妍	一等獎
嘉諾撒聖方濟各書院	莊婧希	吳卓蕎	一等獎
香港四邑商工總會黃棣珊紀念中學	羅梓熙	尹經天	二等獎
福建中學	戴健愷	袁尉誠	二等獎
保良局董玉娣中學	朱翰陞	李卓熹	二等獎
元朗公立中學	何卓辰	秦顯淇	二等獎
瑪利諾中學	何子豪	劉逸東	三等獎
仁濟醫院靚次伯紀念中學	梁展濤	廖俊軒	三等獎
文理書院(香港)	廖家熙	歐陽滄森	三等獎
保良局何蔭棠中學	梁芷欣	游凱淇	三等獎、最佳設計圖獎

## 高年級組標準組

學校	隊員 1	隊員 2	獎項
香港道教聯合會圓玄學院第三中學	李世鴻	羅茗勇	一等獎
香港道教聯合會圓玄學院第三中學	呂柯鵬	黃嘉林	一等獎
迦密愛禮信中學	曾諾軒	吳梓熙	一等獎
十八鄉鄉事委員會公益社中學	陳善盈	楊卓然	一等獎
地利亞修女紀念學校(協和)	陳柯君	伍思行	二等獎
銘基書院	黎子謙	李承熹	二等獎
皇仁舊生會中學	許廣寧		二等獎、最佳設計獎
地利亞修女紀念學校(協和)	陳瑩潔	慕婧雨	二等獎
中華基督教會基朗中學	張柏康	梁浩彬	三等獎
佛教何南金中學	張英楠	洪淇	三等獎
保良局何蔭棠中學	簡國亮	李翠盈	三等獎

沙田循道衛理中學	黃浩軒	何珈濠	三等獎
德望學校	劉映君	陳倩穎	最佳設計圖獎
佛教何南金中學	馮家杰	陳黃彥	最佳工藝獎

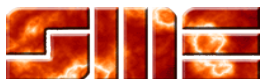
## 高年級組挑戰組

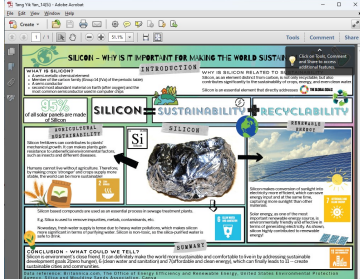
學校	隊員 1	隊員 2	獎項
新生命教育協會平安福音中學	鄭曉君	蕭浩軒	一等獎
福建中學	趙子萱	莊瑩	一等獎
文理書院(香港)	潘兆祺	李環希	一等獎
順德聯誼總會梁詠琚中學	高銘謙	劉銘哲	一等獎
聖公會李炳中學	蔡旻熹	李禮豪	二等獎
潔心林炳炎中學	邢惠美	黃勺桐	二等獎
聖安當女書院	高沛茜	江梓桐	二等獎
香港仔工業學校	鄧斌豪	劉一明	二等獎
嘉諾撒聖心書院	龔敏怡	林巧遙	三等獎
寧波公學	黃碧珊	黃俊瑋	三等獎
孔教學院大成何郭佩珍中學	王樂儀	蔡綠柔	三等獎
中華基督教會全完中學	管朗	譚麗虹	三等獎、最佳設計獎
東華三院黃笏南中學	廖宇昊	余梓楊	最佳工藝獎
香港青年協會李兆基書院	潘彥廷		最佳設計圖獎

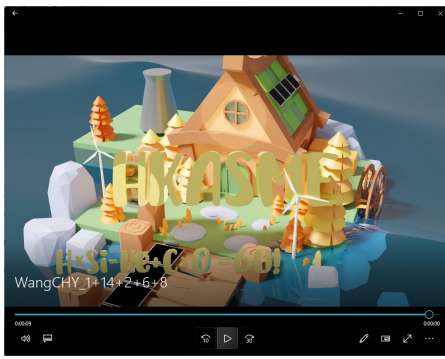
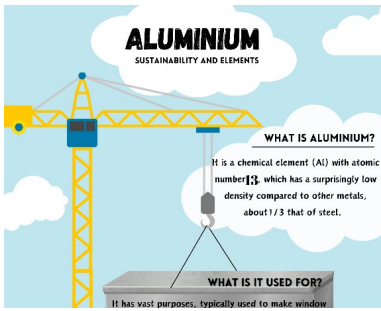
## \*\* CHEMISTRY NEWS \*\*

