

For 4-13 years old 适合 4 至 13 岁学生



Project X

ECA Program

HONG KONG'S FIRST 全港第一

STEAM X Public Speaking Accelerated Programme

STEAM X 公开演讲课程

Build Tomorrow's Leaders

装备关键能力，培育未来领袖

Structured Curriculum in STEAM, AI & Public Speaking

STEAM、人工智能与公开演讲的系统化课程设计

THINK like a SCIENTIST

BUILD like an ENGINEER

PITCH like a CEO

Level
1

Level 1-5
课程级别 1-5

Level
5



Project X REPORT CARD	
NAME: <i>Cheng, Jia</i>	First Name
LEVEL: <i>Level 1-5</i>	Level
Project X Date: <i>2024-2025</i>	Year
PROGRAMME COMPLETION (20%)	
Attendance (10%)	100%
Class Attendance (10%)	100%
SCIENCE FAIR PERFORMANCE (80%)	
Creativity (20%)	95%
STEAM Knowledge (20%)	95%
STEAM Passion (20%)	95%
Presentation & Storytelling (20%)	95%
Visual of the display board (20%)	95%
EXAMINER SIGNATURE: <i>[Signature]</i>	TOTAL POINTS: <i>95</i>

Scan the code to watch curriculum philosophy & logic
扫码观看课程设置理念与逻辑



Awards
获国际奖项认可



Media Coverage
媒体报导



4 Future-Ready Modules | 5 Progressive Levels

四大领域 | 五级进阶课程设计

✦ Coming soon
即將推出，敬請期待！

ProjectX

Science & Engineering

Tech, Coding & Robotics

AI & Entrepreneurship

Public Speaking & Presentation

Level 5
(Age 11-13)



Science Innovations



Research-ready innovator — combines science + engineering to create a refined, high-performing prototype and show real-world impact.



Python Product Builder



Product builder — creates a market-ready prototype with Python + SBC, validates it, and pitches its real value.



AI Product Launch

Alibaba Cloud Certified

Tech CEO in training — Launch a real AI product in Python, present like a tech CEO, and earn an Alibaba Cloud certificate.



Tech CEO Product Keynote

Stage-ready launcher (3 minutes) — delivers a launch-style pitch with results, limits, and sharp Q&A.

Level 4
(Age 9-11)



Science Engineering



Problem solver — applies science ideas to design and build a working solution to a real-world problem.



Micro:bit Inventor

Real-world inventor — turns ideas into working sensor-based solutions, then tests, fixes, and demos them confidently.



AI Builder + Brand Owner



Product & brand builder — Build more advanced GenAI products and learn branding, marketing, and how to run a sustainable business.



Tech Business Pitch

Pitch-ready presenter (3 minutes) — tells a problem-solution-value story with a live demo.

Level 3
(Age 7-9)



Science Research

Evidence thinker — collects results, spots patterns, and backs ideas with data & analytics.



Scratch Creator



Game & animation maker — builds fun interactive projects and learns core coding logic (loops, rules, cause-and-effect).



AI Creator + Biz Starter



Young creator-founder — Create GenAI-powered storybooks, videos and simple games and learn the basics of starting a small business.



Research Presentation

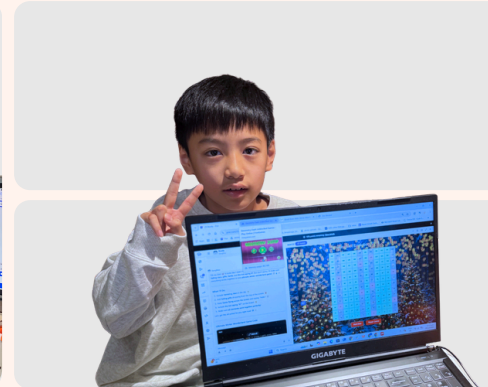
Evidence presenter (2 minutes) — uses data, analytics and product demo to persuade with proof.

Level 2
(Age 5-7)



Science Mindset

Young scientist — asks a question, makes a prediction, tests fairly, and shares a clear conclusion.



Science Presentation

Clear explainer (1.5 minutes) — delivers a structured talk with a labelled prototype and a strong takeaway.

Level 1
(Age 4-5)



Science Exploration

Hands-on explorer — completes simple experiments and explains what happened with confidence.



Show & Tell

Confident sharer (1 minute) — explains the project clearly using the board and prototype.



