ONWARD & PERSEVERE

Sec 3 Subject Combination Talk (*for Sec 2 NA*)

1 MARCH 2023

Please scan the QR code to access the digital version of the Subject Combination Booklet

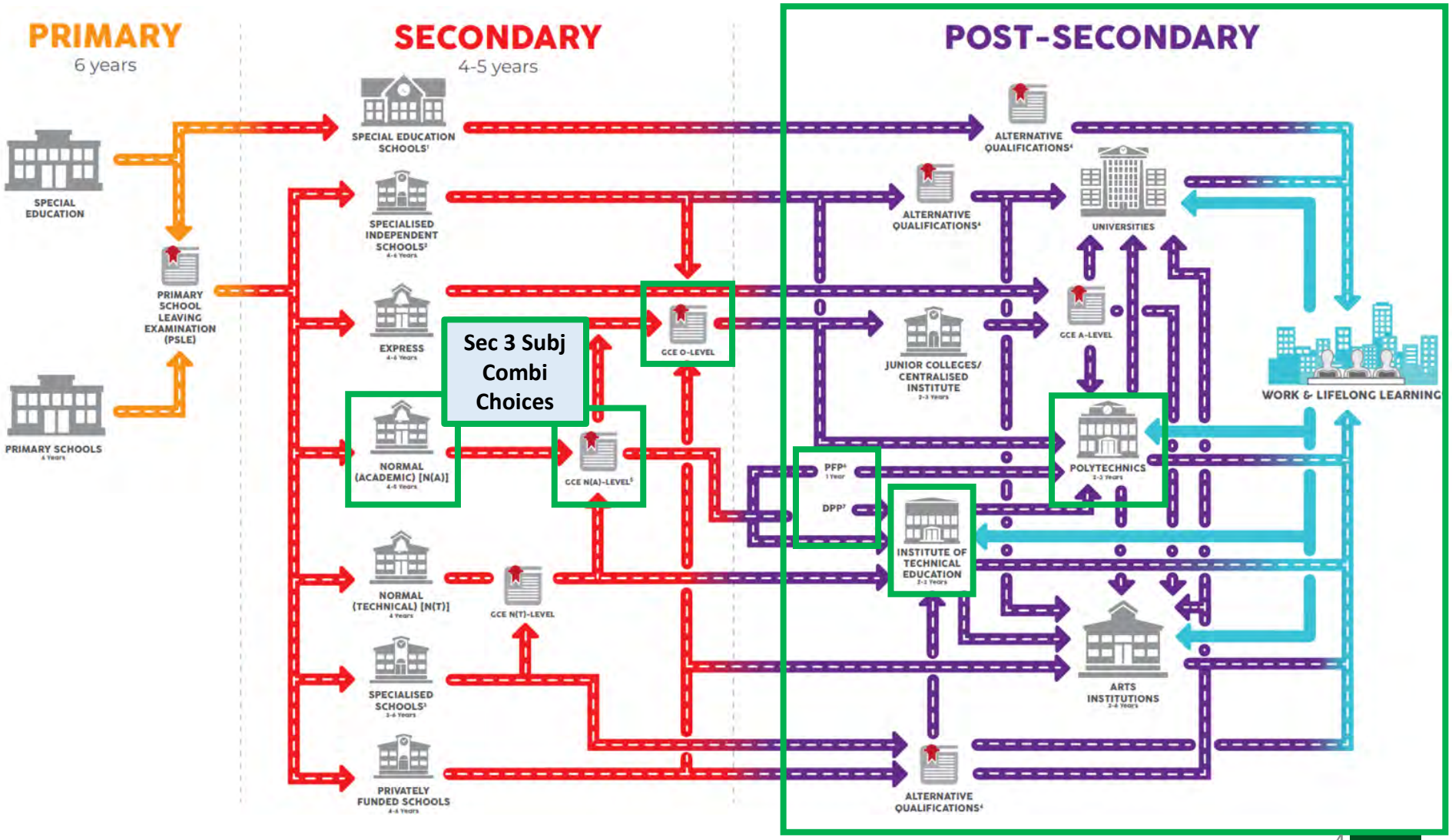
PROGRAMME OUTLINE (FOR 2NA)

1. Sharing by Vice-Principal, Mrs Yvonne Ong
2. Electives Sharing: Additional Mathematics
3. Sharing on Out-Of-Stream Subjects
4. Education and Career Guidance (ECG) Sharing
5. Electives Sharing: POA
6. Electives Sharing: Art
7. Electives Sharing: D&T
8. Electives Sharing: NFS
9. Q & A Segment

Sharing by Vice-Principal, Mrs Yvonne Ong

Overview

Singapore's Education System:



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TRANSITING TO UPPER SECONDARY

Choosing the right subjects at the end of Secondary 2 is an **important decision** that needs to be **informed** and **tailored** to the child's **interests and aspirations**.

Parents
Class Mentors
Subject Teachers
IP HODs
Year Heads
ECG Counsellor
Institutes of Higher Learning
Industry Experts

Knowing the Child


BEGIN...
...with the END *in mind*!

WHAT DO I NEED TO KNOW BEFORE I MAKE MY CHOICES?

- Factors to consider when making choices
- Subjects that are offered
- Criteria for subject combinations
- Process

FACTORS TO CONSIDER

- Child's **strengths**, **interests**, **aspirations** and **post-secondary options**
- Results at Secondary 1 and 2
- Qualitative feedback from teachers

- **The subject combination chosen must equip the child with the passion, self-confidence and the belief to progress to more advanced levels after OPSS.**
- **This will result in positive outcomes – student engagement and achievement.**

Subjects offered at Sec 3 Normal (Academic)

Subj 1	Subj 2	Subj 3	Subj 4	Subj 5	Subj 6
*English Language	*Mother Tongue Language	*Humanities SS/Geo Or SS/Hist	*Mathematics	*Science (Chem/ Phy) Or *Science (Chem/Bio)	#Additional Mathematics Or Art Or Design and Technology Or Nutrition and Food Science Or Principles of Accounts

*Subject is offered at either NA-level or at O-level
Student offering 'NA ' level A. Math will be required to read 'O' level E.Math

SUBJECTS WITH ELIGIBILITY REQUIREMENTS

To be eligible for	Criteria*Subject to changes
Additional Mathematics at 'N' Level	Mathematics (overall) ≥ 75%
Mathematics at 'O' Level	Mathematics (overall) ≥ 75%
Science at 'O' Level	Science (overall) ≥ 75%
English at 'O' Level	English (overall) ≥ 75%
Mother Tongue Language at 'O' Level	MT (overall) ≥ 75%

***Note:**

- Subject percentile ranking is also taken into account in the streaming process

PROCESS

The allocation of subjects is based on the following:

- Students' choice(s)
- Students' **overall academic performance** at Secondary 2
- Eligibility requirements for certain subjects
- Teachers' recommendations
- Available resources

TIMELINE

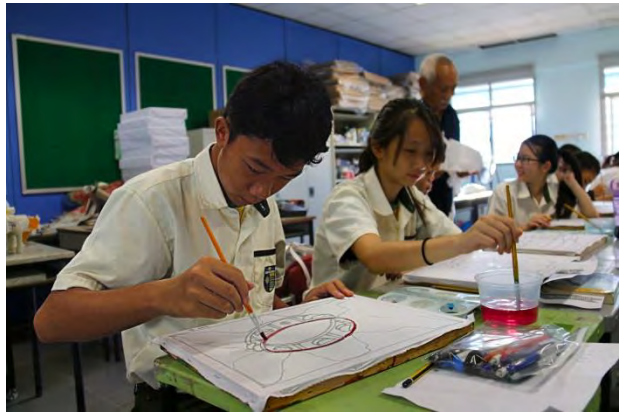
1	Talk for parents	1 March
2	Subject Exposure + Online interest survey for students	Mid-May
3	2nd Student Engagement Session	Mid-October
4	**Actual:** Submission of choices	End of October
5	Release of Subject Combination results	Early November
6	Appeals	Mid-November
7	Release of appeal results	End of November