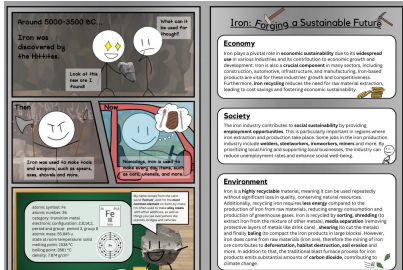
### (C-1) About “Sustainability & Elements” Competition for Hong Kong Secondary Schools (2023-24) ... Results of “Sustainability & Elements” of HKASME-60 Dec-2023

for 60<sup>th</sup> Anniversary of HKASME (2024)”



Award	Student (Level)	School	Title / Message presented * [1]
<b>Excellent Award</b>	<b>Tang Yik Yan (F3)</b>	St. Paul's Co-educational College	<p><b>Silicon – Why is it important for making the World sustainable? ... addressing 4 of the 17 sustainable development goals.</b></p> 
Outstanding award	<b>Wong Yu Hei (F3)</b>	St. Paul's Convent School	Ruthenium and Sustainability
Outstanding award	<b>Chong Tsz Huen Nicole (F5)</b>	Diocesan Girls' School	How Lithium contributes to a sustainable future?
Outstanding award	<b>Luo Wanqing Amy (F3)</b>	St. Paul's Co-educational College	<p>Sodium and sustainability</p> <p>-- 3 aspects esp. highlighted: food production, water resources, sustainable batteries</p>
Merit award	Wang Boqiao (F5)	YCH Tung Chi Ying Memorial Sec. School	Nb - 鈮 (Niobium)

Merit award	Kwok Tsz Chung (F4)	YCH Tung Chi Ying Memorial Sec. School	H - 氫氫鬆鬆 為環境出一分力
Merit award	Tong Mong Chi Claudia (F3)	Diocesan Girls' School	Silicon and Sustainability
Merit award	Wang Cindy Hing Yu (F3)	Diocesan Girls' School	<p><b>A 3D-design : HKASME's Sustainable World</b></p>  <p>WangCHY_1+14+2+6+8</p> <p>(Movie file with elements 1+14+2+6+8)</p>
Merit award	Tam Nga Yu (F4)	St. Paul's Co-educational College	<p>(Al) – poster :</p> 
Merit award	Fu Shun Ying (F4)	St. Paul's Co-educational College	Carbon == Climate Change, Air Pollution, Reliance on fossil fuels, Boost carbon pricing, Opt for a low carbon economy, Net zero emissions
Merit award	To Lok Yee Cherry (F3)	St. Paul's Convent School	Iron: Forging a Sustainable Future

			
Merit award	Leung Man Ching (F3)	St. Paul's Convent School	Magnesium: Key to Sustainability
Merit award	Cheung Wing Hei (F3)	St. Paul's Convent School	Element – Who's the Best? (Gallium, 31, Ga)
<b>Merit award</b>	Fung Ho Ting Jamie (F3)	St. Paul's Convent School	Sustainability and the future of Silicon
<b>Notes:</b>			
[1] *The above awards had displayed a range of different communication skills & design – from 2D to 3D (The DGS merit award). From text to cartoon or wide poster design. Most could pick some important tracks according to the UN's Sustainable Development Goals ( <a href="https://sdgs.un.org/goals">https://sdgs.un.org/goals</a> ) and merged some related element features chosen for their presentation.			
[2] All other participants will have a certification of participation.			
[3] ALL participants' name will appear in the final report of this Chemical Celebration which will be published in the Association Journal (expected to be out by Sep-2024).			

**Congratulations to all award winners and thanks all teachers and students in supporting the event.**

As the activity is to encourage all teachers and students to participate in this meaningful and historical moment with 60<sup>th</sup> year of services to the Maths and Science Education, all other participants will also have "Certificates of Participation" and their names will appear in the Final Report of the Competition in the Association Journal (to be published in Aug/Sep-2024). The situation will be similar to the grand global celebration in IYC-2011 (IYC = International Year of Chemistry) in Hong Kong and around the World (<https://cen.acs.org/collections/iyv2011.html>).