Our Signature STEAM Approach 我们的标志性 STEAM 教学法



The Proven Framework Behind Future-Ready Skills Development 成就面向未来核心技能的实证教学框架

Science & Engineering

科学与工程



Subject Pillars 学科范畴

Physics
物理

Ecology
生态学

Chemistry
化学

Astronomy
天文学

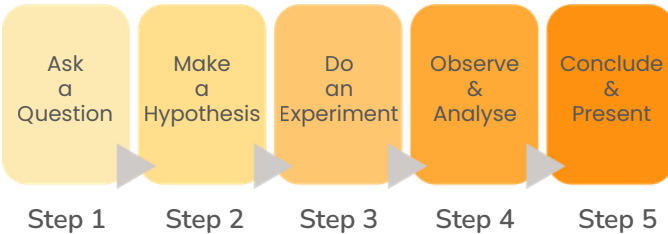
Biology
生物

Engineering
工程学

Scientific Thinking Framework

5-Step Process

科学思维五步学习法



Technology & AI

科技与人工智能



Subject Pillars 学科范畴

Coding
编程

3D Printing
3D 打印

Robotics
机器人技术

Website
网页开发

Game Design
游戏设计

Mobile App
手机应用程序设计

Tech Pitching Framework

P.R.O.V.E

科技简报框架：PROVE 五步法



AI & Entrepreneurship

AI 与创业



Subject Pillars 学科范畴

AI & Ethics
AI 与道德

Cloud Computing
云端运算

Business Planning
商业策划

Design Thinking
设计思维

AI-Human Co-creation Framework

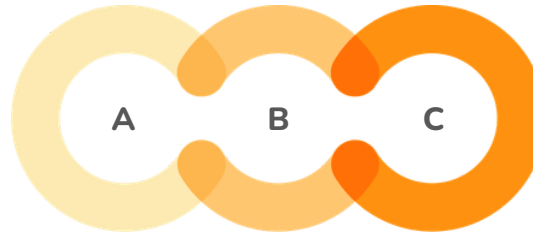
S.P.A.R.K

AI 协作五步法 - SPARK :



Presentation Framework

ABC



A - Articulation

B - Body Language

C - Confidence

Learning Outcome 学习成果

Scientific Presentation
科学演示训练

Science Fair
参与科学展览活动

Learning Outcome 学习成果

Tech Pitching
科技创业简报训练

Product Demo Day
产品展示日

Learning Outcome 学习成果

CEO Keynote Speech
CEO 主题演讲训练

AI Product Launch
AI 产品发布展示

Big Bang Academy, an accredited tech-enabled education startup founded in 2020, fosters passionate, self-directed learners. We have positively influenced over 35,000 students aged 3-16 at secondary schools, primary schools and kindergarten across the Greater Bay Area and Hong Kong. Our Co-Founders, Sarah Tong and Nixon Chan—both alumni of the University of Cambridge—were honoured as Forbes 30 Under 30 Asia 2022, solidifying our commitment to education and innovation.

Big Bang Academy 是一所于2020年成立的认证教育科技初创企业，致力于培养充满热情、自主学习的年轻探索者。我们已在大湾区及香港的中小学、幼儿园中，积极影响了超过35,000名3至16岁的学生。联合创始人Sarah Tong与Nixon Chan均毕业于剑桥大学，并于2022年荣膺《福布斯》亚洲“30位30岁以下精英”，这进一步印证了我们对教育与创新事业的坚定投入。

FIND
YOUR
SPARK

WITH OVER 35,000 STUDENTS REACHED AND 150+ PARTNER SCHOOLS AND CORPORATE

已惠及超35,000名学生，并与150多所学校和机构达成合作。

We help every child **Find Their Spark** — their life-defining moment of passion and curiosity.
我们助力每个孩子“发现他们的火花”——那定义他们人生的热爱与好奇瞬间。

Our Academic Advisors and Industry Mentors 我们的学术顾问与行业导师



Sarah Tong

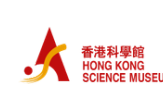
- **Bachelor of Science -Engineering (University of Cambridge)**
工程学学士 (剑桥大学)
- **Master of Engineering (University of Cambridge)**
工程学硕士 (剑桥大学)
- **Forbes 30 Under 30 Asia 2022**
2022 年福布斯亚洲 30 位 30 岁以下杰出人物
- **Global Women Asia in STEM 2024**
2024 年 STEM 领域全球亚洲女性



Nixon Chan

- **Master of Art - Natural Science (University of Cambridge)**
自然科学硕士 (剑桥大学)
- **Master of Science - Electronic Commerce & Internet Computing (The University of Hong Kong)**
电子商务及互联网计算硕士 (香港大学)
- **Forbes 30 Under 30 Asia 2022**
2022 年福布斯亚洲 30 位 30 岁以下杰出人物
- **Taught more than 2,000 students**
教授超过2,000名学生

Our School and Corporate Networks 我们的合作网络



Greater Bay Area Inter-School Student Leaders STEAM Speech Competition Training Program

