

G2~NORMAL ACADEMIC COURSE



**2025**  
**SECONDARY 3**  
**SUBJECT COMBINATIONS**  
**Information Booklet**

*Updated April 2024*

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## **Preface**

At the end of Secondary 2 education, all students will be taking part in the Subject Combinations exercise to pursue a particular course from Secondary 3 to Secondary 4/5.

For the Secondary 2 students, choosing N-Level subjects is a significant phase of their Secondary School education. This information booklet is prepared with the objective of assisting parents and their daughters in making an informed decision on the Secondary 3 subject combination that best suits the child.

The information in this booklet is organised to provide general expectations of each N-Level subject and possible post-secondary education pathways. The information is provided with the best intentions and is accurate based on current knowledge. However, they do not guarantee future prospects in either education or career.

We hope you will find the information booklet useful. If you need further clarification, you may seek assistance from your daughter/ward's Form Teachers. We also welcome feedback to improve the Information Booklet.

On behalf of our teachers, we wish every student a meaningful educational journey in PLMGS(Sec) and beyond.

## **PART 1: SECONDARY 3 SUBJECT COMBINATIONS EXERCISE**

The Secondary 3 Subject Combinations Exercise is an important step in our students' educational journey. The first two years of education in Secondary School has allowed our students to be exposed to a wide variety of subjects. As the students move towards Secondary 3, they have become better equipped to take on a more specialised course of education. Students have to make a choice on the course, which suits them best based on their competency, interest and aspirations. The streaming process as detailed below is put in place to guide students' decisions in choosing their subject combinations.

### **1.1: Process**

- Using this information booklet, students are advised to have an active discussion with their parents.
- Upon release of the overall results, students will be briefed on the submission of Secondary 3 Subject Combinations Option Form through the online option portal. (October 2024).
- Students to receive their Login ID and password for <https://plmgs.schoolhub.sg/> via their plmgss email 3 days before the release of online option portal. (October 2024).
- Based on the performance of their overall results, ONLY options that the students are eligible for will be displayed on the online option portal for selection.
- A subject combination will be allocated to a student based on the following criteria:
  1. Competency of the student based on her results. **(Merit)**
  2. Demand for the Subject Combination of her choice. **(Choice)**
- Students are to complete the online submission of the Subject Combinations Options Form after collecting their overall results. (October 2024).
- Students will receive the outcome of the streaming exercise. (October-November 2024).

### **1.2: Secondary 3 Subject Combinations 2025**

We understand that there are students who are able to handle a more demanding educational course yet maintain active participation in their CCA, school and other enrichment programmes. To stretch their potential to the fullest, these students will be allowed to offer one additional subject (7<sup>th</sup> subject), Pure Humanities (Geography) or Art/Music in the afternoon.

While the school will always try to cater to the needs and interest of our students, we would like to reiterate that the deciding factors will still be your daughter/ward's overall results and her aptitude towards the subjects chosen. However, constraints in school resources such as manpower and physical facilities are also part of the important factors for consideration in planning and allocating the subjects to our students.

### OPTIONS FOR SEC 3 NORMAL (ACADEMIC)/G2 SUBJECT COMBINATIONS IN 2025

	Option 1	Option 2
<u>Languages</u>	English Language	English Language
	Mother Tongue	Mother Tongue
<u>Mathematics</u>	Mathematics	Mathematics
<u>Humanities</u>	Social Studies & Literature <sup>^</sup>	Social Studies & Geography <sup>^</sup>
<u>Combined Science</u> (select one)	a. (Physics, Chemistry) <sup>^</sup> or b. (Biology, Chemistry) <sup>^</sup>	
<u>Elective subjects</u> (select one)	a. (O-Level) Nutrition & Food Science <sup>^^</sup> or d. Principles of Accounts <sup>^^</sup> or e. Additional Mathematics <sup>^^</sup>	
<b>Total subjects</b>	<b>6 subjects</b>	<b>6 subjects</b>
<b>7<sup>th</sup> subject</b> – for those eligible (max. 40 studs)	Pure Geography	
<b>Total subjects</b>	<b>7 subjects</b>	

<sup>^</sup>Subjected to maximum class size to 40 students for the Humanities and Sciences Teaching Groups (TGs)

<sup>^^</sup>Subjected to minimum of 20 students to offer the option

#### Points to note

- Students are eligible to take the more demanding subjects (i.e. O-Level subjects/G3),
  - subjected to a minimum number of 20 students, manpower resources and timetable combination
  - more demanding subjects that are being offered at O-Level/G3 include English Language, Mother Tongue Language, Mathematics, Combined Science (Physics/Chemistry), Nutrition & Food Science, Art and Music.
- To be eligible for N(A)-Level/G2 Pure Geography subject,
  - students should obtain a minimum of **65%** for Sec 2 Geography.
  - subjected to **minimum** of **20** students and **maximum** of **40** students class size per subject.
  - offering of the Pure Geography subject is subjected to the availability of manpower resources for the year.
- To be eligible for N(A)-Level/G2 Additional Mathematics,
  - students should either obtain **60%** in Sec 2 Express/G3 Mathematics or
  - obtain a minimum **70%** in Sec 2 Normal (Academic)/G2 Mathematics.
- O-Level/G3 Art and Music subject will be offered as the 7th subject. They will be conducted at the same time with the lessons with all students taking the subject at the Express course. The 7th subject will be offered at the end of the schooling day.
  - to be eligible for Art, students should obtain a minimum of 65% for Sec 2 Art.
  - to be eligible for Art and Music, students should pass an audition and interview.

### 1.3: “How to decide” Guide

*What must I consider when choosing the subject combination that suits me best?*

As you move on your journey from Lower Secondary to Upper Secondary, you will need to make some important choices. One of them is the subject combination that you would like to take in Secondary 3. This is an important decision because it will affect the next few years of your school life, as well as the future educational and career paths that you would like to take.

Here are a few matters you should consider while deciding on which subject combination suits you best:

**Competency in the subject** – Competency refers to the ability of an individual to handle the requirements of a subject. Some of us have an innate ability in certain subjects or areas. For example, some find Mathematics a subject easy to manage; they tend to find it quite easy to solve difficult mathematical questions. However, there are some who will take a little longer to grasp a mathematical concept. Competency in the subject is important because it suggests that the students are able to manage difficult topics at the Upper Secondary level.

**Interest in the subject** – Many students tend to excel in the subjects they are interested in. They go beyond the classroom to read up on information related to the subject. It is important to make sure that it is the subject content that you like and not the teaching style of the subject teacher.