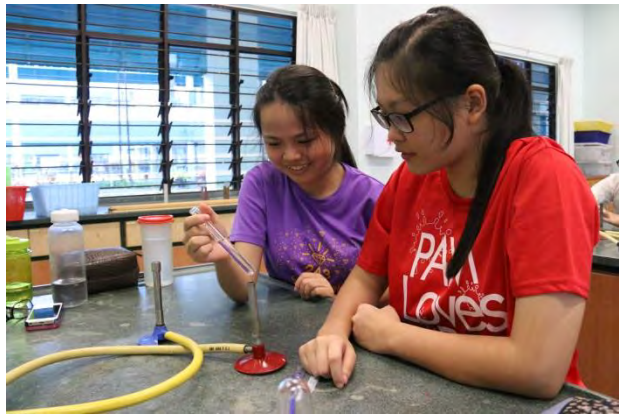
GETTING YOUR CHOICE SUBJECT COMBINATION …

✓ **Consistent hard work**

	Assessment Weighting (%)		Date
2NA	Weighted Assessment 1 (WA1)	15%	Term 1
	WA2	15%	Term 2
	WA3	15%	Term 3
	AA	10%	Terms 1 - 3
	End-of-Year Exam	45%	Term 4

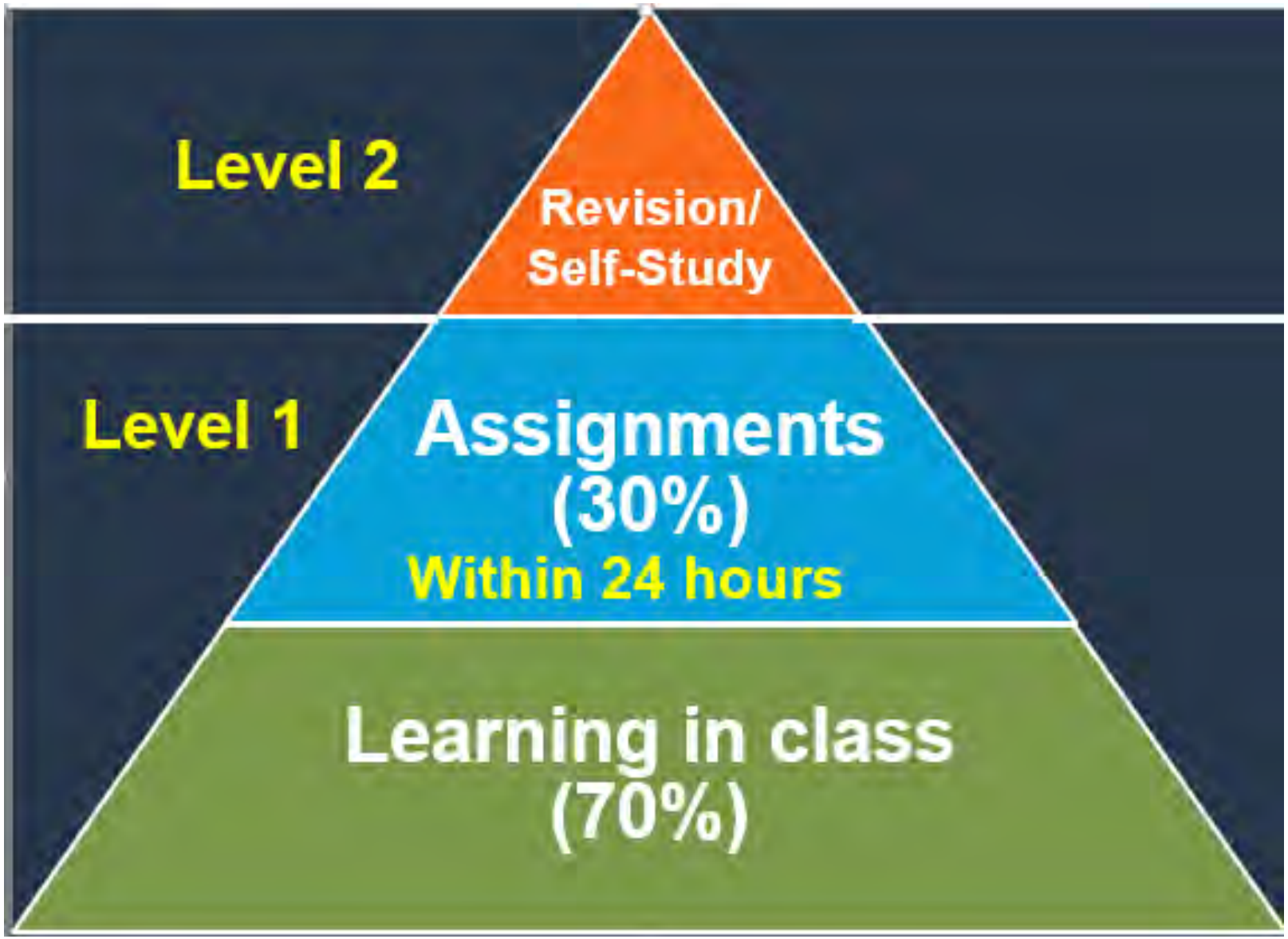
✓ **Selecting your combinations wisely**





4As to Success

- **A**ttendance
- **A**ppearance
- **A**ttentiveness
- **A**ssignment


Level 2
Revision/
Self-Study
Level 1
Assignments
(30%)
Within 24 hours
Learning in class
(70%)

CCA

LEAPS 2.0

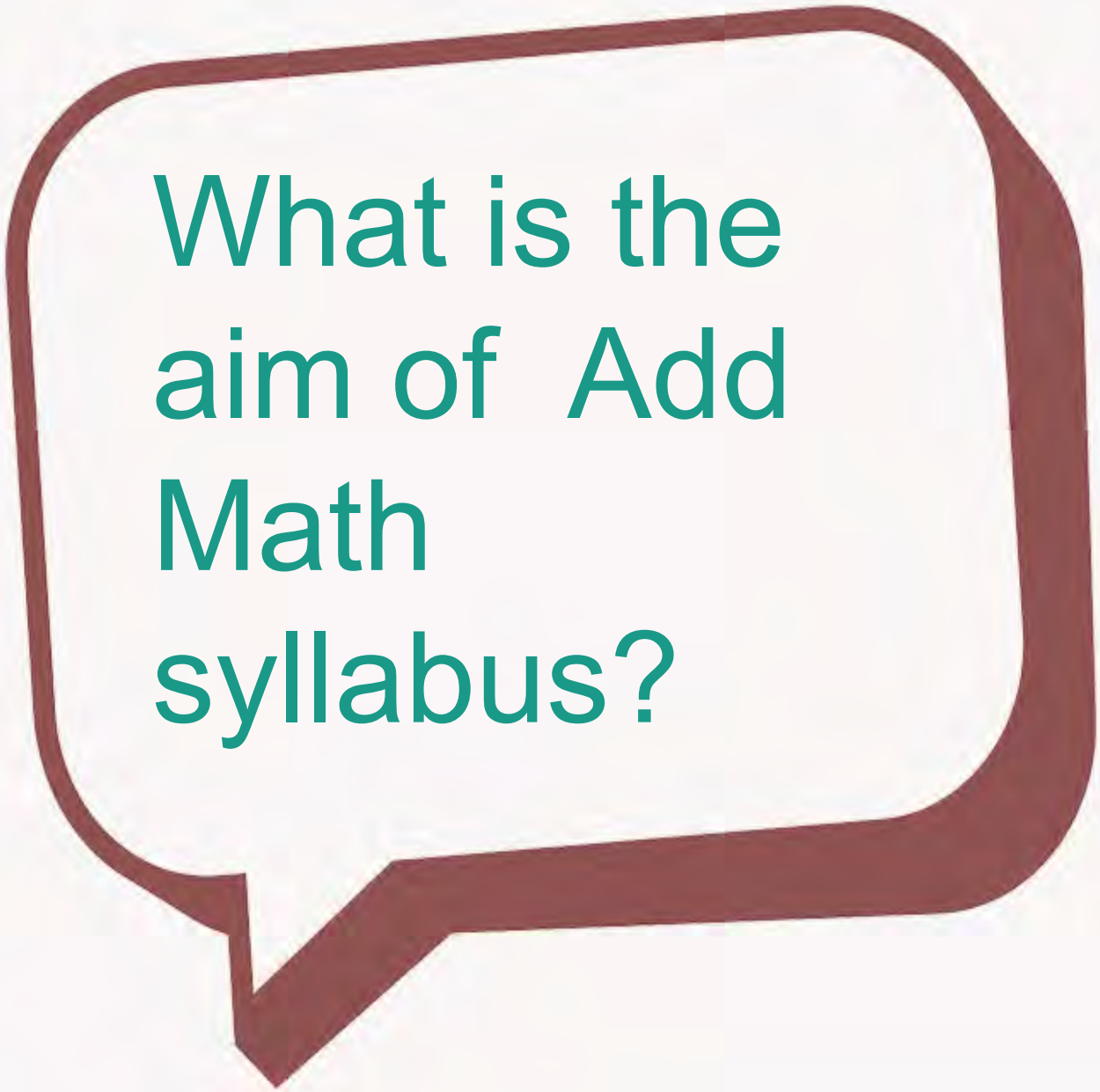
- Leadership
- Achievement
- Participation
- Service

LEAPS 2.0

- Recognition of Students' Co-Curricular Attainment

- Bonus points for admission (Post Secondary)
  - **Excellent:** **2 Bonus Points**
  - **Good:** **1 Bonus Point**
  - **Fair:** **No Bonus Points**

Elective Sharing on Additional Mathematics


What is the aim of Add Math syllabus?

