



avocado lab
math & science

2023 Holiday Workshops



Our wildest season ever, with

20

unique workshops!

To register, call or WA 8764-8720

air detectives

Unraveling Air Quality Mysteries!

Bothered by
the haze?



Nasal
Congestion?



Eczema?



Only on 29 Nov 1.30-5.50pm

Discover the science behind **pollutants** while building a complete **sensor** package.

Get detailed readings on light, sound, humidity, temperature, VOCs, VSCs, PM0.3 to PM10, CO and more and have fun measuring each part of your home!

Air Detectives is the 1st in the Detective Workshop Series, where scientific theories meet hands-on experiences! Each topic is not just intriguing but also practical, perfect for exploration or school projects.

air detectives

Unraveling Air Quality Mysteries!

Date : 29 Nov 1.30pm-5.30pm (4 hours)

Cost: Introductory price of \$360 includes \$180 of take-home kit.

Components are reusable for future Detectives workshops or school projects.

Pre-requisites

1. P5 and above. Some familiarity with text-based programming (Python) highly recommended but not essential
2. Windows/Macbook with USB port and Admin rights
(PLDs may not work as we need low level access to the ports)



Part One: Theory and Understanding Air Quality In-depth (Coach Crystal)

Brief Introduction to Air Quality

- Overview of air quality and its impact on health and the environment.
- Discuss the significance of monitoring air quality for human well-being and ecological balance.
- Use case studies of air quality issues and their consequences.

Brief Understanding of Air Pollutants

- Explore common air pollutants, their sources, and their adverse effects on human health and ecosystems.
- Cover pollutants such as particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, and volatile organic compounds (VOCs).
- Discuss how these pollutants contribute to smog, respiratory diseases, and global warming.

Introduction to Sensors and Their Types

- Basic principles of sensors and how they function in air quality monitoring.
- Provide an overview of various sensor types used in environmental monitoring, including temperature sensors, humidity sensors, light sensors, gas sensors, and VOC sensors.
- Explain the role of each sensor type in assessing different air quality parameters

Part Two: Crafting Your Own High-Grade Air Quality Monitoring System (Coach Garry)

Building the Commercial Quality Kit

- Build an environmental monitoring/citizen science kit powered by Raspberry Pi Pico W (Wireless-capable).
- Equipped with a vibrant 1.54" LCD screen and a plethora of sensors!
- Capable of measuring temperature, pressure, humidity, gas, light, sound, PM1 to PM10 (including PM2.5).
- Entire kit is compact, self-contained, and portable (Palm sized). High end power bank included

Setting Up Your Development Environment

- Configure Thonny, Micropython, and learn about the particulate sensor library.
- Conduct Calibration and Testing for precision.
- Learn how to explore and manipulate the data output creatively.


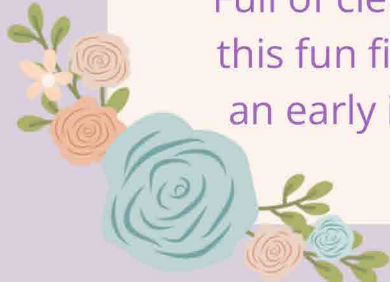
PM10	0
PM2.5	12
PM1.0	226
PM0.3	3159





Lower Primary

Math Olympiad & Puzzles



Full of clever techniques, puzzles, and arithmetic wonders, this fun filled and interactive workshop will give your child an early introduction to the world of Math Olympiad and recreational math

Focused on visual, spatial, abstract reasoning and logical reasoning concepts, this workshop helps prepares both newbies and precocious kids for higher-order abstract math.

Join Coach Crystal for a blast with FUN & GREAT LEARNING MOMENTS



For: P1 &2
K2 & below, please ask.

21 Nov Thursday 230-430pm
5 Dec Tuesday 430-630pm
20 Dec Wednesday 230-430pm

\$100/session (2 hr)

P4/5 Math Olympiad Primer



NO DRILLING EDITION

This is an excellent primer class for the kids who have always wanted to try Math Olympiad or want to do better but are let down by weak training in school or do not want to cram blindly.