大湾区校际学生领袖 STEAM演讲 比赛训练

G4-G6

THURSDAY

15:30-16:30

2026.9.10-2027.1.14



Part

1

Background Study
背景研究

Part

2

Project-Based Learning
以项目为基础的学习

Part

3

Real Game Experience
实战体验



- Project-Based Learning
以项目为基础展开学习
- Training presentation skills
训练演讲表达能力

- Participate in the GBA Inter-school Competition (Optional)
参与大湾区校际比赛（选择性）
- Taught in English & 1:10 small class size
全英小班制授课
- STEM.org Certificate
提供STEM.org专业证书



Sign up now

G3-G4

Course Description 课程介绍

AI Eco-Engineers – Smart Farm on Mars is a project-based STEAM course where students design an AI-assisted vertical farm for extreme environments. Through experiments, sensors, and coding, learners discover what plants need to thrive and build a smart system that monitors conditions, automates care, and improves efficiency.

Students test how light affects growth and photosynthesis, then use sensors to track key factors such as temperature, humidity, and soil moisture. They program smart irrigation and automation, explore farm security with pest detection concepts, and use AI-style image tools to sort harvest quality and spot plant health issues. In the build phase, students design and construct a multi-level vertical farm, integrate environmental monitoring and control (CEA concepts), and connect everything into one working system. The course ends with debugging, optimization, and final tuning—so their “Mars farm” runs reliably like a real engineered solution.

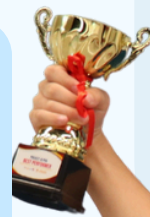
《AI 生态工程师：太空智慧农场》是一套以专题制作为核心的 STEAM 课程，孩子将以「在极端环境建造智慧农场」为情境，结合实验、感测器与程式设计，打造一座具备监测与自动控制能力的垂直农场原型。课程从植物生长需求出发，让孩子用数据理解环境条件，并把观察转化为可运作的系统设计。

孩子会测试不同光源与光照条件对生长与光合作用的影响，并使用感测器量测温度、湿度与土壤含水等关键指标；接着撰写程式实作智慧灌溉与自动化控制，延伸到病虫害侦测与农场安全的概念，也会接触以影像



Learning Outcomes 学习成果

- Understand plant growth needs by investigating light and photosynthesis, and by measuring environmental factors that affect health.
- Build and program smart farming systems using sensors and automation for monitoring, irrigation, and decision-making.
- Integrate, test, and optimize a multi-level vertical farm prototype through debugging and system-level thinking.
- 透过光照与光合作用探究，并量测环境因素，理解植物健康与生长需求。
- 运用感测器与自动化程式，建立智慧监测、灌溉与决策控制系统。
- 完成多层垂直农场原型的整合、测试与优化，培养系统思维与除错能力。



Sign up now

G4-G6

Focusing on Micro:bit, the program includes learning of knowledge theory, practical application, hands-on production, and presentation skills.

围绕Micro:bit, 课程内容包括理论知识学习、实际应用、动手制作与演讲技能训练。

Smart City Project 智慧城市项目

Tech Topic 技术主题



1. Let's Get Started! -
Rock, Paper, Scissors
Game

2. Light Up the Street! -
Smart Streetlight

3. Clean Hands, No Touch!
- Ultrasonic Hand Dryer

4. Smart Info Screen -
OLED Bus Display

5. Stop Right There! -
Smart Car Gate

6. Stay in Line! - Line-
following Robot

7. Rainy Helper - Smart
Dryer Rack

8. Forklift in Action -
Smart Lifter

9. Stop & Go! - Traffic
Light with Button

10. Talk to the Bin! - AI
Rubbish Bin

11. Who's There? - AI Facial
Recognition Door

12. Final Touches - Test,
Debug & Present

Presentation Topic 演讲表达主题

13. Designing Smart Health
Solutions

14. Delivering a City
Innovation Pitch

15. Drafting Your Script and
Slide Deck



Classes Information 课程资料



**Minimum class size
开班人数**

5 students
5人/班



**Thursday
周四**

15节

Lesson: 1 hour per class, 15 lessons per term
课时: 15节/学期, 每节一小时

Sep 10,17,24 | Oct 8,15,22,29 | Nov 12,19,26 |
Dec 3,10,17, Jan 7,14

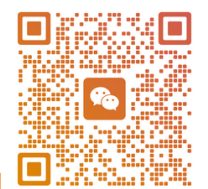


CNY 6750 /Semester
6750元/学期
包含器材使用费

Hardware package usage leasing

硬件包(仅使用)