**(C-2) Water! - What does it mean to you & your students? .....**  
**Chemists dedicated to making water safer to use...**



*What techniques are used for analyzing and treat our water to ensure it's safe for us?*

As the world is diving into different modes of living habits, especially with fully packed modern cities, water supply is more than just having a tap at your house. For daily use, you won't realise how complicated the problem is as *"all you need is to turn the tap and you get water you like"*!

Though the water supply in modern cities, like Hong Kong, has already been handled with advanced technologies and usual trends (for many years); the quality and quantity of water supplied to the public is under threat from time to time. Actually, scientists across the world are still using a variety of techniques to analyse and treat water to ensure it's safe for us to drink and use! Since F.1, your students have been involved in the study of water via the "Water and Solution" topic. Have you passed on enough information and/or rules for them to follow involving the proper use of water as a more scarce resource amongst our living necessity.

A recent report in the "Chemistry World" has revealed the present situation that water-scientists are addressing. .... According to figures from the WHO (World Health Organization), 296 million people across the world are drinking water from unprotected wells and springs, and a further 115 million are collecting untreated surface water from lakes, ponds, rivers and streams.

The potential contaminants in these water sources vary depending on the location; from harmful naturally occurring chemicals such as arsenic and fluoride to those introduced by urban, industrial, and agricultural activities. Contaminated drinking water is linked to the transmission of many diseases which can cause millions of deaths each year.

Now, there are even more challenges to contend with as climate change and population growth further increase water scarcity and the resulting pressure on water

supply systems. And, we still don't know details about the potential harms of micro- and nano plastics and per- and poly-fluoroalkyl substances (PFAS)!!

Scientists are working hard to develop ways to test the quality of drinking water and to develop more efficient purification techniques. Fluorosis is a problem but not yet know the magnitude it would cause! Bottled water is also a problem as the presence of two types of polymers may be introduced through the bottling process.

>> *Check for more at ..*

[https://www.chemistryworld.com/features/the-chemists-dedicated-to-making-drinking-water-safer/4019193.article?utm\\_source=cw\\_weekly&utm\\_medium=email&utm\\_campaign=cw\\_newsletters](https://www.chemistryworld.com/features/the-chemists-dedicated-to-making-drinking-water-safer/4019193.article?utm_source=cw_weekly&utm_medium=email&utm_campaign=cw_newsletters)

### **(C-3) Hong Kong Chemistry Olympiad & Digi-Video-Science ... Competitions**

Submission will be handled through the holidays.

Details will be updated on WWW. Check the due dates online!!!

#### **Hong Kong Chemistry Olympiad for Secondary Schools (2023 - 2024)**

##### **Information Sheet**

The Hong Kong Chemistry Olympiad for Secondary Schools is a project learning competition jointly organized by the Hong Kong Association for Science and Mathematics Education (HKASME), the Hong Kong Chemical Society and the Royal Society of Chemistry. It aims at promoting the interest of students in learning Chemistry and developing students' problem solving, communication and science process skills through project learning.

Details of the Olympiad are given below:

- |                                  |   |
|----------------------------------|---|
| <b>Theme</b>                     | Chemistry of Fermentation (發酵的化學)   |
| <b>Participants</b>              | Each team comprises three to five Secondary 3-6 students and each school can present a maximum of two teams of students to compete in the Olympiad.   |
| <b>Rules for the competition</b> | <p>(a) Students will design and work on their own project in school. The project should include experimental work.</p> <p>(b) Each team of students should write up a report to give a concise and well-ordered account of their project including the objectives, an abstract of not more than 200 words, principles, experimental methods, presentation and interpretation of results, discussions, conclusions and references.</p> <p>(c) <b>No school logo or name should appear on any works, otherwise participants will be disqualified.</b></p> <p>(d) The Competition consists of two rounds. A preliminary screening based on the written reports and all presentation materials will be conducted. <u>The best 6-10 teams</u> (approximate) will be invited to attend the Final Round Competition.</p> <p>(e) During the Final Round Competition, each team is allowed to <b>give a 10-minute presentation, including a maximum of 7 minutes to report their project and 3 minutes to play the video showing their experiment.</b> After each presentation, there will be <u>7 minutes</u> for the team to respond to questions raised by the panel of judges and the audience. The softcopies of PowerPoint, video, report, abstract and summary should be stored in a CD-R and submit to the HKASME before the Final Round Competition.</p> <p>(f) If finalist teams participate in other competitions, they should notify the organizing committee as soon as possible so that proper arrangement could be made.</p> <p>(g) Students can only use either Chinese or English in their project report/website and presentation. Mixed mode of both languages is not allowed.</p> <p>(h) Schools will be responsible for the production costs of their projects.</p> |