Aims:

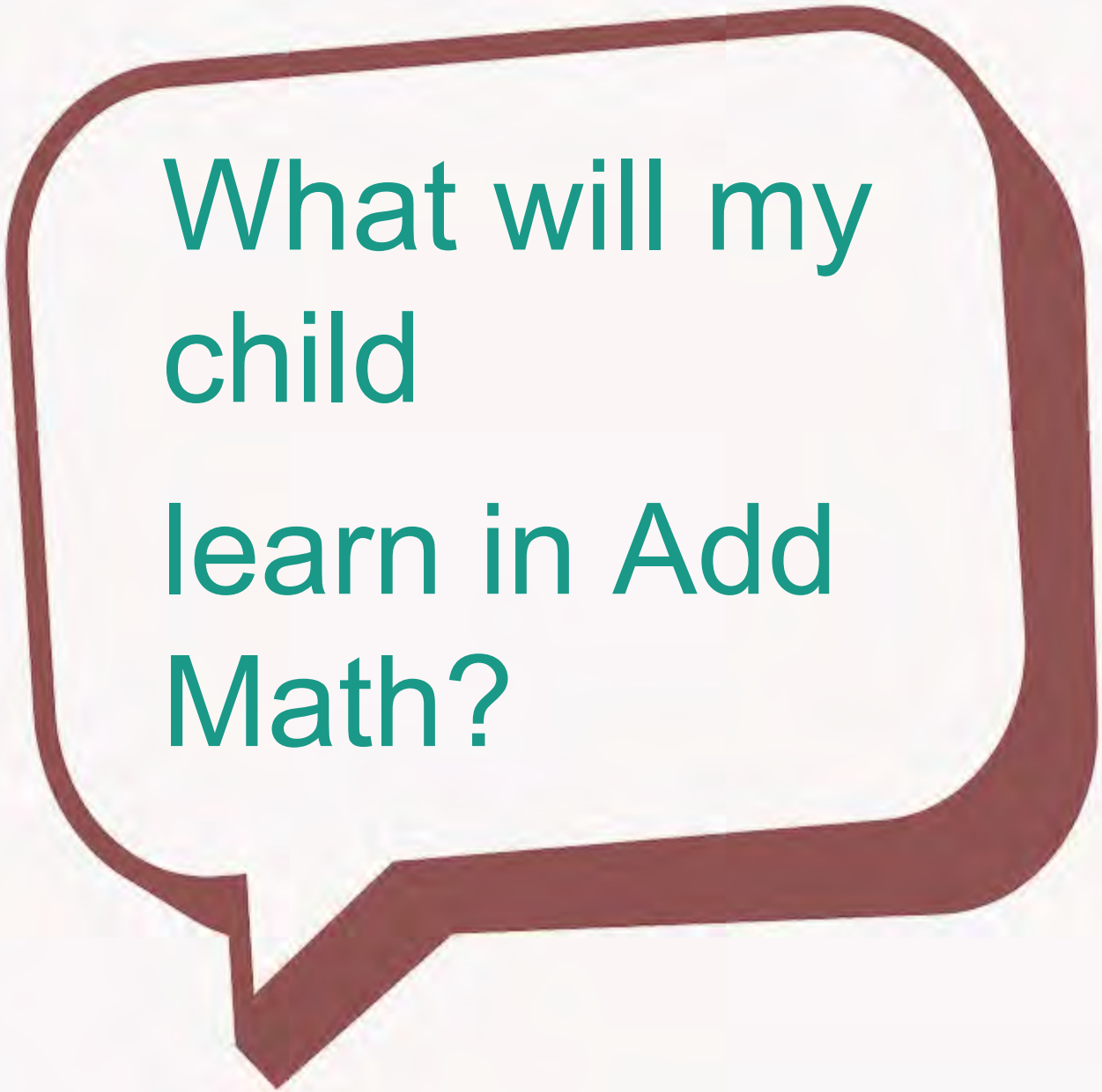
- Acquire Math concepts and skills for higher studies in Math and to support learning in the other subjects, in particular, the Sciences
- Develop thinking, reasoning and metacognitive skills through a mathematical approach to problem-solving
- Connect ideas within Math, and between Math and the Sciences through applications of Math
- Appreciate the abstract nature and power of Mathematics.

In taking Add Math

Students taking Add Math (NA level) will take Express E math.

At Sec 4, students will take

- Add Math (N Level)
- E Math (O Level)


What will my child
learn in Add Math?

Concept and Skills		
Algebra	Geometry and Trigonometry	Calculus
Learning Experiences (Processes, Metacognition and Attitudes)		

A strong foundation and proficiency in algebra is required for Add Math!

Algebra	Geometry & Trigonometry	Calculus
Quadratic Functions	Trigonometry functions, identities and equations	Differentiation and Integration
Equations and Inequalities	Coordinate Geometry in 2D	
Surds	Proofs in Plane Geometry	
Polynomials and Partial Fractions		