Our workshop is your secret weapon! We'll serve up a smorgasbord of tasty algebra, geometry, combinatorics, and number theory topics, unlocking the mysteries behind each one.

We know the secret sauce to success is exposure, so we'll shower you with authentic past year NMOS questions, cracking open the unique patterns and quirks lurking within.

This workshop, run by Coach Garry and his uniquely whimsical teaching style, will enhance your child's learning experience, helping them grasp concepts more effectively.

For: P4 2024s who are strong in school math & P5s 2024

Run 1: Nov 20-23 Mon to Thurs
9am-12noon daily

Run 2: Dec 19-22 Tue to Fri
9am to 12noon daily

\$400/run (12 hr)

P3 GEP PREP

LEVEL THE PLAYING FIELD



This workshop is intended for P3 2024 students who are talented but have had limited exposure, providing them with a more level playing field, by giving them an overview of commonly tested topics/concepts across English, Math and General Ability.

This class will be run by Coach Garry. With two children of his own who were part of the GEP, he understands the challenges faced by gifted children and the importance of providing them with the right support and resources to thrive academically and beyond.

Reach out to us for a conversation, and let us prove that we're not just another run-of-the-mill tuition centre. We're the real deal, committed to genuine learning.

For: P3 2024

Run 1: Nov 21 Tue, 22 Wed & 24 Fri
1pm-330pm daily

Run 2: Dec 26 Tue, 27 Wed & 29 Fri
1pm-330pm daily

\$300/run (7.5 hr)

fraction, ratio & percentage

MASTERCLASS FOR P5/6

Elevate your child's math skills to new heights with our intensive 2-day Fractions, Decimals & Percentages (FRP) Workshop by Coach Kwan.

This masterclass is crafted for students who have a solid foundation in math basics and are enthusiastic about gaining profound insights to conquer even the most challenging school math problems.

Participants will not only learn advanced strategies but also cultivate a profound understanding, setting the stage for confident and competitive performance for the PSLE and Math Olympiads alike.

Don't miss this opportunity to supercharge your child's mathematical abilities and pave the way for their academic success!



For: Upper Primary

2-day Masterclass
12 Dec Tue 230-430 pm
13 Dec Wed 230-430pm

\$185 (4 hr)

Elevate your child's
geometric prowess!

GEOMETRY

AL1 masterclass for P5/6

Crafted as a specialized masterclass, this workshop is designed for students already well-versed in math basics who aspire to handle the toughest PSLE questions.

This workshop will be led by Coach Kwan, whose expertise in geometry will have you and your child laughing at angles and polygons in no time!

The class aims to not only solidify essential geometric principles but also introduce fundamental Math Olympiad concepts.

Students can expect to gain a strong and confident foothold, equipping them to excel in school exams and even the less competitive Math Olympiad challenges.

For: Upper Primary
2-day Masterclass

Run 1: 22 Nov Wed 3-5pm
& 23 Nov Thurs 3-5pm

Run 2: 19 Dec Tue 230-430pm
& 21 Dec Thurs 230-430pm

\$185 (4 hr)

SCHOOL MATH

P5 HEADSTART

ENSURING A STRONG FOUNDATION



P5 poses significant challenges for many students, especially those who seemed to be doing well in P4. It's not uncommon for students to experience a sudden 2-3 band drop in grades. The root cause of this decline is often the lack of strong fundamentals or misconceptions about essential concepts.

This workshop will focus on model drawing, geometry, and word problem analysis – three critical aspects of school math where many students tend to struggle.

With his firm yet compassionate approach, Coach Marcus guides students who might have slipped academically due to lack of attention in school. Students not only master the core concepts but also learn to apply them confidently.

Join us in this comprehensive and interactive workshop, where your child will not only bridge the gaps in their knowledge but also develop crucial problem-solving skills. Let's turn Primary 5 into a year of growth, understanding, and academic achievement for your child!

For: P5s 2024 who are scoring AL3/4 and below or lack confidence to score AL1/2

2-day workshop
5 Dec Tue 10am-12noon
& 6 Dec Wed 10am-12noon

\$168 (4 hr)



SCHOOL MATH

P6 LAST MILE

ENSURING A STRONG FOUNDATION

As the PSLE edges closer, the school pace quickens, often leaving those with weak foundations stressed. Blindly cramming won't help unless the root causes of weaknesses are addressed.