**Adjudication** The panel of judges comprises representatives from the organizers. All projects will be judged according to the following criteria:

- whether the project is relevant to the theme of the Olympiad,
- whether the chemical principles described are sound and whether the methods used are reliable,
- whether the project describes a novel but significant experience and can be used or applied in other areas,
- whether the presentation is clear and convincing, and
- other criteria as deemed appropriate by the panel of judges.

The preliminary screening will focus on the quality of projects. The final adjudication will focus on the overall performance of the team on the day of the final round competition.

**Deadline for** 15 January, 2024 (Mon) before 5:00 p.m.

**Submission** (to the HKASME office)

- Awards**
- Gold, silver and bronze medals will be presented to members of the first three winning teams.
  - A trophy will be presented to the school of the champion team for its retention for one year.
  - Certificates and souvenirs will also be given to all members of the finalist and commendable teams.

**Enquiries** Enquiries regarding the Olympiad may be directed to Miss CHU of HKASME at 2333 0096. For more details, please visit our website: [www.hkasme.org](http://www.hkasme.org).

**Copyright** The organizers reserve the right to publish in full or part of the entries. All entries will not be returned to schools.

**Safety Matter** All participating schools should take all necessary safety precautions and obey laws announced by Education Bureau and other authorities.

### **Schedule for Hong Kong Chemistry Olympiad for Secondary School 2023-2024**

Date	Detail
Nov. 18, 2023 (Sat)	☞ Briefing Session with Science Talk Venue: Newman Catholic College, 1/F., School Hall, 2 Cliff Road, Yaumatei, Kowloon. Time: 9:30 a.m.– 11:00 a.m.
Jan. 15, 2024 (Mon) Before 5:00pm	☞ Deadline for submission of application forms for the Olympiad. <i>An application form (Appendix I) is attached.</i>

Mar 28, 2024 (Thu) Before 5:00pm	☞ <b>Deadline for submission of written reports and any supporting materials (for website report, please store in a flash drive).</b> All materials should be submitted through the Responsible Teacher to: Mr. Ricky Yeung Room 114, 1/F, Po On Court 1-15 Po On Road, Sham Shui Po, Kowloon.
Apr. 26, 2024 (Fri)	☞ Announcement of result for entering (around 6-10 teams)
June 29, 2024 (Sat)	☞ <b>Final Competition and Award Ceremony</b> Time: 9:00 a.m. – 1:00 p.m. Venue: Maryknoll Fathers' School, 2 To Yuen Street, Sham Shui Po. (Kowloon Tong Station MTR Exit C2)

- The content could be presented in either Chinese or English. Mixed language is not accepted.
- The content should not be promoting any product brands and should not display the brand name or logo of any products;
- The video should be uploaded on YouTube (URL: www.youtube.com) before submitting the Application Form and the report.

## (c) Report:

- The video should be accompanied by a report including the experimental principle and the safety-related aspects for the experiment. The coverage of the report should not exceed four single sided A4 papers (including reference sheet). The idea can be illustrated by texts, diagrams or photos, etc.
- The report shall have a cover page with the title of the video. School logo or name should be avoided on any work, otherwise participants may be disqualified.
- The language used in the report should be consistent with that used in the video.

**4. Rules**

## (a) The competition consists of Junior Secondary Division and Senior Secondary Division:

1. Junior Secondary Division: Students of S1 to S3.
2. Senior Secondary Division: Students of S4 or above.

## (b) Teams, comprising not more than three students in a team, must be nominated by schools. Each school can nominate a maximum of two teams and each team can only submit one entry. A team who submits more than one entry will be disqualified.

## (c) Each entry should include a video and a report.

## (d) Entries must be the participants' original work that have not been published previously, nor submitted for other competitions.