*ELECTREX Micro:bit Nezhha 48 in 1
Inventor Kit



Sign up now

Designing Smart Health Solutions “设计智能健康解决方案”	Delivering a City Innovation Pitch 进行城市创新提案演讲	Drafting Your Script and Slide Deck “撰写演讲讲稿与设计演示文稿”
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Lessons	Science Topics	Science Descriptions
1	Light Science & Control	Test different light conditions (red, blue, natural, darkness) on plants to discover optimal growing conditions and guide future experiments.
2	Photosynthesis Optimization	Measure and track plant growth data to discover the optimal balance of light, temperature, humidity, and CO2 for maximum photosynthesis.
3	Plant Health Monitoring	Learn how sensors monitor temperature, humidity, and soil moisture to read plant vital signs like digital translators.
4	Smart Irrigation & Automation	Program automatic watering systems using plant health data to irrigate plants at exactly the right time and amount.
5	Pest Detection & Farm Security	Build smart pest detection systems to identify and scare away harmful threats while protecting helpful insects and plants.
6	AI-Powered Harvest Sorting	Program AI-powered cameras to identify ripe produce, sort by quality, and detect disease for accurate robotic harvesting.
7	Vertical Farm Design & Construction	Design a multi-level vertical farm tower to maximize space and plan optimal plant placement and environmental control systems.
8	Multi-Level Environmental Monitoring	Install smart sensors on every level of your vertical farm tower to monitor environmental conditions.
9	(CEA) Controlled Environment Agriculture	Learn how to grow plants indoors with complete environmental control using smart sensor systems.
10	Integration and AI	Program an integrated farm control system to automatically manage irrigation, lighting, and monitoring throughout your vertical farm tower.
11	Optimization and System Testing	Debug and optimize your farm system to troubleshoot sensor readings, fix code errors, and ensure all components work reliably.
12	Final System Tuning	Fine-tune your vertical farm system to optimize plant health and efficiency through precise adjustments and automation balance.

2026-2027 Greater Bay Area Inter-School Student Leaders STEAM Speech Competition Training Program

2026-27年度大湾区校际学生领袖STEAM演讲比赛训练

What Makes the Competition Unique 赛事独家

EMPHASIS ON REAL-WORLD GLOBAL ISSUES
聚焦真实世界全球议题

MENTORSHIP WITH INDUSTRY EXPERTS
行业专家指导

PROFESSIONAL TRAINING ON PITCHING
专业路演培训

Qualification for
participating teams
参赛队伍资格：

Enroll in the course and pass the
preliminary round
报名参加该课程并顺利通过初赛



THE CHAMPION
WILL BE FUNDED TO GO
冠军将获得资助前往

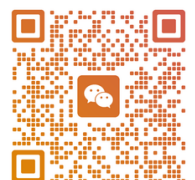
UNIVERSITY OF CAMBRIDGE
英国剑桥大学



After completing the course, you will have the opportunity to participate in the Greater Bay Area inter-school competition (optional). Participating in the GBA inter-school Competition is an excellent opportunity to exchange and learn with different schools!

Outstanding teams will participate in the Greater Bay Area Inter-School Student Leaders STEAM Speech Competition held in Hong Kong, and the winner of the competition will receive partial sponsorship for the STEAM study tour going to the UK!

课程结束后将参与大湾区校际比赛(可选择)。一次绝佳与不同学校交流学习的机会！优秀团队将参加在香港举行的大湾区校际学生领袖STEAM演讲比赛，比赛优胜者将获得STEAM赴英国剑桥游学的赞助！



Sign up now

World Reimagined

Global **STEAM Public Speaking** Competition 2027

The Big Bang Academy Global STEAM Public Speaking Competition is Hong Kong's largest STEAM x public speaking competition, empowering students to pitch innovative solutions for 2050's global challenges. Join us in letting your students find their spark!



Competition Themes:



Sustainable Technology

What if we have to manage resource crises in a carbon-neutral world?



Medical Technology

What if humans live to 150 years?



Smart Cities

What if our living areas run out—how would we create new space?

	Eligibility	Competition Requirement
 Senior Group	<u>G4 - G6</u> Group of 2-3 students	Pick ONE of the 3 themes above, and: - Build a micro:bit-based prototype - Prepare a PowerPoint or other visual aid - Submit a 3-minute oral presentation video

Judging Criteria:

- Presentation Skills (60%)
- STEAM & Coding Knowledge (20%)
- Prototype & Solution (10%)
- Team Spirit (10%)

- Students from the same school are welcomed to form their own team, so long as a school teacher endorses their participation through a simple recommendation letter upon registration.



Sign-up Deadline

Early Feb 2027

Preliminary Round Submission Deadline

Late Feb 2027

Final Round Competition (HK)

April 2027

Grand Prize - *Sponsored UK Trip - Cambridge Tour

July 2026
(*Partially Sponsored)

Register Now!



Hong Kong Enquiry

Contact Person: Sam Li
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Greater China Enquiry

Contact Person: Doris Ma
Tel: +86 13825186323
Email: zhilin.ma@bigbangacademyhk.com