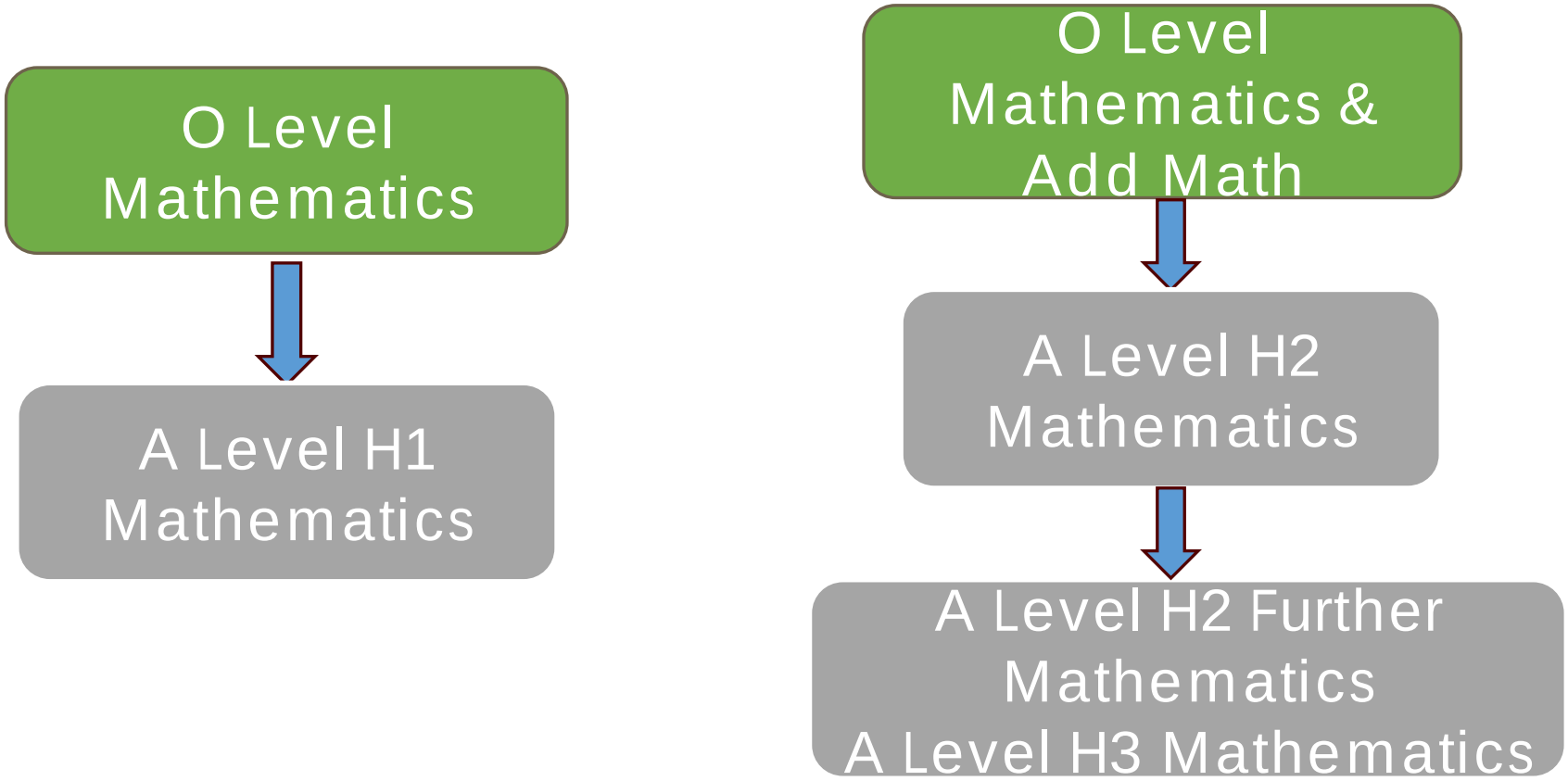
4051 'N' Level

Paper	Assessment	Duration	Weighting
1	**Written Paper 70 marks**	**1 hour 45 mins**	**50%**
2	**Written Paper 70 marks**	**1 hour 45 mins**	**50%**

Is Add Math necessary for my child's Post-Sec Education and Life in general?

Requirements for Admission to Junior College

Add Math can be considered as one of the L1R5 subjects

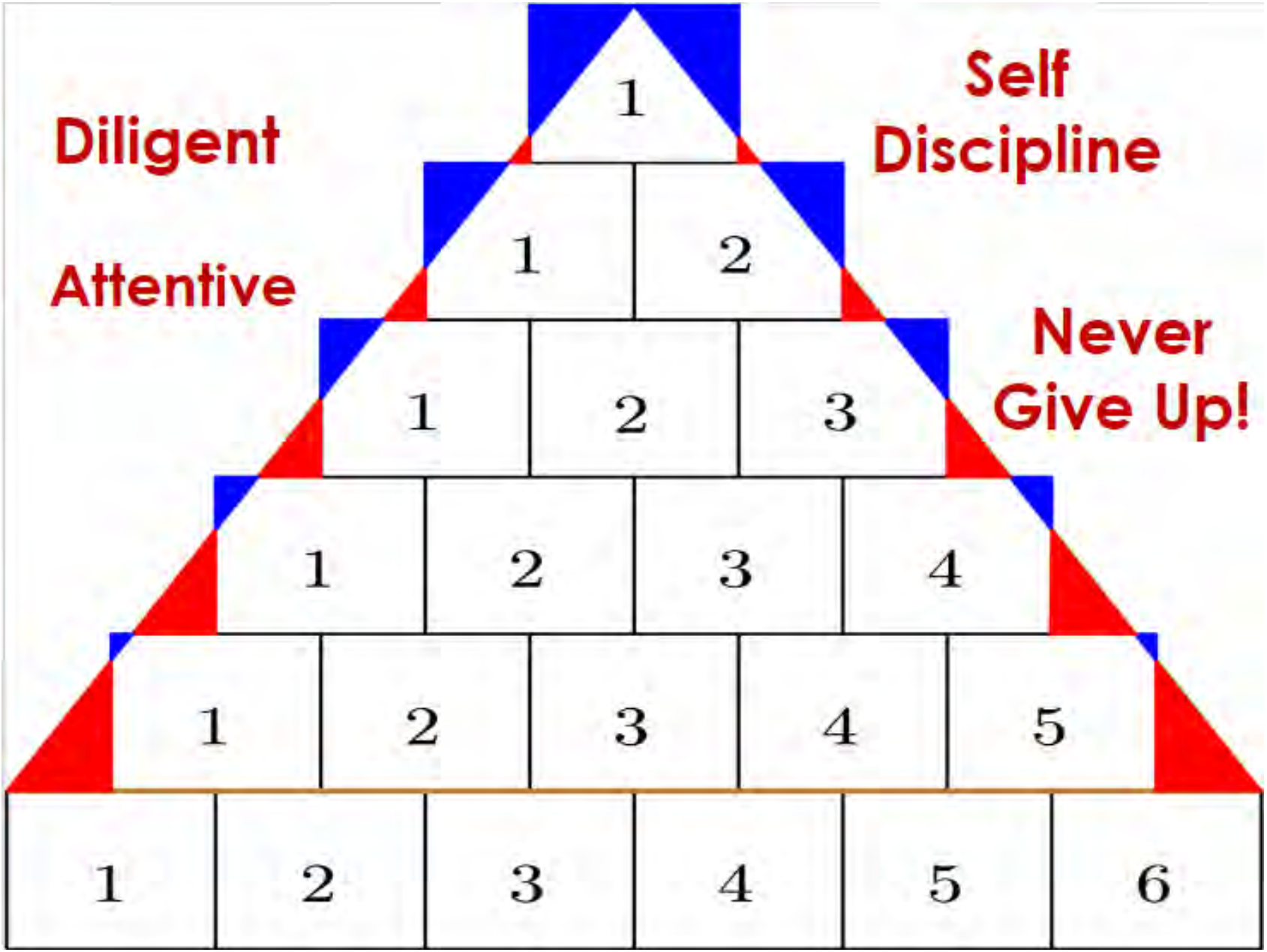


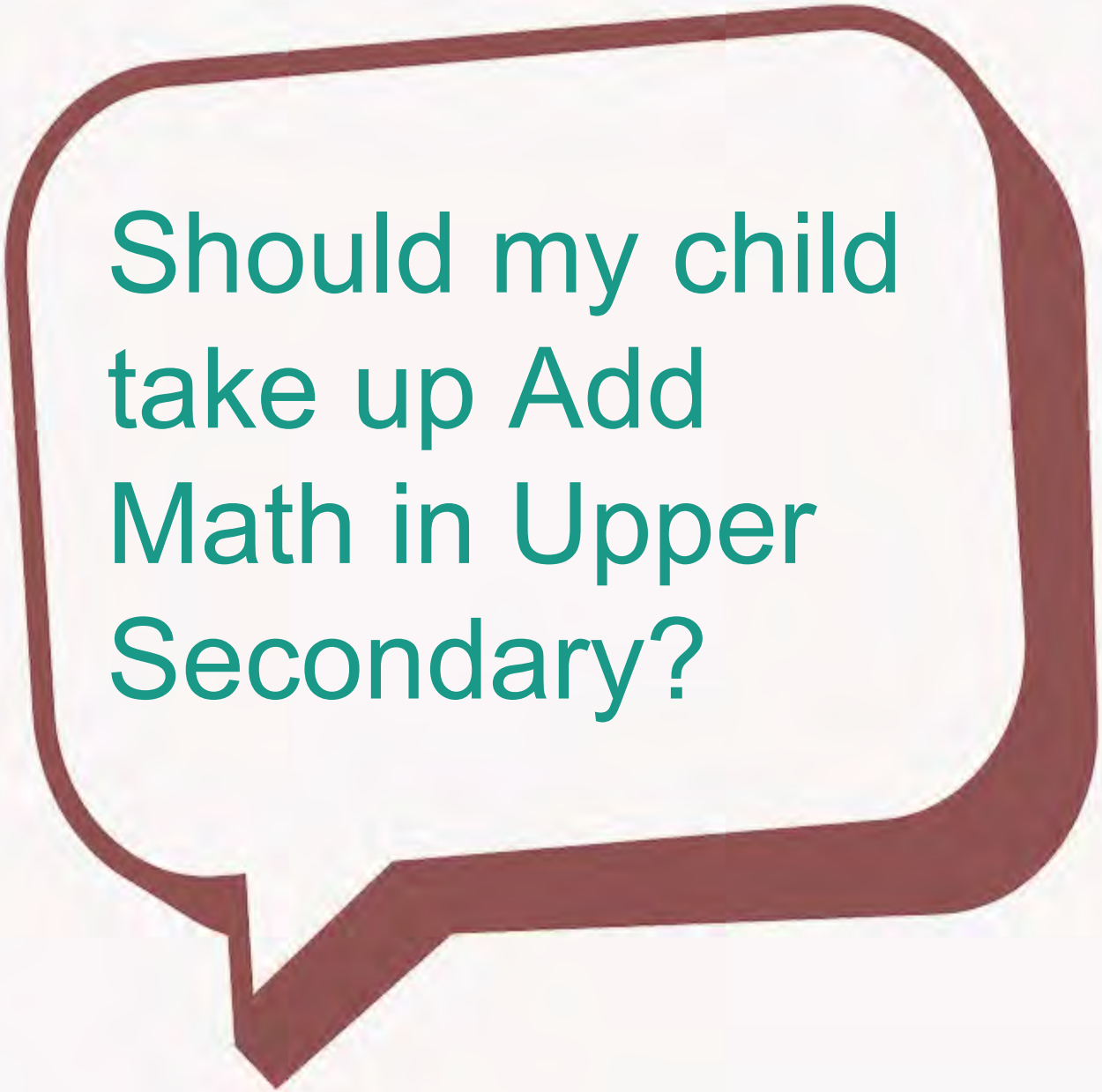
Requirements for Admission to Polytechnics