Enter our PSLE Headstart workshop, a timely intervention. First, we identify gaps and provide tailored solutions. Second, we focus on model drawing, geometry, algebra, word problem analysis, and exam techniques – common stumbling blocks for many students.

There's still time before the PSLE to make a difference. It's common for parents and kids to seek help only when it's almost too late. Don't wait until it truly is.

Facilitated by Coach Marcus, experienced in guiding students at this critical stage, the workshop offers a steady and patient approach. Marcus not only calms panicked students but also provides a roadmap for improved performance. Act now and equip your child for PSLE success!

For: P6s 2024 who are scoring AL3/4 and below or lack confidence to score AL1/2

2-day workshop
7 Dec Thurs 10am-12noon
& 8 Dec Fri 10am-12noon

\$168 (4 hr)



Dive into Hydrosphere!

Join us in an exhilarating voyage into the mysteries of water's captivating properties.

Explore the science of surface tension, investigate water quality through hands-on testing, unravel the secrets of watersheds, and unlock the incredible power of hydropower.

This immersive experience will leave you with a deep understanding of the significance of water and foster a newfound appreciation for this life-giving element.

Let's celebrate the wonders of water science together with the "mad scientist" Coach Crystal!

For: Middle-Upper Primary

6 Dec Wednesday 4.30-6.30pm

7 Dec Thursday 2.30-4.30pm

13 Dec Wednesday 4.30-6.30pm

19 Dec Tuesday 4.30-6.30pm

21 Dec Thursday 4.30-6.30pm

\$180 (2 hr) - includes lots of hands-on and take home materials!

Discover the magic of renewable energy with our "Wind Wizardry" workshop

Wind Wizardry



In this interactive adventure led by the ever eccentric Coach Crystal, participants will dive into the world of wind energy, uncovering the secrets of generation, and the transfer of energy.

From exploring diverse types of windmills to breaking down the anatomy of these amazing machines, young minds will be captivated.

Students will design and build their own windmills, fostering creativity and problem-solving skills.