**Aspirations** – Planning for a career at Secondary 2 is not too far-fetched. Entry to certain careers could be affected by the subject combination you choose now. If you find it difficult to planning for a career, you might want to think about the jobs you definitely do not want and that may help to narrow down your options. Consider your plans for post-secondary education. (Would you like to further your education in junior college, polytechnic or specialised schools?)

**Aptitudes and Abilities** – Consider the talents and skills you have. For example, are you musically or artistically talented? What does your RIASEC code says about your strengths and interests?

## PART 2: SUBJECT INFORMATION

The following information on the respective subjects offered in Upper Secondary is extracted from the N-Level syllabi provided by MOE.

### 2.1 ENGLISH [Syllabus 1190]

#### SCHEME OF ASSESSMENT - G2~N(A)

Paper	Type of Paper	Duration	Marks	Weighting
1	Writing	1h 50min	70	35%
2	Comprehension	1h 50min	50	35%
3	Listening	About 45min	30	10%
4	Oral Communication	About 20min	30	20%
	<b>Total</b>		<b>180</b>	<b>100%</b>

#### SUBJECT CONTENT FOR NORMAL (ACADEMIC) [G2] STREAM

Paper 1 Writing	<p><u>Section A</u> (Editing) Candidates identify and edit grammatical errors in a short written text.</p> <p><u>Section B</u> (Situational Writing) Candidates write 180 – 250 words on a given situation which will involve viewing a visual text.</p> <p><u>Section C</u> (Continuous Writing) Candidates write 250 – 400 words on one of the four topics set.</p>
Paper 2 Comprehension	<p><u>Section A</u> Candidates respond to questions based on Text 1 and 2, which will include visuals.</p> <p><u>Section B</u> Candidates respond to a variety of questions based on Text 3, which is a narrative or a recount.</p> <p><u>Section C</u> Candidates respond to a variety of questions based on Text 4, a non-narrative text, and write an 80-word response to a summary writing task.</p>
Paper 3 Listening	<p><u>Section A</u> Candidates respond to a variety of listening tasks based on a number of audio recordings, which the candidates will hear twice.</p> <p><u>Section B</u> Candidates listen to an audio recording and do a simple note-taking exercise. Candidates will hear the recording only once.</p>
Paper 4 Oral Communication	<p>The two parts may be thematically linked.</p> <p>Part 1 – Planned Response</p> <p>Part 2 – Spoken Interaction</p>

## 2.2 MOTHER TONGUE LANGUAGE

\*The following information from SEAB for all Mother Tongue languages are accurate as of March 2024.

**Normal (Academic) [G2] Chinese Language (CL): 普通学术课程—华文**

Paper	Type of Papers	Marks (Weighting)	Duration
1 试卷一	Composition 作文 (记叙文、议论文和说明文) (3选1)	40 marks (20%)	2 h
	Email writing 实用文 (私人电邮、公务电邮) (2选1)	20 marks (10%)	
2 *试卷二	Language use and Comprehension 语文理解与运用: <ul style="list-style-type: none"> <li>● 综合填空 (多项选择)</li> <li>● 阅读理解一 (多项选择)</li> <li>● 阅读理解二 (自由作答)</li> </ul>	60 marks (30%)	1 h 30 min
3 试卷三	Oral 口试 <ul style="list-style-type: none"> <li>● 朗读短文</li> <li>● 会话: 看录像短片, 然后跟主考员进行对话</li> </ul>	60 marks (30%)	10-15 min
	Listening Comprehension 听力理解	20 marks (10%)	30 min

\*从 2025 年起, 考生将使用电脑作答。

The national examination for Normal (Academic) [G2] Mother Tongue Languages (MTL) for paper 2 will be conducted online in 2025.



## Normal (Academic) [G2] (ML) Examination Syllabus

Paper	Type of Papers	Marks (Weighting)	Duration
1	Functional writing	20 marks (10%)	2 h
	Essay	40 marks (20%)	
2	Language use and comprehension <ul style="list-style-type: none"> <li>● Bahagian A (2 teks pendek: Golongan kata)</li> <li>● Bahagian B (Kefahaman 1: 2 teks pendek dari bahan autentik)</li> <li>● Bahagian C (Pemahaman 2:1 teks naratif)</li> </ul>	60 marks (30%)	1 h 30 min
3	Oral <ul style="list-style-type: none"> <li>● Reading (20/10%)</li> <li>● Conversation – Video clips (40/20%)</li> </ul>	60 marks (30%)	10-15 min
	Listening Comprehension	20 marks (10%)	30 min

The national examination for Normal (Academic) [G2] Mother Tongue Languages (MTL) for paper 2 will be conducted online in 2025.

## Normal (Academic) [G2] (TL) Examination Syllabus

Paper	Type of Papers	Marks (Weighting)	Duration
தாள் 1	<b>கட்டுரை</b>	<b>60 (30%)</b>	2 மணி
	<b>'அ' பிரிவு</b> நடைமுறை சார்ந்த எழுத்துப்படைப்பு – மின்னஞ்சல் (90 சொற்களுக்குக் குறையாமல்)  <b>'ஆ' பிரிவு</b> கட்டுரை (170 சொற்களுக்குக் குறையாமல்) வகைகள்: நிகழ்வு, விளக்கம், கதை	20 (10%)  40 (20%)	
தாள் 2	<b>மொழி மரபும் பயன்பாடும் மற்றும் கருத்தறிதல்</b>	<b>60 (30%)</b>	1 மணி 30 நிமிடங்கள்
	<b>'அ' பிரிவு</b> A1 இணைமொழி/மரபுத்தொடர் A2 முன்னுணர்வுக் கருத்தறிதல்	5(2.5%) 5(2.5%)	
	<b>'ஆ' பிரிவு</b> B3 தெரிவுவிடைக் கருத்தறிதல் B4 பிழை திருத்தம்	10(5%) 10(5%)	
	<b>'இ' பிரிவு</b> C5 சுயவிடைக் கருத்தறிதல்\ பொருள் எழுதுதல்	30(15%)	
தாள் 3	<b>வாய்மொழியும் கேட்டல் கருத்தறிதலும்</b> வாய்மொழி 1. வாய்விட்டு வாசித்தல் (கணினித் திரை) 2. உரையாடல் (ஒளிக்காட்சி ஊக்கக்கூறையொட்டி அமையும்)	<b>80 (40%)</b>  20(10%) 40(20%)	15 நிமிடங்கள்
	<b>கேட்டல் கருத்தறிதல் (6 பனுவல்கள்)</b>	20(10%)	30 நிமிடங்கள்

The national examination for Normal (Academic) [G2] Mother Tongue Languages (MTL) for paper 2 will be conducted online in 2025.