- Add Math is **NOT** compulsory for all Polytechnic Courses including some Engineering related courses
- Can be included as one of the two Relevant Subjects for ELR2B2

  (Need only one Mathematics Subject – can be either Elementary Mathematics or Add Math)

Besides having the aptitude in Math, what else is required for my child to be successful in Add Math?


Diligent
Attentive
Self
Discipline
Never
Give Up!
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
1 2 3 4 5 6


Should my child take up Add Math in Upper Secondary?

Interest

Sharing on Subject-Based Banding (SBB) & Out-of-Stream Subjects (OOS) Matters

CONTENT

- ✓ Rationale and Intent
- ✓ Subjects Offered & Criteria
- ✓ Post-Secondary Progression
- ✓ Conversion of Grades
- ✓ FAQs

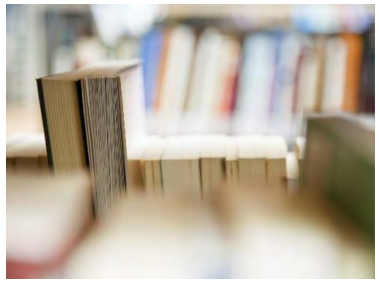
Rationale and Intent

- Each student is different and possesses **different strengths**.
- To help each student find **fulfilment in learning** and be **motivated to excel** in what he/she is good at.

- Taking higher level subjects at Lower Secondary (SBB) helps students to build a **strong foundation**.
- Taking higher level subjects at Upper Secondary (OOS) may help students in their **post-secondary progression**.

Out-of-Stream (OOS) Subjects offered

- English Language
- Mother Tongue Language
- Mathematics
- Science (Combined)
  - Chemistry & Physics OR
  - Chemistry & Biology



Criteria for taking OOS Subjects

For SBB Students

- Overall (**50% and above**) in the **SBB subject** (at Express level) at the end of Secondary 2

- Teachers' inputs on learning disposition and attitude

Criteria for taking OOS Subjects

For non-SBB Students

- Overall (**75% and above**) in the **subject** (at NA level) at the end of Secondary 2
- Teachers' inputs on learning disposition and attitude

Criteria for taking OOS Subjects

<table>
<tr><td rowspan="2">Secondary 3 Subject offered at
O level standard</td><td colspan="2">Minimum Requirement
(Based on Sec 2 Overall Results)</td></tr>
<tr><td>For 2NA SBB students</td><td>For 2NA non-SBB students</td></tr>
<tr><td rowspan="2">• English Language
• Mother Tongue Language
• Mathematics
• Combined Science
(Chem/Phy or Chem/Bio)</td><td>SBB subject (Exp level):
50%</td><td>Subject (NA level):
75%</td></tr>
<tr><td colspan="2">Teachers' inputs on learning disposition and attitude</td></tr>
</table>

Conversion of Grades

GCE 'O' Level Grade	GCE 'N' Level Grade
A1 – B3	1
B4 – C6	2
D7	3

For N-level students offering O-level subjects, their grades will be converted to the N(A) level grades for admission to Poly Foundation Programme (PFP) or Direct Poly Programme (DPP).

Consideration for taking up OOS subject(s)

- Interest and aptitude in the subject(s)
- Ability to cope with subject(s) at higher level and overall demand at Upper Secondary
- Requirement for interested courses at Institute of Higher Learning
- Seek advice from subject teachers/ HOD

Revert to Appropriate level of study

Can a student withdraw from taking higher-level subjects if he or she finds it unsuitable after a semester?

Students and parents can make the final decision to continue or drop the subject. Nevertheless, students are encouraged to give themselves time to adjust to the greater demands of the higher-level subject. Before a decision is made to drop the subject, advice from subject teachers should be sought on the students' academic progress. The school will also advise on the possible impact on admission to post-secondary courses.

- Students taking Out-of-Stream subject at Sec 3 may revert to the appropriate level of study for the subject at (NA) level at the end of the year, if they face insurmountable problems.
- Parents' approval is needed.
- This will be approved after discussion on a case by case basis.

Taking higher-level subject examination

At the national examinations, will my child be taking the higher-level subject examination or the normal level examination for this out-of-stream subject?
Is my child allowed to take the subject at both the Normal and higher-level examination.

Your child will sit for the higher-level subject examination for the out-of-stream subjects that they are taking.
For example, a student in the Normal Academic Stream taking 'O' level Science will sit for the 'O' level Science examination only. He/she is not required to sit for the 'NA' Science examination. This is to be consistent with school-based assessments where your child has been prepared and has sat for the higher level paper.

Marks Adjustment for OOS students

How will my child be compared to the other students from his/ her course at the end of the year, for lateral transfers, promotion and Edusave awards, given that the higher level subject is more demanding?

For the purposes of determining eligibility for promotion, lateral transfers and Edusave awards, your child will be considered alongside those in his course. To ensure that students who stretch themselves by taking up higher-level subjects are not disadvantaged in terms of promotion to the next level, eligibility for lateral transfer, and Edusave awards, the school will adjust the marks obtained in the higher-level subject *at the backend*. For example, adding marks to the Math score obtained by an N(A) student taking Math at Express level.

Sharing on ECG Matters

Elective Sharing on Principles of Accounts (POA)

Objectives

1) Introduction to Principles of Accounts (POA)
2) Assessment for N Levels
3) Advancement
4) Fun activities for POA students

Introduction to POA

- Accounting principles
- It involves the recording and processing of business transactions, and communicating the information to stakeholders.
- To evaluate business performance and facilitate decision-making.

Principles of Accounts

- You will be taught relevant accounting knowledge and skills.
  - Applying the **double entry system** of recording business transactions
  - Synthesis and presentation skills in the **preparation of accounting information** in a suitable form
  - **Analytical skill** in interpreting, analyzing financial statements

Principles of Accounts

- You will learn and understand how businesses use accounting and non-accounting information to make decisions.
  - **decision-making skill** in evaluating choices using both accounting and non-accounting information.

Principles of Accounts

- You will acquire transferrable skills that you can apply in your daily lives.
  - being **logical**, **methodical**, **consistent** and **accurate**
  - develop values such as **integrity**, **objectivity** and **social responsibility**

Assessment (N Level)

SCHEME OF ASSESSMENT

There are *two compulsory papers*.

	Details	Weighting	Duration
Paper 1	Answer 3 to 4 compulsory structured questions. (40 marks)	40%	1 hour
Paper 2	Answer 4 compulsory structured questions. (60 marks) • One question requires the preparation of financial statements for a business for one financial year. (20 marks) • A scenario-based question (5 marks) will be part of one of the 3 remaining questions.	60%	2 hours

Candidates will write their answers on the question paper in **Paper 1**. For **Paper 2**, candidates will write their answers on the generic answer booklet provided.

Principles of Accounts

It involves more than just numbers and calculations!