## (e) Entries must not infringe any intellectual property rights or any other rights of any third party.

**5. Submission of Entries**

**(A) Application (due by Feb 23, 2024 (Friday)):** Fill in the Application Form (Appendix I) and email to digisci@hkasme.org.

**(B) Submission of Report:** The report(s) for the video(s) should be submitted together with the attached Submission Form (Appendix II) via schools **by post** to "Hong Kong Association for Science and Mathematics Education, Rm 114, 1/F., Po On Court, 1 Po On Road, Sham Shui Po, Kowloon". Please mark clearly on the envelope "*Digi-science*". The deadline for the entry submission is **April 5, 2024 (Friday)** (the postal chop date will be the date of receipt).

**6. Judging**

## (a) The judging panel for the competition will comprise representatives from HKCTC and HKASME.

## (b) Entries will be marked according to the following criteria:

- How the experiment and the report are presented and elaborated;
- Whether the idea of experiment is creative; and
- Whether the entry is interesting, original, scientifically accurate and engaging to ordinary audience.

**("Digi-Science" Video Production Competition for Hong Kong Secondary Schools 2023-2024 ) Regulations (Revised)**

**1. Aims**

The competition aims at:

- promoting students' interest in learning Science;
- developing students' problem solving, communication and science process skills through demonstrating and explaining interesting experiments;
- encouraging students to communicate scientific ideas to the public in a meaningful and creative way; and
- raising students' awareness of testing and certification and its importance to their daily life.

**2. Participants' Qualification**

Participant must be a secondary student of a whole-day school.

**3. Requirement of Entry**

## (a) Theme:

**Testing Science – Sustainability in Daily Life “測試科學 – 日常生活中的可持續性”**

## (b) Video:

- The duration of the video should be not exceeding 2 minutes.
- The science experimental work should be conducted in the school laboratory using materials obtained at home, schools or any daily products. Risk assessment should be conducted before starting the experiment. Supervision from the teacher should be provided when the students carrying out the experiments.

**7. Awards**

(a) The competition consists of the following awards for each junior secondary and senior secondary levels:

- One Champion : One trophy and book coupons worth HK \$1,000
- One first runner-up : One trophy and book coupons worth HK \$800
- One second runner-up : One trophy and book coupons worth HK \$600
- Two merit awards : One award certificate and book coupons worth HK \$300 each

(b) All participants will receive a certificate of participation.

(c) Winners will be notified of the competition results before **May 31, 2024** (Friday) and be invited to receive their awards in a prize-giving ceremony, details of which will be given in due course.

**Copyright** The organisers reserve the right to publish in full or part of the entries. All entries will not be returned to schools.

For details, please visit our website: [www.hkasme.org](http://www.hkasme.org)

Download Forms: Appendix I: Application Form

Appendix II: Submission Form

*Appendix II*

## (“Digi-Science” Video Production Competition for Hong Kong Secondary Schools 2023-2024)

### URL of the video Submission Form (12 April 2024(Friday))

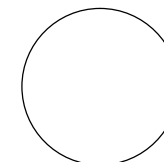
Name of School	:	
Responsible Teacher(s)	:	
Email	:	
Team	:	Team A
Division	:	Junior / Senior* secondary
Title of the video	:	
URL of the video	:	

Responsible Teacher(s)	:	
Email	:	
Team (if any)	:	Team B
Division	:	Junior / Senior* secondary
Title of the video	:	
URL of the video	:	

Signature of Principal : \_\_\_\_\_

Name of Principal : \_\_\_\_\_

Date : \_\_\_\_\_



School Chop

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**Re: About the International Chemistry Quiz (ICQ) (H.K. Section) 國際化學測試 (ICQ)**

The ICQ organized by the RACT(Australia) has changed the implantation of Quiz . The HKASME will not organize the ICQ for the Hong Kong Region.

HKAMSE

由澳洲皇家化學學院舉辦的 ICQ 本年已改變 ICQ 的營運。故香港數理教育學會不會承辦香港區測試。

數理教育學會

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**Re: Science Assessment Test (Secondary 2 and 3) 科學評核測驗 (SAT)**

SAT will not be organized this year.