## 2.3 MATHEMATICS SYLLABUS A [Syllabus 4045]

### SCHEME OF ASSESSMENT

Paper	Description	Duration	Marks	Weighting
1	There will be about 23 short answer questions. Students are required to answer all questions.	2 hours	70	50%
2	<p><u>Section A</u> There will be 9 to 10 questions of varying marks and lengths. The last question in this section will focus specifically on applying mathematics to a real-world scenario. Students are required to answer all questions.</p> <p><u>Section B</u> There will be 2 questions of which candidates will be required to <b>answer only one</b>.</p> <ul style="list-style-type: none"> <li>The questions in this section will be based on the underlined content and there will be one question from the 'Geometry and Measurement' strand and one from the 'Statistics and Probability' strand.</li> <li>Each question carries the same number of marks, that is, either 7 or 8 marks.</li> </ul>	2 hours	70	50%

### SUBJECT CONTENT

Number & Algebra		Geometry & Measurement	
N1	Numbers and their operations	G1	Angles, triangles and polygons
N2	Ratio and proportion	G2	Congruence and similarity
N3	Percentage	G3	Properties of circles
N4	Rate and speed	G4	Pythagoras' theorem and trigonometry
N5	Algebraic expressions and formulae	G5	Mensuration
N6	Functions and graphs	G6	Coordinate geometry
N7	Equations and inequalities	<b>Statistics &amp; Probability</b>	
		S1	Data analysis
		S2	Probability
		<b>Real-World Contexts</b>	
		R1	Problems derived from real-world contexts

### **Additional Information**

Mathematics is a compulsory subject to be offered at GCE O-Level Examination with the following requisite grades for admission to post-secondary institutions:

- Junior Colleges (JC) / Millennia Institute (MI) Admission – At least a D7 in Mathematics
- Polytechnic Admission – At least a C6 for most courses
- ITE Admission for *Higher Nitec* Courses – At least a D7 for most courses

A student who excels in Mathematics will have a good foundation to offer Mathematics in JC / MI at the H1 level. H1 Mathematics provides a foundation in Mathematics for students who intend to enrol in university courses such as Business, Economics and Social Sciences. Students will develop Mathematical thinking and problem-solving skills. The course covers 'Functions & Graphs', 'Calculus' and 'Probability & Statistics'. A major focus of the syllabus will be the understanding and application of basic concepts and techniques of statistics to equip students with the skills to analyse and interpret data, and make informed decisions.

### **Advice to students who are weak in Mathematics**

It is a requisite to obtain a minimum grade of D7 in Mathematics for admission to JC / MI. Otherwise, a student will only be granted conditional admission to JC / MI and is required to re-sit for the Mathematics Papers in the GCE O-Level Examination in the following year. Should a student fail to obtain the requisite grade, she will be transferred from the JC to MI. Should a student fail to obtain the requisite grade by the 2<sup>nd</sup> year in MI, she will be asked to leave the MI course.

Hence, it is advisable to focus one's efforts to excel in Mathematics and obtain a distinction for computation towards L1R5 than to struggle with the offer of Mathematics and Additional Mathematics with each subject getting a failing or mediocre grade.

## 2.4 ADDITIONAL MATHEMATICS (NA-LEVEL) [G2] [Syllabus 4051]

### SCHEME OF ASSESSMENT

Paper	Description	Duration	Marks	Weighting
1	There will be 13 to 15 questions of varying marks and lengths. Students are required to answer all questions.	1 hour 45 minutes	70	50%
2	There will be 8 to 10 questions of varying marks and lengths. Students are required to answer all questions.	1 hour 45 minutes	70	50%

### SUBJECT CONTENT

Algebra		Geometry & Trigonometry	
A1	Quadratic Functions	G1	Trigonometric functions, identities and equations
A2	Equations and inequalities	G2	Coordinate geometry in two dimensions
A3	Surds		
A4	Polynomials and Partial Fractions		
		Calculus	
		C1	Differentiation and integration

#### Additional Information

To offer Additional Mathematics, a student should obtain an overall mark of 70% for Mathematics in Sec 2. A **strong foundation** in lower secondary Mathematics, **especially in algebra**, will help a student to experience a higher chance of excelling in Additional Mathematics.

#### *For admission to JC / MI*

- Additional Mathematics is a **not** a compulsory subject to be included in the computation of L1R5.
- A student does **not** need to offer Additional Mathematics to take up Mathematics at the **H1 level**.
- A student who wishes to offer Mathematics at the H2 level should have taken Additional Mathematics. H2 Mathematics prepares students adequately for university courses including Mathematics, Physics and Engineering where more Mathematics content is required. The course covers 'Functions & Graphs', 'Sequences & Series', 'Vectors', 'Complex Numbers', 'Calculus', 'Permutations & Combinations' and 'Probability & Statistics'. Students will learn to analyse, formulate and solve different types of problems. Students will also learn to work with data and perform statistical analyses.

#### *For admission to Polytechnic*

- The offer of Additional Mathematics is **not** compulsory, as the offer of Mathematics **OR** Additional Mathematics will provide a foundation in Mathematics-related courses, such as Engineering, Applied Sciences, Health Sciences, Business & Management, Information & Digital Technologies and Media & Design.

## 2.5 COMBINED HUMANITIES

### INTRODUCTION

The Humanities subject is a compulsory subject for the GCE N-Level Examinations.

For 2024, students will have to take the compulsory Social Studies component with Literature.

### SUBJECT COMBINATIONS

Students will have to take Paper 1 (Social Studies) with Literature.

First Humanities Subject (compulsory)		Second Humanities Subject
Paper 1: Social Studies (compulsory)	Paper 4: Humanities (Literature)	Geography

#### 2.5.1 HUMANITIES PAPER 1 (SOCIAL STUDIES) 2125/1, 2127/1

#### SCHEME OF ASSESSMENT

Paper	Type of Paper	Section A	Section B	Duration	Marks	Weighting
1	Social Studies	1 Source Based Question with 5 parts	Structured Response Question with 2 parts.	1h 45 min	Section A (35m) Section B (15m)	50%

\*e-Assessment for N-Levels Social Studies.