LEARNING A NEW LANGUAGE

- Language of business
  - How to communicate financial information of a business to the users of the information
  - You will be learning
    - new terms
    - various formats for recording and reporting
    - How to analyse and interpret financial information

ACCOUNTING TERMS (EXAMPLES)

Statement of financial position		Statement of financial performance
Current assets	**Current liabilities**	Sales revenue
Inventory	Trade payables	Cost of sales
Other receivables / Prepaid expenses / Income receivables	Expenses payable / Income received in advance	Gross profit
Trade receivables	Bank overdraft	Other income
Allowance for impairment of trade receivables	Current portion of long-term borrowings	Interest expense
Cash at bank / Cash in hand	Dividends payable	Impairment loss on trade receivables
Non-current assets	**Non-current liabilities**	
Land	Long-term borrowings	Gain/loss on sale of non-current assets
Property		
Plant and equipment	**Equity**	Profit/loss for the year
Fixtures and fittings	Capital / Issued share capital	
Accumulated depreciation	Retained earnings	

FORMATS

Journal entries

Journal			
Date	**Particulars**	**Debit**	**Credit**
20X1		$	$
Feb 5	Drawings	120	
	Cash in hand		120
	Withdrawal by owner of $120 for personal use		
Feb 12	Inventory	1,000	
	Trade payable — TeeShirts		1,000
	Purchased goods of $1,000 from TeeShirts on credit		
Feb 22	Trade payable — TeeShirts	400	
	Inventory		400
	Returned goods of $400 to credit supplier, TeeShirts		
Feb 28	Trade payable — TeeShirts	600	
	Cash at bank		600
	Payment of $600 by cheque to credit supplier, TeeShirts		

Ledger account

Inventory account				
Date	**Particulars**	**Debit**	**Credit**	**Balance**
20X1		$	$	$
Dec 1	Balance b/d			2,500 Dr
5	Trade payable	11,200		13,700 Dr
7	Trade payable		1,200	12,500 Dr
10	Cost of sales		8,600	3,900 Dr
15	Cash at bank	7,800		11,700 Dr
19	Cost of sales		6,800	4,900 Dr
22	Cost of sales	800		5,700 Dr
31	Impairment loss on inventory		700	5,000 Dr

FORMATS

Statement of Financial Performance

Name of Business
Statement of Financial Performance for the year ended...

	$	$
Sales revenue	xxxx	
less: Sales returns	xxxx	
Net sales revenue		xxxx
less: Cost of sales		xxxx
Gross profit		xxxx
Other income		
Commission income	xxxx	
Discount received	xxxx	
Gain on sale of non-current assets[1]	xxxx	
Rent income	xxxx	xxxx
less: Other expenses [3]		
Impairment loss on trade receivables	xxxx	
Depreciation of fixtures and fittings[2]	xxxx	
Depreciation of office equipment[2]	xxxx	
Depreciation of motor vehicles[2]	xxxx	
Interest	xxxx	
Insurance	xxxx	
Loss on sale of non-current assets[1]	xxxx	
Motor vehicle expenses	xxxx	
Office expenses	xxxx	
Rent and rates	xxxx	
Wages and salaries	xxxx	xxxx
Profit for the year		xxxx

Statement of Financial position

Name of Business
Statement of Financial Position as at ...

	$	$	$
Assets			
Non-current assets	Cost	Accumulated depreciation	Net book value
Property	xxxx	xxxx	xxxx
Fixtures and fittings	xxxx	xxxx	xxxx
Office equipment	xxxx	xxxx	xxxx
Motor vehicles	xxxx	xxxx	xxxx
			xxxx
Current assets			
Inventory		xxxx	
Trade receivables	xxxx		
less: Allowance for impairment of trade receivables	xxxx	xxxx	
Other receivables/ prepaid expenses/ income receivables		xxxx	
Cash at bank		xxxx	
Cash in hand		xxxx	xxxx
Total assets			xxxx
Equity and Liabilities			
Owner's equity			
Capital			xxxx
Non-current liabilities			
Long-term borrowings			xxxx
Current liabilities			
Trade payables		xxxx	
Expenses payable/income received in advance		xxxx	
Current portion of long-term borrowings		xxxx	xxxx
Total equity and liabilities			xxxx

SCENARIO-BASED QUESTION (N LEVEL)

The SBQ requires students to make a decision between two possible choices within a fictional business context.

Each scenario will include **both accounting and non-accounting information** which students are expected to use to support their decision.

The business context for a scenario will be based on one of the 5 topics prescribed for the scenario-based question:

- Inventory
- Trade Payables
- Trade receivables

COMMON TRAITS OF STUDENTS WHO HAVE DONE WELL IN POA

EXAMPLES OF RELEVANT COURSES IN POLYTECHNICS

Singapore Polytechnic - Business School

Diploma in

- Accountancy
- Banking & Finance
- Business Administration
- Human Resource Management with Psychology

Ngee Ann Polytechnic - School of Business & Accountancy

Diploma in

- Accountancy
- Banking & Finance
- Arts Business Management
- International Trade and Business
- Tourism & Resort Management

Temasek Polytechnic - School of Business

Diploma in

- Accountancy
- Business
- Law & Management
- Hospitality & Tourism Management
- Communications & Media Management
- Culinary & Catering Management

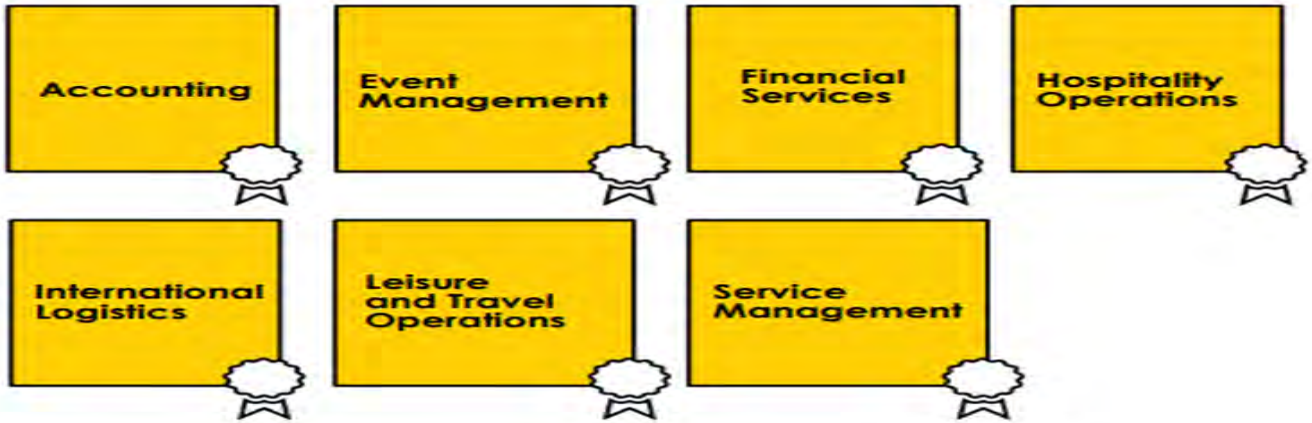
BEYOND N LEVEL: AT POLYTECHNIC (PFP)

- The Polytechnic Foundation Programme (PFP) is a one-year programme to prepare polytechnic-bound N(A) students for entry into the relevant Polytechnic Diploma courses.
- Entry Requirements

Business and management courses	Minimum Required Grades in N level exam
English Language Syllabus A	2
Mathematics Syllabus A / Additional Mathematics	3
One relevant subject (POA being one of them)	3
Any two other subjects	3

BEYOND N LEVEL: AT ITE (DPP)

Business & Services



Grade 1–3 in English Language
Grade 1–4 in Mathematics
Grade 1–5 in three other subjects

CAREER OPPORTUNITIES

- **Private Sector**
  - Business firms
  - Finance services firms such as banking & finance
  - Consultancy firms
  - Accounting/Auditing firms

- **Government Sector**
  - Taxation
  - Accounting
  - Auditing

POA Activities (outside of classrooms)

- POA is not just about studying hard in classroom
- Plenty of fun activities to enjoy too

Financial Literacy Workshop with TP and HSBC

Build Your Own Business (BYOB) Game Board Challenge 2018

- Board game in learning more about the applications of accounting

- Organised by Republic Polytechnic

POA Learning Trail 2018

- Multiple stations of quizzes and games in NEX shopping mall
- Link between their learning of POA in classroom to real life practices
- Organised by Zhonghua Secondary School

Business Case Study 2022

- Students role-play as consultants to a business and present their findings
- Dressed up smartly in business attire
- Lessons can be engaging through Collaborative learning & Hands-on approach

THANK YOU!