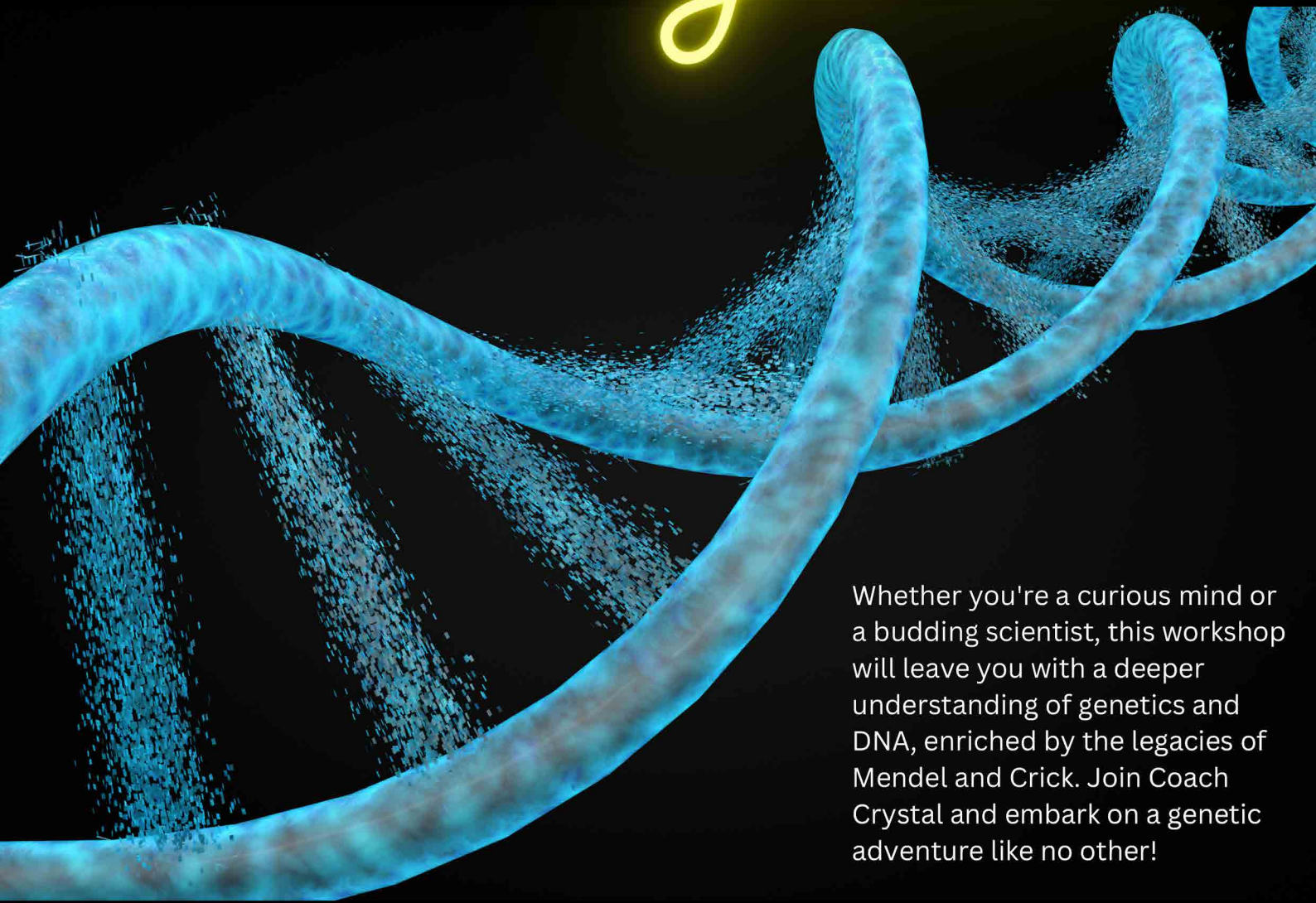
Wind Wizardry isn't just a workshop; it's an unforgettable journey that educates and inspires our future leaders about the power of renewable energy.

For: P1-3

5 Dec Tue 2.30-4.30pm
12 Dec Tue 4.30-6.30pm
14 Dec Thurs 2.30-4.30pm
19 Dec Tue 2.30-4.30pm

\$148 (2 hr) - includes lots of hands-on and take home materials!

Mendel-ing with genes



Whether you're a curious mind or a budding scientist, this workshop will leave you with a deeper understanding of genetics and DNA, enriched by the legacies of Mendel and Crick. Join Coach Crystal and embark on a genetic adventure like no other!

Dive into the captivating world of genetics and DNA in our "Mendel-ing with Genes" workshop.

Discover the fascinating mechanisms behind inheritance, genetic traits, and DNA's intricate code. Don't miss this unique opportunity to explore the building blocks of life.

In addition to unravelling the mysteries of DNA, we'll journey through the discoveries of Gregor Mendel, the "Father of Modern Genetics," and Francis Crick, co-discoverer of the DNA double helix.

For: Middle-Upper Primary

6 Dec Wednesday 2.30-4.30pm

7 Dec Thursday 4.30-6.30pm

13 Dec Wednesday 2.30-4.30pm

19 Dec Tuesday 2.30-4.30pm

\$180 (2 hr) - includes lots of hands-on and take home materials!

LIFE

The Kaleidoscope of Life: an exploration
into the cycles that surrounds us

Join young explorers on a journey
through life cycles, from organisms to
environmental processes.

Through hands-on activities, they'll learn,
create, and understand the intricate
cycles in nature and around us.

From the life of interesting animals to
broader environmental cycles, students
will leave with an appreciation for the
web of life and their own cycle creations.

Explore the exciting world of life with
Coach Crystal!

For: P1-P3

21 Nov Tuesday 4.30-6.30pm

12 Dec Tuesday 2.30-4.30pm

14 Dec Thursday 4.30-6.30pm

20 Dec Wednesday 4.30-6.30pm

\$148 (2 hr) - includes lots of hands-on
and take home materials!