Issue 1 Exploring Citizenship and Governance	This Issue invites students to begin exploring what it means to be an informed, concerned and participative citizen. Students will deepen their understanding of their roles as citizens and that of the government. This will serve to develop a stronger sense of civic consciousness, enhancing the roles they play as citizens who are rooted in Singapore with a global outlook.
Issue 2 Living in a Diverse Society	This Issue helps students appreciate diversity and the importance of harmony. Students will develop an understanding of who they are as individuals and accept, respect and celebrate diversity as well as common practices and values in a diverse society. This will heighten students' awareness of the need to develop personal and collective responsibility in promoting and maintaining harmony in a diverse society.

<p>Issue 3</p> <p>Being Part of a Globalised World</p>	<p>This Issue helps students understand and make meaning of their lives in a globalised world where countries, companies and individuals are interconnected and interdependent. Students will explore the impacts of globalisation in three areas: economy, culture and security. Students will therefore appreciate the complex decision-making process behind responses towards the impacts of globalisation. This understanding will lead them in making well-reasoned and responsible decisions as informed, concerned and participative citizens in a globalised world.</p>
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## 2.5.2 HUMANITIES (Geography) - PAPER 2

**Combined Humanities syllabus** comprises two components: **Social Studies (50%)** which is compulsory and an **elective (50%)**.

### ELECTIVE GEOGRAPHY (Subject Code: 2125/2)

Geography emphasises the integrative study of physical and human environments to enable students to gain a better understanding of their own space and other parts of the world. It also focuses on the interconnectedness among groups of people, and between people and their environment. The Geography student can expect to acquire a wide range of knowledge and skills to understand and explain physical and human phenomena, and other contemporary environmental and social issues that occur in different places and cultures.

### SYLLABUS FRAMEWORK AND OUTLINE

The Normal-Level Geography syllabus is structured around the main theme of **Sustainable Development**. The theme comprises of four clusters as shown below:

#### **Cluster 1: Geography in Everyday Life**

- Topic 1.1 – Thinking Geographically
- Topic 1.2 – Sustainable Development
- Topic 1.3 – Geographical Methods

#### **Cluster 2: Climate**

- Topic 2.1 – Weather and climate
- Topic 2.2 – Climate Change
- Topic 2.3 – Climate Action

#### **Cluster 3: Tectonics**

- Topic 3.1 – Plate Tectonics
- Topic 3.2 – Earthquakes and Volcanoes
- Topic 3.3 – Disaster Risk Management

<b>Cluster 2 – Climate</b>	<b>OR</b>	<b>Cluster 3 – Tectonics</b>
Topic 2.1 – Weather and Climate Topic 2.2 – Climate Change Topic 2.3 – Climate Action		Topic 3.1 – Plate Tectonics Topic 3.2 – Earthquakes and Volcanoes Topic 3.3 – Disaster Risk Management

## **SCHEME OF ASSESSMENT (50% of total paper)**

<b>N-Level Humanities (Elective Geography)</b>	
<b>One Paper</b>	
Candidates answer Questions 1 and either Question 2 or 3 <b>based on the Cluster studied.</b>	
•	Question 1: Cluster 1 - Geography in Everyday Life (25m)
Either	
•	Question 2: Cluster 3 - Climate (25m)
OR	
•	Question 3: Cluster 4 - Tectonics (25m)

### **2.5.3 HUMANITIES PAPER 2 (LITERATURE) 2127/2**

#### **SCHEME OF ASSESSMENT**

<b>Paper</b>	<b>Type of Paper</b>	<b>Section A</b>	<b>Section B</b>	<b>Duration</b>	<b>Marks</b>	<b>Weighting</b>
2	Humanities (Literature)	Set Text (Novel / Short Stories Collection)	Unseen Poetry	1h 40m	50 m	50 %

#### **SUBJECT CONTENT**

The Literature Syllabus aims to enable students to discover the joy of reading Literature, appreciate the aesthetic value of language and to explore how the elements of different genres function in literary works to achieve specific effects. Candidates of this paper will be assessed on their ability to demonstrate understanding of the ways in which writers' choices of form, structure and language shape meanings and express their responses clearly and coherently.

Section A: Set Text (25%)	Students will read one set text (Novel / Short Stories Collection) and answer one passage-based or one essay question. There will be a choice of one passage-based question and two essay questions given.
Section B: Unseen Poetry (25%)	There are no prescribed texts. There will be two questions on unseen poetry. Students will answer one question. There are two parts to each question.



### ADDITIONAL INFORMATION

<b>Sec 3</b>	<b>Sec 4</b>
<ul style="list-style-type: none"><li>● Set Text (70% completed)</li><li>● Components of Unseen Poetry</li></ul>	<ul style="list-style-type: none"><li>● Set Text (100% completed)</li><li>● Components of Unseen Poetry</li></ul>

- Both the G3~Exp and G2~N(A) students may do the same texts.
- However, assessment is in the form of scaffolded questions for the G2~N(A) students.
- Over 3 years, G2~N(A) students will be prepared for one set text (novel) and the Unseen component.

## 2.6 GEOGRAPHY (2 Papers)

### PURE HUMANITIES

#### 2.5.1 GEOGRAPHY (Paper Code: 2246)

#### SUBJECT CONTENT

The O-Level Upper Secondary Geography syllabus comprises **Physical Geography, Human Geography and Geographical Skills and Techniques, including Geographical Investigation**. The aims of the syllabus are similar to that of the Humanities Paper 2 (Geography) component.