Elective Sharing on Art

Upper Secondary Art

Art as "N" Level Subject

Overview of 'N' Upper Sec Art

- What do you learn?
- What is being measured (assessed)?
- How much is expected?
- Where can "N" Level Art lead to?

What do you get to learn?

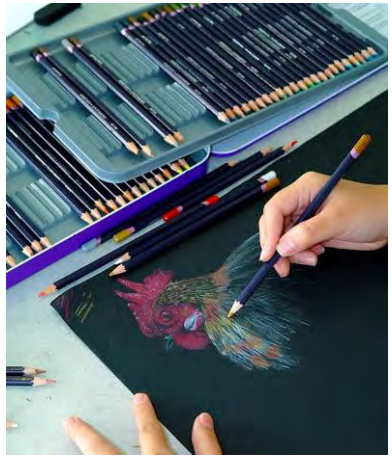
- Painting (Watercolour / Oil / Acrylic / Digital)
- Batik Painting
- Intermediate to Advanced illustration skills, to be applied in:
  - Fashion / Costume illustration
  - Narrative illustration

Illustrations

What will be provided to help you learn?

- Equipment
  - DSLR Camera, computer, illustration sensor tablets, iPad pro (procreate app)

- Materials
  - 72-Colour pencils, pastels, charcoal
  - Watercolour, acrylic, oil paint
  - Illustration markers
  - Art, Design, Illustration Books



How Much Is Expected?

6 periods per week + remedial

- Coursework (60%)
  - Done over 6 months
  - CONSISTENT effort (no last minute)
- Paper 2 (40%)
  - Question / Theme given 21 days before exam
  - 3-hour paper

Coursework

Consistency and Commitment

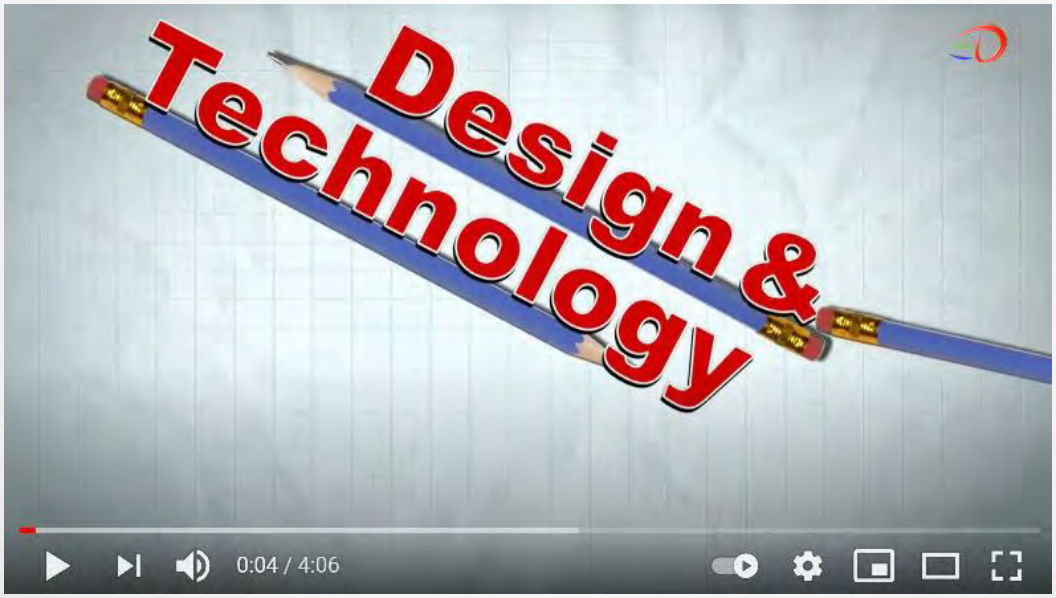
Where can “N” level Art lead to?

- ITE
  - Design related courses

Elective Sharing on Design & Technology and Nutrition & Food Science

What is Design & Technology?

- A video containing a brief introduction on the subject ‘Design & Technology’ can be viewed at https://www.youtube.com/watch?v=nIjmGVWUnDU



Aims:

- Develop '**Design**' related dispositions.
  - ✓ Empathy, sensitivity, embrace complexities.
- Foster **positive values**
  - ✓ Confidence, tenacity, pride
- Cultivate the following:
  - ✓ **Creative, critical** and **reflective** thinking
  - ✓ **Decision making** skills

Subject Content:

- Section A: Knowledge with understanding.
  - ✓ Understand, apply design process.
  - ✓ Project Management
- Section B: Design Thinking Skills.
  - ✓ Generate ideas
  - ✓ Research, analyse info for decision making.
- Section C: Design Manipulating skills.
  - ✓ Sketch, build mock-ups to explore ideas.
  - ✓ Prototype design solution.

‘N’ Level Assessment:

Paper	Assessment Mode	Duration	Weighting
1	Written Paper	1.5 hrs	40%
2	Design Project	20 wks	60%

Design Project:

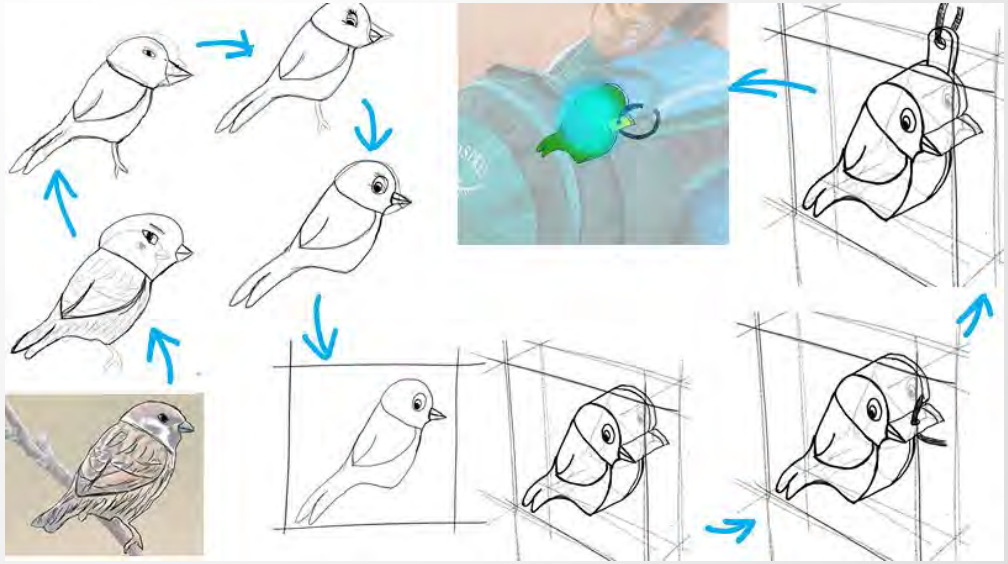
1) Design Journal
   - Design process
   - Research, ideation, mock-ups
2) Presentation Boards
   - Communicate proposed design solution
3) Prototype

2019 D&T Awards
Creative Innovation Award

Examples:

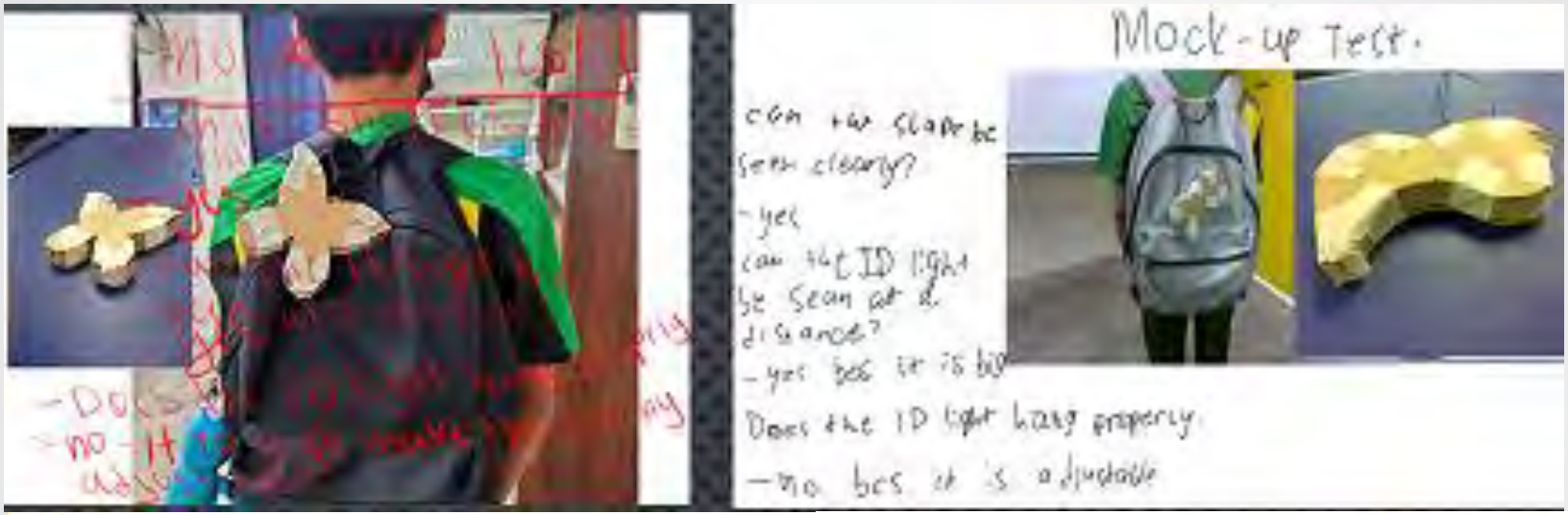
Research

Ideation



Examples:

Mock-ups & Testing



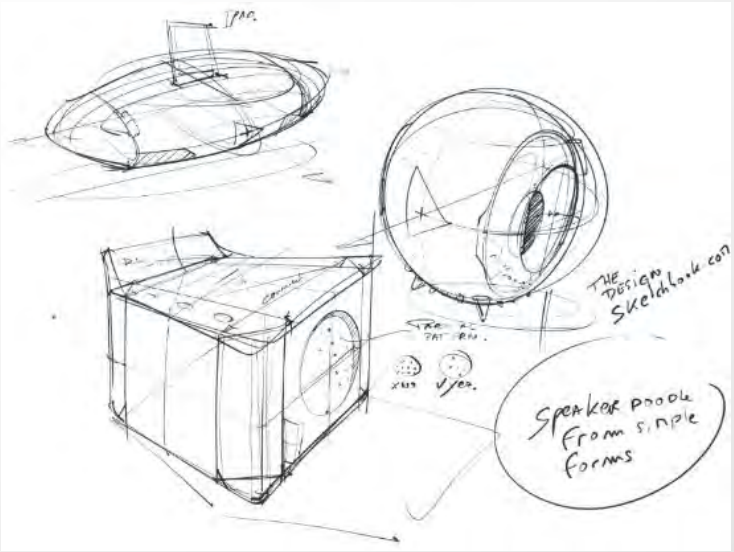
Testing, tinkering

Demands of D&T:

Time Management skills.

Regular & consistent work

Sketching skills



Possible Progression:

- Polytechnics – EL R2 B2
  - ✓ Engineering related courses (Aerospace, electrical, electronics, Civil, Marine, mechanical, etc.)
  - ✓ Technology related courses,
  - ✓ Aerospace,
  - ✓ Build Environment (Hotel & Leisure Facility Mangt, etc)
  - ✓ Maritime Studies,
  - ✓ Applied Sciences (Biomedical sciences, etc)

Possible Progression:

- ITE – EL R2 B2
  - ✓ Engineering related courses (Electrical, electronics, Civil, Marine, mechanical, mechatronics, etc.)
  - ✓ Engineering with Business,
  - ✓ Security systems integration,
  - ✓ Facility Management,
  - ✓ Space Design Technology.

Aims:

- Acquire knowledge and skills to make informed decisions concerning food and nutrition.
- Learn the principles of Food Science.
- Develop the following:
  - ✓ Concepts of Nutrition and Meal Planning
  - ✓ Understanding of the link between diet and health

Subject Content:

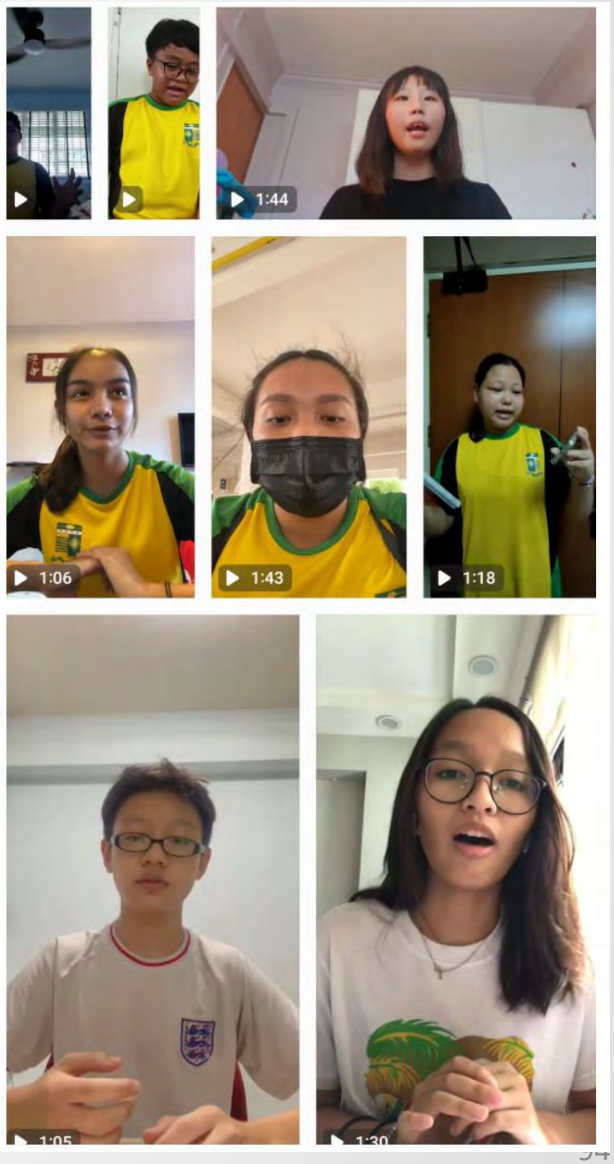
- 1. Nutrition & Health
  - ✓ Nutrients, Diet & Health
  - ✓ Energy Balance
  - ✓ Meal Planning & Meal Analysis
- 2. Food Literacy
  - ✓ Main food commodities, food labels.
- 3. Food Science
  - ✓ Food Preparation & Cooking (Science, reactions)
  - ✓ Evaluation of food.

6073 'N' Level Assessment:

Paper	Assessment	Duration	Weighting
1	Written Paper	1.5 hours	40%
2	Coursework	5-6 months	60%

What do we do in class?

Theory Lessons



What do we do in class?

Practical Lessons

What do we do in class? Food Science Experiments

Demands of Nutrition & Food Science:

Regular & consistent work

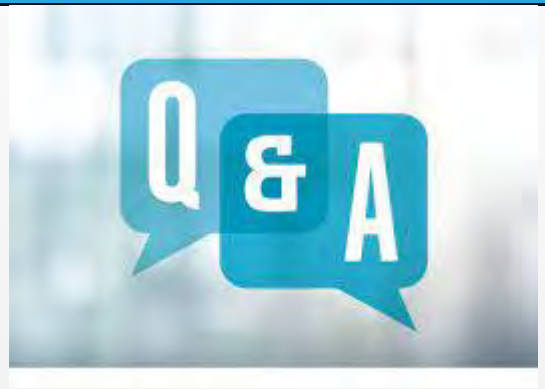
Time Management skills.

- ICT skills is a bonus

Possible Progression:

- JC – L1R5
  - ✓ One of the R5 subject
- Polytechnics – EL R2 B2
  - ✓ Health Sciences
    (Nursing, Optometry, Health Services Management, Sports and Exercise Sciences, Perfumery and Cosmetic Science, etc)
  - ✓ Applied Sciences
    (Chemical & Pharmaceutical Technology, Pharmaceutical Sciences, Biomedical Science, Molecular Biotechnology, Baking & Culinary Science, etc)


Question
Answer


Q & A

Thank you for joining us today.

To help us improve on our future talks on the Sec 3 Subject Combination, please spare us some time to complete the feedback form. Your feedback is truly appreciated.