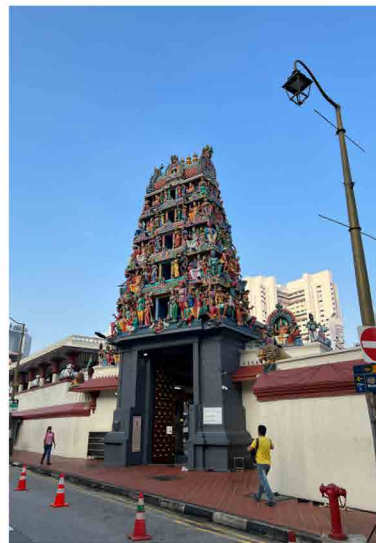
WHAT? WHY DOES AVOCADO LAB
HAVE SO MANY WILD IDEAS?



Scavenger
hunt
@
Chinatown

28 Nov or 26 Dec
\$10/pax

Starts at 7.30am
unless you like heat and crowds



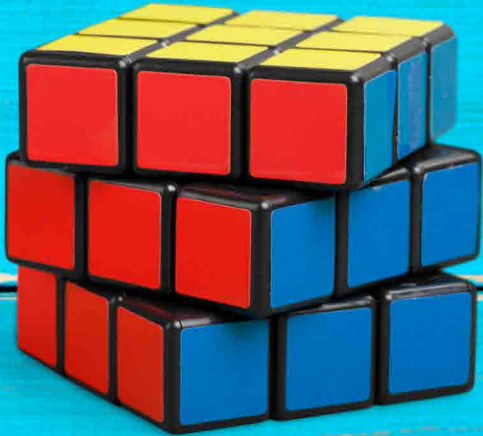
Embark on a captivating journey through Chinatown, delving into its rich culture and heritage while working in teams to solve engaging math, science, and cultural puzzles.

Immerse yourself in a unique learning experience as you unravel the mysteries of this vibrant neighborhood!



HOLIDAY FUN!

RUBIK'S CUBE



BEGINNER'S WORKSHOP

The 3x3x3 Rubik's cube has 43 252 003 274 489 856 000 combinations, or 43 quintillion. That sounds impossible to solve! Or is it?

Join us as we learn the beginner's method to solving an age old toy that's been around since 1974 in 7 easy steps with 8 simple algorithms.

Suitable for Complete beginners or amateurs and enjoy the 'Ah-Ha' moments together with Coach Kwan

For: All ages

21 Nov Tuesday 230-430 pm

27 Nov Monday 3-5pm

7 Dec Thursday 230-430 pm

\$90/session (2 hr)

ADVANCED

Rubik's Cube

Do you already know how to solve the Rubik's cube but want to do it faster? Ever wondered how the pros can solve it in under 10 secs? Interested to get your time under a minute?

Let Coach Kwan introduce the CFOP method which pro speed cubers use in competitions and see how far you can push your own limits.

Pre-requisites:

- 1) know the beginner's method and/or able to solve in about 5 mins or under.
- 2) know how to read the basic algorithms. (eg R, L', U, etc).