<b>N-Level Geography</b>	
<b>Paper 1</b> Candidates answer <b>two</b> compulsory structured questions.	<ul style="list-style-type: none"><li>● Question 1 Cluster 1 – Geography in Everyday Life (Topic 1.3)</li><li>● Question 2 Cluster 2 Tourism</li></ul>
<b>Paper 2</b> Candidates answer <b>two</b> compulsory structured questions	<ul style="list-style-type: none"><li>● Question 1 Cluster 1 Geography in Everyday Life (Topics 1.1 and 1.2)</li><li>● Question 2 Cluster 3 Climate</li></ul>
<b>Cluster 1: Geography in Everyday Life</b> Topic 1.1 – Thinking Geographically Topic 1.2 – Sustainable Development Topic 1.3 – Geographical Methods	
<b>Cluster 2: Tourism</b> Topic 2.1 – Tourism Activity Topic 2.2 – Tourism Development Topic 2.3 – Sustainable Tourism Development	
<b>Cluster 3 – Climate</b> Topic 3.1 – Weather and Climate Topic 3.2 – Climate Change Topic 3.3 – Climate Action	

## 2.7 COMBINED SCIENCES

### 2.7.1 SCIENCE (CHEMISTRY/BIOLOGY) 5107

#### SCHEME OF ASSESSMENT

Paper	Type of Paper	Duration	Marks	Weighting
3	Multiple Choice (Chemistry)	1h 15min	20	20%
4	Structured questions (Chemistry)		30	30%
5	Multiple Choice (Biology)	1h 15min	20	20%
6	Structured questions (Biology)		30	30%

Paper 3 & 5 (20 marks)	Each of these papers consists of 20 compulsory multiple choice questions.
Paper 4 & 6 (30 marks)	Each of these papers consists of two sections. Section A will carry 22 marks and will contain a number of compulsory structured questions. The last question will carry 8 marks. Section B will carry 8 marks and will contain two structured questions. Candidates must answer only one out of these two questions.

#### CONTENT STRUCTURE

##### Sc (BIOLOGY)

Section	Topics	Content
<b>I. Cells and The Chemistry of Life</b>	1. Cell Structure and Organisation	<ul style="list-style-type: none"><li>• Plant and Animal Cells</li><li>• Cell Specialisation</li></ul>
	2. Movement of Substances	<ul style="list-style-type: none"><li>• Diffusion</li><li>• Osmosis</li></ul>
	3. Biological Molecules	<ul style="list-style-type: none"><li>• Carbohydrates, Fats and Proteins</li><li>• Enzymes</li></ul>
<b>II. The Human Body – Maintaining Life</b>	4. Nutrition in Humans	<ul style="list-style-type: none"><li>• Human Digestive System</li><li>• Physical and Chemical Digestion</li><li>• Absorption and Assimilation</li></ul>
	5. Transport in Humans	<ul style="list-style-type: none"><li>• Parts and Functions of the Circulatory System</li><li>• Blood</li><li>• Coronary Heart Disease</li></ul>
	6. Respiration in Humans	<ul style="list-style-type: none"><li>• Human Gas Exchange</li><li>• Cellular Respiration</li></ul>
	7. Infectious Diseases in Humans	<ul style="list-style-type: none"><li>• Organisms affecting Human Health</li><li>• Influenza and Pneumococcal Disease</li><li>• Prevention and Treatment of Infectious Diseases</li></ul>
<b>III. Living Together – Plants and Animals</b>	8. Nutrition and Transport in Flowering Plants	<ul style="list-style-type: none"><li>• Plant Structure</li><li>• Photosynthesis</li><li>• Transpiration</li><li>• Translocation</li></ul>

**Sc (CHEMISTRY)**

<b>Section</b>	<b>Topics</b>	<b>Content</b>
<b>I. Matter – Structures and Properties</b>	1. Experimental Chemistry	1.1 Experimental Design 1.2 Methods of Purification and Analysis
	2. The Particulate Nature of Matter	2.1 Kinetic Particle Theory 2.2 Atomic Structure
	3. Chemical Bonding and Structure	3.1 Ionic Bonding 3.2 Covalent Bonding 3.3 Structure and Properties of Materials
<b>II. Chemical Reactions</b>	4. Chemical Calculations	4.1 Formulae and Equation Writing 4.2 The Mole Concept
	5. Acid-Base Chemistry	
	6. Qualitative Analysis	
	7. Patterns in the Periodic Table	8.1 Periodic Trends 8.2 Group Properties 8.3 Reactivity Series
<b>III. Chemistry in a Sustainable World</b>	8. Organic Chemistry	8.1 Fuels and Crude Oil 8.2 Hydrocarbons 8.3 Polymers
	9. Maintaining Air Quality	

## 2.7.2 SCIENCE (PHYSICS/CHEMISTRY) 5105

### SCHEME OF ASSESSMENT

Paper	Type of Paper	Duration	Marks	Weighting
1	Multiple Choice (Physics)	1h 15min	20	20%
2	Structured questions (Physics)		30	30%
3	Multiple Choice (Chemistry)	1h 15min	20	20%
4	Structured questions (Chemistry)		30	30%

Paper 3 & 5 (20 marks)	Each of these papers consists of 20 compulsory multiple choice questions.
Paper 4 & 6 (30 marks)	Each of these papers consists of two sections. Section A will carry 22 marks and will contain a number of compulsory structured questions. The last question will carry 8 marks. Section B will carry 8 marks and will contain two structured questions. Candidates must answer only one out of these two questions.

### CONTENT STRUCTURE

#### Sc (PHYSICS)

Section	Topics	Content
<b>I. Measurement</b>	1. Physical Quantities, Units and Measurement	<ul style="list-style-type: none"> <li>Physical quantities and SI units</li> <li>Measurement</li> <li>Scalars and vectors</li> </ul>
<b>II. Newtonian Mechanics</b>	2. Kinematics	<ul style="list-style-type: none"> <li>Speed, velocity and acceleration</li> <li>Graphical analysis of motion</li> <li>Free-fall</li> </ul>
	3. Force and Pressure	<ul style="list-style-type: none"> <li>Types of forces</li> <li>Mass, weight and gravitational field</li> <li>Density</li> <li>Pressure</li> </ul>
	4. Dynamics	<ul style="list-style-type: none"> <li>Newton's laws of motion</li> <li>Effects of resistive forces on motion</li> </ul>
	5. Energy	<ul style="list-style-type: none"> <li>Energy stores and transfers</li> <li>Work</li> <li>Power</li> </ul>
<b>III. Thermal Physics</b>	6. Kinetic Particle Model of Matter	<ul style="list-style-type: none"> <li>States of matter</li> <li>Kinetic Particle Model</li> <li>Internal energy</li> </ul>
	7. Thermal Processes	<ul style="list-style-type: none"> <li>Thermal equilibrium</li> <li>Conduction</li> <li>Convection</li> <li>Radiation</li> </ul>
<b>IV. Waves</b>	8. General Wave Properties	<ul style="list-style-type: none"> <li>Describing wave motion</li> <li>Wave properties</li> <li>Longitudinal and transverse waves</li> </ul>
	9. Electromagnetic Spectrum	<ul style="list-style-type: none"> <li>Properties of electromagnetic waves</li> <li>Applications of electromagnetic waves</li> <li>Effects of electromagnetic waves on cells and tissues</li> </ul>
<b>V. Electricity and Magnetism</b>	10. Electric Charge and Current of Electricity	<ul style="list-style-type: none"> <li>Electric charge</li> <li>Conventional current and electron flow</li> <li>Electromotive force and potential difference</li> <li>Resistance</li> </ul>
	11. D.C. Circuits	<ul style="list-style-type: none"> <li>Circuit diagrams</li> <li>Series and parallel circuits</li> </ul>