HKAMSE

科學評核測驗本年將不舉辦。

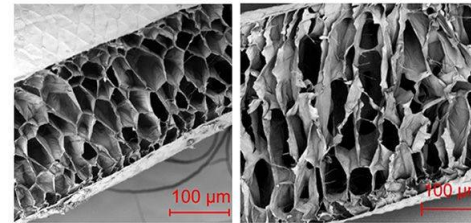
數理教育學會

## Biology News

### **(B-1) Seasonal Secrets Unveiled: How wild animals' hair changes to beat the cold?**



... Animal in winter ... What changes????



... Animal Hair Structure ... ??? changed?

The research about “how wild animals have evolved to survive extreme temperatures is led by Taylor Millett at Utah Tech University.

The study explores the fascinating world of animal hair, revealing for the first time that the inner structure of animals' coats undergoes significant changes with the seasons. Unlike common beliefs that only the colour of the hair changes, Millett's research shows microscopic alterations within the hair that are crucial for survival in different weather conditions.

Millet and her colleagues explored that complex hair structures of wild, big-game animals including elk, mule deer, etc... Using advanced scanning electron microscopy, they discovered the unique honeycomb structure within the hairs, which changes in density and size between seasons to provide essential insulation. Their findings not only shed light on nature's ingenious ways of protecting these animals but also suggest possible for other applications, such as synthetic insulation for homes and consumer products.

Reference site::

[https://www.acs.org/pressroom/presspacs/2024/march/animal-hair-structure-changes-from-summer-to-winter-to-fend-off-freezing-weather.html?utm\\_source=axial&utm\\_medium=web&utm\\_campaign=IC001\\_ST0001R\\_T003419\\_ACS\\_Spring\\_24\\_Hot\\_Topics&src=IC001\\_ST0001](https://www.acs.org/pressroom/presspacs/2024/march/animal-hair-structure-changes-from-summer-to-winter-to-fend-off-freezing-weather.html?utm_source=axial&utm_medium=web&utm_campaign=IC001_ST0001R_T003419_ACS_Spring_24_Hot_Topics&src=IC001_ST0001)

[R\\_T003419\\_ACS\\_Spring\\_24\\_Hot\\_Topics](#)**(B-2) Coral Survey of Lamma Island, HK – showcases of local biodiversity (“Green Hong Kong Green” (GHKG) program) -- you can also join their tours!!!**

3 HK Corals ...



// The OctoCoral ...

During the recent reef check, divers assessed the health of coral at 10 sites using the Coral Watch tool, a colour chart designed to measure how well reefs are doing, with deeper colours meaning healthier coral. The average health index of those sites was 4.28, slightly better than last year's 4.06.

The importance of preserving habitats for maintaining biodiversity is supported by the Hong Kong Electric and the Conservancy Association. It helps to monitor the effect of the Power station at Lamma in local waters. Lucky that the results showed coral colonies were found to be healthy and showed no signs of bleaching. With such support, the GHKG has developed Eco-heritage Tours throughout the year for the public to join and learn more about such importance!!!

Check for more at...

[https://www.hkelectric.com/media/press-releases/year-2024/20240325\\_GHKG-showcases-Local-Biodiversity-as-revealed-by-Coral-Survey-of-Lamma-Island](https://www.hkelectric.com/media/press-releases/year-2024/20240325_GHKG-showcases-Local-Biodiversity-as-revealed-by-Coral-Survey-of-Lamma-Island)

**“ Protecting Biodiversity, Protecting Life” ....**

**Hong Kong Biology Literacy Award (2023-2024)****Five-minute Presentation Contest cum Prize Presentation Ceremony Results**

<b>Winning Teams</b>	<b>Topics</b>	<b>Awards</b>
Fukien Secondary School - Group 1	Gene Therapy	Champion

	基因治療	
Carmel Pak U Secondary School - Group 1	CRISPR and Genetic Engineering CRISPR 和基因工程	First-runner up
Wa Ying College - Group 2	Cancer immunotherapy 癌症免疫治療	Second-runner up
Diocesan Girls' School - Group 2	Antibiotic resistance 抗生素抗藥性	Third-runner up
Diocesan Girls' School - Group 2		Excellence in Inquiry Award
Carmel Pak U Secondary School - Group 1		Excellence in Inquiry Award

**Physics News**

**(P-1) Physics Mock Exam in Dec-2022 (30<sup>th</sup> & 31<sup>st</sup>) – ALL scripts had been handled and results processed.**

ALL results and reports had been issued and most collected to students.