For: All ages

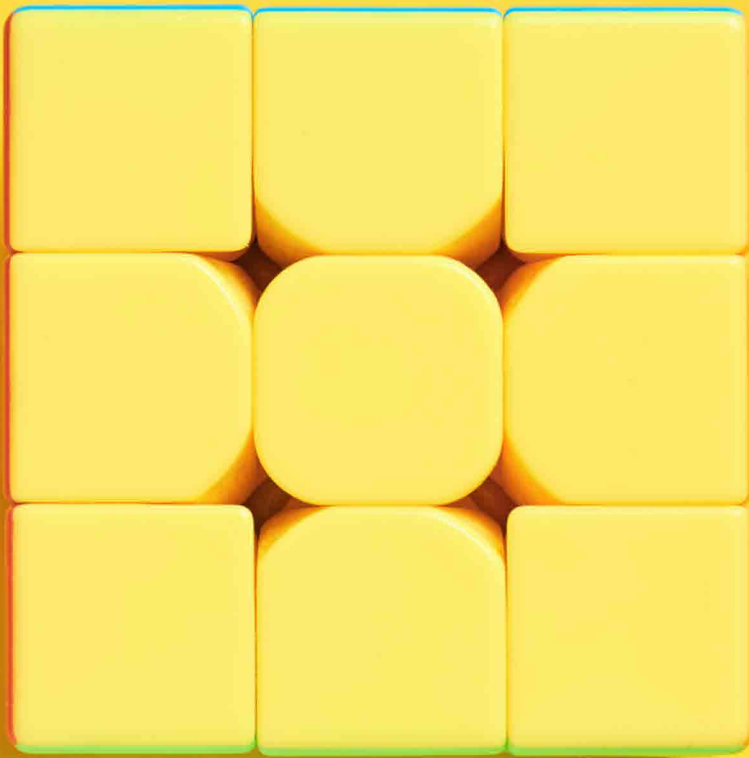
30 Nov Thurs 3-5pm

21 Dec Thurs 230-430 pm

\$90/session (2 hr)

SPEED CUBING

Road to 30 secs



Time to embark on your next phase of cubing, prepping for competition!

Learn how to overcome this 30 sec barrier with tips from coach Kwan's own personal road from 30 sec to 20 secs.

Rome wasn't built in a day, but this workshop might be your gateway to becoming a speed cubing sensation.

Pre-requisites: MUST know Advance method (at least beginner's CFOP)

Participants may sign up for more than 1 workshop.

For: All ages

6 Dec Wednesday 230-430 pm
14 Dec Thursday 230-430 pm

\$90/session (2 hr)

FOR BEGINNERS

chess

Embark on your chess journey with our Chess Beginner Workshop, tailor-made for young enthusiasts.

This workshop introduces beginners to the exciting world of chess, covering the rules, essential strategies, and the joy of the game. From learning the basics to understanding opening moves, our workshop is the perfect starting point for young chess enthusiasts to hone their skills and have fun while doing it.

Join us and take your first step toward mastering the game of kings.

Class conducted by Coach Kwan; checkmates & laughs guaranteed!

For: All ages

20 Nov Monday 3-5pm

29 Nov Wednesday 3-5pm

14 Dec Thursday 230-430 pm

\$90/session (2-hr)

Chinese Composition & Oral (P5/6)

At the heart of effective communication in Chinese lies the mastery of both written and spoken expression. Our workshop aims to introduce you to the essential tools and strategies to express yourself fluently, coherently, and confidently in both written compositions and oral conversations.

In this workshop, you can expect to:

- Develop and refine your Chinese writing skills used in Primary compositions.
- Enhance your Chinese conversational skills through practical exercises.
- Engage in group discussions to boost your confidence in real-life scenarios.
- Learn from an experienced instructor who is passionate about teaching and dedicated to your success.

We are excited to embark on this learning adventure with you, and we believe that with dedication, practice, and the right guidance, you can unlock your full potential in the Chinese language. So, let's embark on this journey together, break down language barriers, and discover the beauty of the Chinese language.

谢谢大家的参与，让我们一起探索中文的无限可能

Anthea, a seasoned tutor with 20+ years of experience, including her role as a MOE teacher, demonstrates her expertise through versatile teaching methods in Chinese language education. Her tenure as an Mother Tongue HOD has given her in-depth knowledge of the MOE syllabus, curriculum, and expectations, especially in areas like answering techniques and marking criteria.

For: P5/6 2024

29 Nov Wed 12noon-3pm

30 Nov Thurs 12noon-3pm

\$240 (6 hr)



Chinese Composition Writing (P3/4)

跟我学

Learning Chinese is a rewarding journey that opens doors to a rich cultural heritage and a world of opportunities. Whether you are a beginner taking your first steps in mastering the language, this workshop is designed to cater to your needs.

In this workshop, we'll take you on a magical ride through the world of words, where you will:

- Unleash your imagination and craft amazing tales that come to life on paper.
- Learn how to express your thoughts, ideas, and emotions through beautiful words and sentences.
- Develop the skills to write with clarity, creativity, and confidence.

Anthea, a seasoned tutor with 20+ years of experience, including her role as a MOE teacher, demonstrates her expertise through versatile teaching methods in Chinese language education.