	12. Practical Electricity	<ul style="list-style-type: none"> <li>• Electrical working, power and energy</li> <li>• Dangers of electricity</li> <li>• Safe use of electricity in the home</li> </ul>
<b>VI. Radioactivity</b>	13. Radioactivity	<ul style="list-style-type: none"> <li>• The composition of the atom</li> <li>• Radioactive decay</li> <li>• Dangers and uses of radioactivity</li> </ul>

### Sc (CHEMISTRY)

<b>Section</b>	<b>Topics</b>	<b>Content</b>
<b>I. Matter – Structures and Properties</b>	1. Experimental Chemistry	1.1 Experimental Design 1.2 Methods of Purification and Analysis
	2. The Particulate Nature of Matter	2.1 Kinetic Particle Theory 2.2 Atomic Structure
	3. Chemical Bonding and Structure	3.1 Ionic Bonding 3.2 Covalent Bonding 3.3 Structure and Properties of Materials
<b>II. Chemical Reactions</b>	4. Chemical Calculations	4.1 Formulae and Equation Writing 4.2 The Mole Concept
	5. Acid-Base Chemistry	
	6. Qualitative Analysis	
	7. Patterns in the Periodic Table	8.1 Periodic Trends 8.2 Group Properties 8.3 Reactivity Series
<b>III. Chemistry in a Sustainable World</b>	8. Organic Chemistry	8.1 Fuels and Crude Oil 8.2 Hydrocarbons 8.3 Polymers
	9. Maintaining Air Quality	

## 2.8 NUTRITION & FOOD SCIENCE

### G3 NUTRITION & FOOD SCIENCE / GCE O-LEVEL NUTRITION & FOOD SCIENCE

The Nutrition & Food Science students are developed to:

- Lead a healthier lifestyle proactively through proper diet and nutrition
- Advocate sustainable food consumption by planning and making appropriate food choices
- Apply principles of culinary science creatively in food preparation and cooking

#### SCHEME OF ASSESSMENT

##### **G3 Food & Nutrition / GCE O-Level Food & Nutrition**

Paper 1: 40% (100m)

Paper 2: 60% (80m)

##### Paper 1 (2 h)

Written paper. Answer all questions.

Section A: Multiple Choice Questions (15m)

Section B: Short Answer Questions & Data Response Questions (55m)

Section C: Open Ended Questions (30m)

##### Paper 2: Coursework (60%)

Research	10m
Decision Making	8m
Investigation	
▪ Plan	6m
▪ Conduct	8m
▪ Apply	8m
Planning:	8m
Execution:	
▪ Organisation & Management	6m
▪ Manipulation	10m
▪ Product & Presentation	8m
Evaluation:	8m
<b>Sub-total:</b>	<b>80m</b>

#### Entry Requirements

- At least a pass in Food and Consumer Education in Secondary 2

#### Demands of the Syllabus

**The Nutrition and Food Science Syllabus requires students to:**

- Possess good work ethics and good time management skill
- Be able to use computer and internet to do coursework

## 2.9 MUSIC

### G3 MUSIC / GCE O-LEVEL MUSIC

Students will develop in the following areas during their weekly lessons:

- Critical thinking and musical creativity
- Communicative and interpretative skills in music
- Perception and awareness of musical cultures and traditions, both local and global
- An informed and lifelong appreciation of music

### SCHEME OF ASSESSMENT

Candidates taking **G3 Music / GCE O-Level Music** will be required to offer the following papers:

#### Paper 1: Music Studies (40%)

- 1 ½ hour written paper (Unprepared Listening Analysis)
- Aural perception skills, knowledge and understanding of Western, Jazz, Popular Music and Asian Music genres
- Use accurate technical vocabulary in all their answers

#### Paper 2: Creating (30%)

- Part 1: Create one composition in response to one of the six stimuli
- Part 2: Submit Reflection Notes of 400 to 500 words

#### Paper 3: Performing (30%)

- Part 1: Plan and perform a 10-minute recital consisting of two contrasting pieces
- Part 2: Submit Reflection Notes of 400 to 500 words

### GCE O-Level Higher Music

Candidates who offer G3 Higher Music / GCE O-Level Higher Music will need to do 1 out of 3 options as follows on top of the G3 Higher Music / GCE O-Level Music components:

- Research Essay: 1500 – 2000 words of individual inquiry into a subject of candidate's own choice
- Higher Creating: 6 minutes of music composition portfolio and programme notes
- Higher Performing: 2 additional musical pieces between 8 and 12 mins followed by 3 mins of viva voce to assess candidates' understanding of the music they have performed

### Entry Requirements

- All applicants must sit for a Selection Test to assess their aptitude
- All applicants must undergo an Interview to evaluate their suitability

### Demands of the Syllabus

**The Music Syllabus requires students to:**

- Study music in greater depth – students must listen to a wide range of music
- Continue with private instrumental/vocal tuition with an external tutor outside of school hours (in preparation for the Performing Component)
- Participate in musical activities (e.g. lunchtime concerts, performing arts CCA etc.)



## 2.10 ART

### G3 ART / GCE O-LEVEL ART

Students are equipped to apply the following 5 domains during their weekly lessons:

- Gathering and Investigation of Information
- Exploration and Development of Ideas/Concepts
- Aesthetic Qualities
- Selection and Control of Materials and Technical Processes
- Personal Response

### SCHEME OF ASSESSMENT

Candidates taking **G3 Art / GCE O-Level Art** will be required to offer the following papers:

Paper	Description	Examination Duration	Weighting
Paper 1	Coursework	Not Applicable	60%
Paper 2	Drawing and Painting	3 hours	40%

#### Paper 1: Coursework

For the Coursework component, candidates must submit **8 A2 size** preparatory boards (single-sided) together with the final Artwork.

#### Paper 2: Drawing and Painting

The topics for the Drawing and Painting exam are released **3 weeks** prior to the Drawing and Painting 3-hour exam. Candidates must submit 5 A3 size preparatory boards (double-sided) together with the drawing and painting artwork they will sit for. The A3 size preparatory boards are to be prepared and ready **before** the day of the drawing and painting exam.