教育局教育多媒體  
EDB Educational MultiMedia (EMM)



Apr 2024

EDUCATION BUREAU EDUCATIONAL MULTIMEDIA MONTHLY UPDATE  
教育局教育多媒體每月速遞 (四月號)

教育局  
課程發展處  
課程資源組  
emm@edb.gov.hk

教育多媒體  
https://emm.edb.gov.hk

教育多媒體資源目錄  
https://emm.edb.gov.hk/static/catalogues

教育多媒體應用程式 EMM EDB

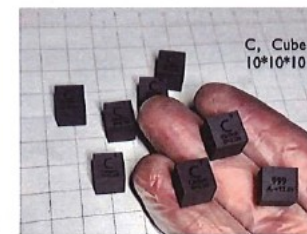
(A-1) \*\* New \*\* -- "Element Cubes" -- IYPT resources ... could

ALSO be used as tools for your students to plan their "Experience Package" for the NEW competition "My experience with the Periodic Table" for IYPT-2019(HK). --- check Chem News (C1) above...

Element CUBES of (1 cm x 1 cm x 1cm) – 4 elements available



(Ni cubes) ...



(C cubes)

Element / Symbol (At.No.)	Purity	Density	Price (Member / Non-member)
Carbon / C (6)	999 (= 99.9%)	1.82	\$ 30 / 40
Nickel / Ni (27)	995 (= 99.5%)	8.9	\$ 50 / 60
Titanium / Ti (22)	995 (= 99.5%)	4.506	\$ 30 / 40
Molybdenum / Mo (42)	9995 (= 99.95%)	10.22	\$ 60 / 70
Gold / Au (79) in tube	999	19.3	\$ 30 / 40

"More" How to use the "Element Cubes" ?? -- check April mailpack for different uses ... and ...use your imagination & creativity for the followings: ...

- 1/ Use waste cardboard and papers to make "paper element cubes" with element info on the 6 sides.
- 2/ How to use the above depend on your imagination ... e.g. as a gift, ... as detective chess, .. as a conversational tool to inspire students
- 3/ Using the "real cubes" (bought as above) and the "paper cubes" together for different activities ...

(A-2) Sets of elemental package for comparison / metallic investigations ...



various metal combination packs are available with metals Mn, Bi, W, Zn, Ti, Cr, Sb, Pb, Mo, .... Some mixed packs with 5 random metals at (\$30) and 3 metals at (\$20).

→ Ask for more updates at the Office (2333-0096)!

### **(B) Periodic Table items for IYPT-2019 >> & Still extending into 2021! ...**

>> YES, check Chem News Section!

\*\* The IYPT-2019 (International Year of Periodic Table) will have global and local activities until the end of the year. Hence, it is not late for you to initiate activities for your school or class or students to join the grand celebration around the World. For updates and our new competition (“My Experience with the Periodic Table” – a continuation of the 2018-19 competition “Element of the Month”), please go to [www.hkasme.org](http://www.hkasme.org) > Subject Comm > Chemistry > IYPT or email your questions or message to [iypt2019@hkasme.org](mailto:iypt2019@hkasme.org)

For details of the competition “Element of the Month for IYPT-2019(HK)”, please refer to the final report in this Journal or check at [www.hkasme.org](http://www.hkasme.org) > Chemistry > iypt2019.

### **(B1) → Different types of Periodic Tables:**

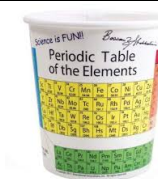
#### **1. Different size: A4 / postcard / bookmark --**



#### **2. 3D periodic table, large size (\$40) --**



#### **3. Heat sensitive periodic table --**



#### **4. Heat sensitive Cup with periodic table --**

(change colour with cold water).

### **(B2) <sup>New</sup> Periodic Table Mugs:**

	Periodic Table Mug (classical)	\$60
	Periodic Table Mug (yellow)	\$60
	Periodic Table Mug (coloured)	\$60

– Ask Office for updates at 2333-0096.

Check for more at the SME Office ... ← → **STEM nourishment needs experiential learning !!!**