Her tenure as an Mother Tongue HOD has given her in-depth knowledge of the MOE syllabus, curriculum, and expectations, especially in areas like answering techniques and marking criteria.

For: P3/4 2024

12 Dec Tue 12noon-2pm

13 Dec Wed 12noon-2pm

\$160 (4 hr)

PSLE Chinese Booster

The PSLE is a pivotal milestone, and we know the importance of laying a strong foundation for it.

- **Solidify Previous Learning:** Students often struggle to remember all they've learned. To ensure your child's success in P6, we'll recap and consolidate the vocabulary they've acquired in P4 and 5. This will provide them with a sturdy platform to build upon.
- **Confidence in Vocabulary:** By revisiting and reinforcing vocabulary, we'll make sure your child is well-prepared to tackle the P6 curriculum. A strong vocabulary is essential for excelling in Chinese language studies.
- **Effective Comprehension Skills:** In addition to vocabulary, we'll focus on enhancing basic comprehension analysis and answer techniques. Your child will learn how to approach and answer questions effectively, boosting their confidence in tackling any type of comprehension.

What Makes Our Camp Unique?

Anthea, a skilled tutor with 20+ years of experience, combines her expertise as a MOE teacher and Mother Tongue HOD to offer versatile teaching methods in Chinese language education. She excels in areas like answering techniques and marking criteria due to her deep understanding of the MOE syllabus and curriculum

- **Tailored for P6:** Our Booster Camp is designed specifically for P6 students, ensuring that the content and teaching methods align perfectly with the upcoming PSLE.

For: P6s 2024

19 Dec Tue 12noon-230pm
20 Dec Wed 12noon-230pm

\$200 (5 hr)

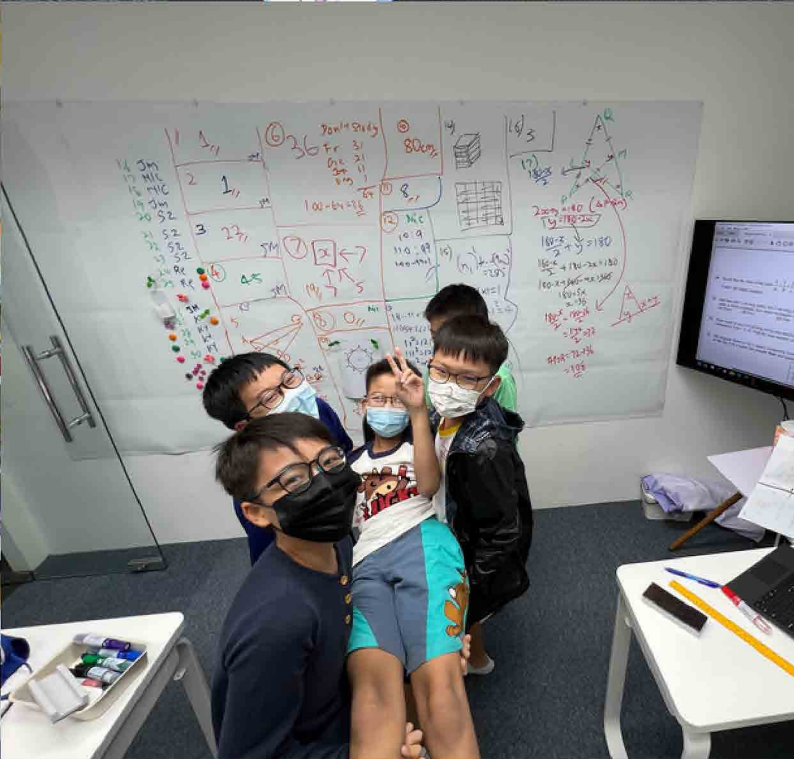




Weekly Science Classes
for School Science and
Science Olympiad

Contact 8764-8720





Serious Math in an even more seriously fun environment.

Limited Math Olympiad and School Math slots.

Contact 8764-8720.



MATH OLYMPIAD
SCIENCE OLYMPIAD
SCHOOL MATH
SCHOOL SCIENCE
CHINESE

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