#### Entry Requirements

- At least 65 marks (overall) for Sec 2 Art and pass a Selection Test
- Right aptitude and attitude for Art
- An inquiring mind, a spirit of experimentation and a passion for the visual arts

#### Demands of the Syllabus

The Art Syllabus requires students to:

- Spend a minimum of three hours each week outside of curriculum to hone their sensitivity to materials and processes to develop a firm grounding in both the practical and theoretical aspects of Art and Design
- Attend enrichment activities such as workshops, artists' talks and learning journeys to art galleries and museums organised by the school or MOE
- Participate in art-related competitions to sharpen their skills and participate in school or national exhibitions
- Commit to the rigour and demands of the art curriculum and art development process

## 2.11 PRINCIPLES OF ACCOUNTS

### SCHEME OF ASSESSMENT

Paper	Description	Duration	Marks	Weighting
1	Answer 3 to 4 compulsory structured questions.	1 hour	40	40%
2	Answer 4 compulsory structured questions. <ul style="list-style-type: none"> <li>• One question requires the preparation of financial statements for a business for one financial year, which carries 20 marks.</li> <li>• A scenario-based question will be part of one of the 3 remaining questions, which carries 5 marks.</li> </ul>	2 hours	60	60%

### SUBJECT CONTENT

<b>(1) Accounting and non-accounting information is used to support and facilitate decision-making</b>	<b>(2) Accounting is a language used to represent business activities</b>
1.1 Roles of accounting & accountants 1.2 Stakeholders & their decision-making needs	2.1 Types of businesses
<b>(3) Accounting is an information system to measure business activities.</b>	2.3 Elements of Financial Statements 2.4 Accounting Equation 2.5 Financial statements 2.6 Income and Expenses 2.7 Assets 2.8 Liabilities 2.9 Equities 2.10 Correction of errors
3.1 Accounting theories 3.2 Accounting information system and accounting cycle 3.3 Understanding double-entry recording system 3.4 Internal controls	

#### Additional Information

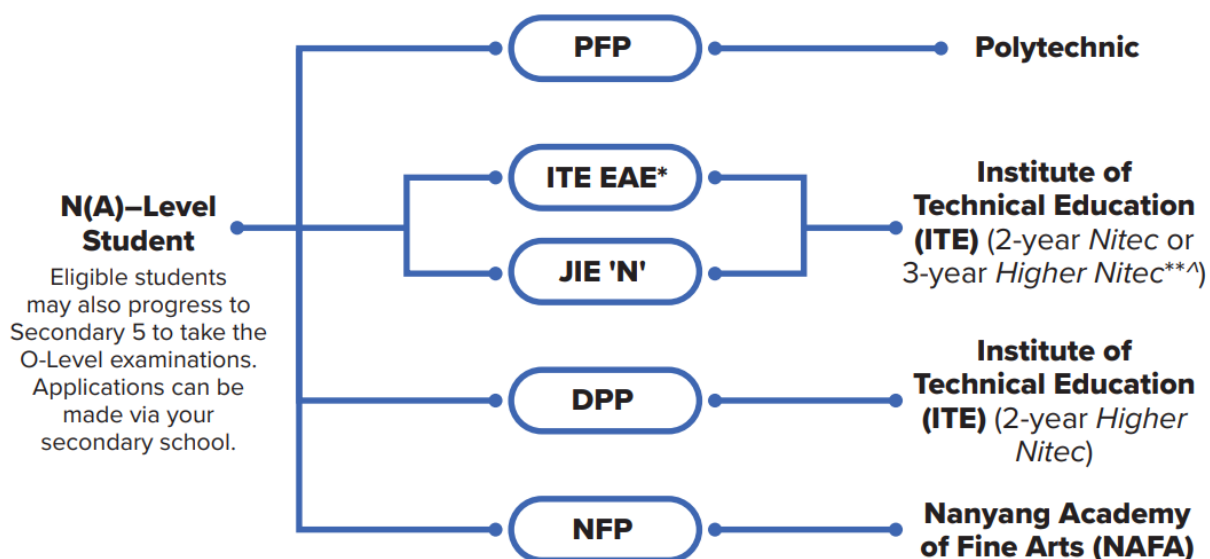
Accounting is an information system based on generally accepted accounting principles. It involves the recording and processing of business transactions, and communicating the information to stakeholders. The accounting information is used to evaluate business performance and facilitate decision-making. What sets the accountancy profession apart is the responsibility to act in the public's interest.

POA is designed to teach age-appropriate and relevant accounting knowledge, skills and values. In addition, students will understand how businesses use accounting and non-accounting information to make decisions. Through the subject, they will acquire transferrable skills that they can apply in their daily lives.

POA forms part of a broad-based education to equip students with strong fundamentals for future learning.

## PART 3: INFORMATION

### 3.1 INFORMATION ON ADMISSIONS EXERCISES FOR G2~N(A) STUDENTS



\*\* Selected Nitec and Higher Nitec courses are available in traineeship mode. For more information on applying to these courses, you can visit: <https://www.ite.edu.sg/admissions/traineeship>

^ For list of 3-year Higher Nitec courses, please visit: <https://www.ite.edu.sg/courses/full-time-courses/nitec-and-3-year-higher-nitec>

COURSES	
<b>Polytechnic diploma courses offered under PFP</b>	<a href="https://pfp.polytechnic.edu.sg/">https://pfp.polytechnic.edu.sg/</a>
<b>Higher Nitec (DPP) Courses</b>	<a href="https://www.ite.edu.sg/admissions/full-time-courses/higher-nitec-dpp">https://www.ite.edu.sg/admissions/full-time-courses/higher-nitec-dpp</a>
<b>Nitec &amp; 3 Year Higher Nitec Courses</b>	<a href="https://www.ite.edu.sg/courses/full-time-courses/nitec-and-3-year-higher-nitec">https://www.ite.edu.sg/courses/full-time-courses/nitec-and-3-year-higher-nitec</a>
<b>Traineeship Nitec Courses</b>	<a href="https://www.ite.edu.sg/courses/traineeship-courses/nitec">https://www.ite.edu.sg/courses/traineeship-courses/nitec</a>

ADMISSION EXERCISES			
<b>Poly Foundation Programme</b> [PFP]	Upon release of O Level results [Jan]	A one-year programme that offers a practice-oriented curriculum to better prepare polytechnic-bound N(A) students for entry into selected relevant polytechnic diploma courses. PFP students are given provisional places in diploma programmes, subject to them passing all modules in the one-year PFP.	<a href="http://go.gov.sg/pfp">go.gov.sg/pfp</a>
<b>ITE Early Admission Exercise</b> [ITE-EAE]	Before release of N Level results [Middle / End May]	An aptitude-based admissions exercise that allows students to apply and receive conditional offers for admission to ITE based on their aptitudes and interests, before they take their GCE N-Level examination. It allows students to demonstrate their aptitudes and interests apart from academic grades, thus allowing a wider range of talents to be recognised.	<a href="http://go.gov.sg/iteeae">go.gov.sg/iteeae</a>
<b>Joint Intake Exercise</b> [JIE 'N']	Upon release of N Level results [Dec]	The JIE 'N' is for 2-year <i>Nitec</i> or 3-year <i>Higher Nitec</i> courses offered by ITE.	<a href="http://go.gov.sg/applyjie">go.gov.sg/applyjie</a>
<b>Joint Intake Exercise</b> [JIE 'H'] (DPP)	Upon release of N Level results [Dec & Jan]	The Direct-Entry-Scheme to Polytechnic Programme (DPP) allows Secondary 4N(A) students to be admitted directly into selected 2-year <i>Higher Nitec</i> programmes at ITE without having to sit for the O-Level examinations or undergo a <i>Nitec</i> programme. DPP students who successfully complete their <i>Higher Nitec</i> courses and attain the required qualifying Grade Point Average (GPA) scores will be admitted to first or second year of a polytechnic diploma course mapped to their <i>Higher Nitec</i> course.	<a href="http://go.gov.sg/applydpp">go.gov.sg/applydpp</a>
<b>NAFA Foundation Programme</b> [NFP]	Upon release of N level results [Dec]	A one-year practice-based programme that prepares N(A)-Level holders to pursue a diploma in the creative arts. NFP students who successfully complete the programme will be offered a place in their chosen diploma course at NAFA.	<a href="http://go.gov.sg/applynafap">go.gov.sg/applynafap</a>

Source: [A Guide to Post Secondary Admissions Exercises](#)

## REQUIREMENTS FOR ADMISSION PROGRAMMES

<b>Polytechnic Foundation Programme [PFP]</b>			
<b>Eligibility Criteria: ELMAB3* ≤ 12</b> ( <i>Before CCA bonus point(s) deduction</i> )			
<b>Group 1</b>		<b>Group 2</b>	
<b>Subject</b>	<b>Minimum Required Grade</b>	<b>Subject</b>	<b>Minimum Required Grade</b>
English Language [Syll A]	3	English Language [Syll A]	2
Math [Syll A/Additional]	3	Math [Syll A/Additional]	3
One of the following subjects: <ul style="list-style-type: none"> <li>• Design &amp; Technology</li> <li>• Food &amp; Nutrition / Nutrition and Food Science</li> <li>• Science (Chem/Bio)</li> <li>• Science (Phy/Bio)</li> <li>• Science (Chem/Phy)</li> </ul>	3	One of the following subjects: <ul style="list-style-type: none"> <li>• Art</li> <li>• Geography</li> <li>• History</li> <li>• Combined Humanities</li> <li>• Literature in English</li> <li>• Principles of Accounts</li> </ul>	3
Any two other subjects excluding CCA	4	Any two other subjects excluding CCA	4
<b>Direct-entry-scheme to Polytechnic Programme [DPP]</b>			
<b>Eligibility Criteria: ELMAB3* ≤ 19</b> ( <i>Before CCA bonus points deduction</i> )			
<b>For Applied Sciences, Engineering and Info-Communications Technology Courses:</b>		<b>For Business and Services Courses:</b>	
<b>GCE N-Level Subjects</b>	<b>Minimum Required Grade</b>	<b>GCE N-Level Subjects</b>	<b>Minimum Required Grade</b>
English Language [Syll A]	4	English Language [Syll A]	3
Math [Syll A/Additional]	4	Math [Syll A/Additional]	4
Any other 3 subjects Excluding CCA	5	Any other 3 subjects Excluding CCA	5
<b>Progression to Secondary 5</b>			
<b>Eligibility Criteria:</b>			
(i) <b>ELMAB3* ≤ 19</b> ( <i>Before CCA bonus points deduction</i> )			
(ii) <b>At least a Grade 5</b> for the subjects used in ELMAB3 computation			

\*: ELMAB3 – English, Mathematics & Best 3 Subjects

### 3.2 Contact Us

School General Office Tel: 62816606

Our School Website: [www.plmgss.moe.edu.sg](http://www.plmgss.moe.edu.sg)

#### Dean IP

<i>Mr Tan Tiah Hui</i>	<i>tan_tiah_hui@moe.edu.sg</i>
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#### Year Head (Lower Secondary)

<i>Mrs Koh Si Ping</i>	<i>chan_si_ping@moe.edu.sg</i>
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#### Sec 2 Form Teachers

<b>Class</b>	<b>Teachers</b>	<b>Email</b>
<b>2.1</b>	Mrs Colleemallay Brenda	<i>colleemallay_brenda@moe.edu.sg</i>
	Ms Wu Caifen	<i>rachael_wu_caifen@moe.edu.sg</i>
<b>2.2</b>	Ms Yan Xiuru	<i>yan_xiuru@moe.edu.sg</i>
	Mr Low Kee Heong	<i>low_kee_heong@moe.edu.sg</i>
<b>2.3</b>	Mrs Neoh Terh Ling	<i>lim_terh_ling@moe.edu.sg</i>
<b>2.4</b>	Mr Lee Yen Chai	<i>lee_yen_chai@moe.edu.sg</i>
	Ms Hannah Zulaihah	<i>hannah_zulaihah_gwynne@moe.edu.sg</i>
<b>2.5</b>	Ms Li Hongyan	<i>li_hongyan@moe.edu.sg</i>
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	Mrs You Mee Choo	<i>tiong_mee_choo@moe.edu.sg</i>
<b>2.7</b>	Ms Liow Xiao Chun	<i>liow_xiao_chun@moe.edu.sg</i>
	Ms Kaur Harjit	<i>harjit_kaur_mindar_singh@moe.edu.sg</i>
<b>2.8</b>	Mdm Durka Kuppa Balakrishnan	<i>durka_kuppa_balakrishnan@moe.edu.sg</i>