

2023 Subject Booklets – G3

**Additional Math
O Level 4049**

Art (O level)

Biology O Level 6093

NFS Express

Chemistry 6092

Chinese O Level 1160

D & T (O level)

ESS

**Higher Chinese O
Level 1116**

**Malay
1117_HML_2023**

**Malay
1148_EXP_2023**

**Math
O Level 4052**

**Physics
O Level 6091**

**Science - Physics,
Chemistry,
Biology O Level**

Sec 3 Tamil G3

**English Language
1184**

**Geography
(2279_1_2)**

**Geography
Elective (2260_2)**

Elective History

Full History

**Literature In
English**

Subject	Additional Mathematics
Subject Code	4049 (O Level)
Stream	Express

Introduction

The O-level Additional Mathematics syllabus aims to enable students to:

- acquire mathematical concepts and skills for higher studies in mathematics and to support learning in the other subjects, with emphasis in the sciences, but not limited to the sciences;
- develop thinking, reasoning, communication, application and metacognitive skills through a mathematical approach to problem solving;
- connect ideas within mathematics and between mathematics and the sciences through applications of mathematics; and
- appreciate the abstract nature and power of mathematics.

Students will be solving problems in different contexts, including those in the sciences and engineering. These experiences give students the opportunities to apply the concepts and skills that they have learnt and to appreciate the value and power of mathematics.

Students will learn different functions, namely, linear, quadratic, exponential, logarithmic and trigonometric. These functions provide the building blocks for simple models. Students could be exposed to the following applications and contexts.

- Motion of projectile (quadratic functions and calculus)
- Optimisation problems e.g. maximising profits, minimising costs (functions and calculus)
- Population growth, radioactive decay, pH scale, Richter scale, decibel scale (exponential and logarithm functions)
- Financial mathematics e.g. profit and cost analysis, marginal profit (functions and calculus)
- Tidal waves, hours of daylight, simple harmonic motion (trigonometric functions)

The list above is by no means exhaustive or exclusive. Students are not required to have in-depth knowledge of these applications and contexts. Problems involving these contexts will provide sufficient information for students to formulate and solve the problems, applying the relevant concepts and skills and interpret the solution in the context of the problem.

Through the process of solving such problems, students will experience all or part of the mathematical modelling process. This includes :

- formulating the problem, including making suitable assumptions and simplifications;
- making sense of and discussing data, including real data presented as graphs and tables;
- selecting and applying the appropriate concepts and skills to solve the problem; and □ interpreting the mathematical solutions in the context of the problem.

Scheme of Assessment

Sec 3 Express Additional Math (New Syllabus 4049) Papers

PAPER	DURATION	DESCRIPTION	MARKS	WEIGHTING
Paper 1	2h 15 min	There will be 12 – 14 questions of varying marks and lengths, up to 10 marks per question. Candidates are required to answer ALL questions.	90	100%

Sec 4 Express Additional Math (New Syllabus 4049) Papers

PAPER	DURATION	DESCRIPTION	MARKS	WEIGHTING
Paper 1	2h 15 min	There will be 12 – 14 questions of varying marks and lengths, up to 10 marks per question. Candidates are required to answer ALL questions.	90	50%
Paper 2	2h 15 min	There will be 9 – 11 questions of varying marks and lengths, up to 12 marks per question. Candidates are required to answer ALL questions.	90	50%

Subject Content

The concepts and skills covered in the A Math syllabus are organised along 3 content strands. The development of processes, metacognition and attitudes are embedded in the

learning experiences that are associated with the content.

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

Additional Information

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Entry Requirement

Students should have a strong foundation of lower secondary math especially in Algebra. All Express students will be offered Additional Mathematics to aid in their development of metacognitive skills that will help them in their higher educational pathway.

Subject	Art
Subject Code	6123
Stream	Express

Introduction

The Art syllabus is designed to provide students with the opportunity to give form and meaning to their ideas, thoughts and feelings through visual and tactile forms. Visual literacy skills such as perceiving and responding to visual images, and analysis of visual information in its many forms are also developed.

Subject Content (Learning Outcomes)

The learning outcomes for the Art syllabus are organised under the domains of **PERCEIVING**, **COMMUNICATING** and **APPRECIATING**.

PERCEIVING	COMMUNICATING	APPRECIATING
<ul style="list-style-type: none"> • record from observation and experience • identify and define problems, issues and themes in visual expressions 	<ul style="list-style-type: none"> • conceptualise and translate ideas into artworks • apply art elements and design principles in the creation of artworks • explore creative use of materials, techniques and technologies to generate ideas and solutions to problems • acquire competence in manipulating art media towards the expression of an idea • communicate with relevant vocabulary the processes involved in art making 	<ul style="list-style-type: none"> • enjoy experiences of art making • achieve a sense of confidence and self-esteem through the visual arts • make connections between visual expressions and personal experiences • critically appraise artists and artworks • value local artworks as part of the development of Singapore's history and cultural heritage • develop an inquiring attitude and lifelong interest in the visual arts

Examination Requirements

Students taking the GCE O-Level Art Syllabus Examinations will be required to offer:
Paper 1: Coursework (60%)
 One Coursework unit comprising the finished artwork and not more than **eight** A2

sheets of preparatory studies. Candidates are to include explorations of artists/artworks relevant to the chosen theme/media in their preparatory studies. The question paper will be issued to the candidates in the month of January of the examination year. Six themes will be issued and candidates are to make response to **one** of the themes.

Paper 2: Drawing and Painting (40%)

Paper to be given three weeks before the commencement of the O-Level Examination. Six themes will be issued and candidates are to make response to **one** of the themes on paper of size A3 or A2. Preparatory studies of **three to five A3** sheets of paper must be submitted.

Scheme of Assessment

Paper 1: Coursework

The five assessment domains applied to the Coursework paper are:

- 1. Gathering and Investigation of Information (20%)**
- 2. Exploration and Development of Ideas/Concepts (20%)**
- 3. Aesthetic Qualities (20%)**
- 4. Selection and Control of Materials and Technical Processes (20%)**
- 5. Personal Response (20%)**

Paper 2: Drawing and Painting

The five assessment domains applied to the Drawing and Painting paper are:

- 1. Investigation and Interpretation of Theme (20%)**
- 2. Exploration and Development of Theme (20%)**
- 3. Aesthetic Qualities (20%)**
- 4. Control of Materials and Technical Processes (20%)**
- 5. Personal Response (20%)**

Entry Requirement

1. At least a 60% pass in Art at Secondary Two

Subject	Biology			
Subject Code	6093			
Stream	Express			
Introduction				
<p>The Upper Secondary Biology syllabus seeks to develop in students the understanding, skills, ethics and attitudes relevant to the Practices of Science, enabling them to</p> <p>a) appreciate practical applications of biology in the real world, b) deepen their interest in biology for future learning and work, c) become scientifically literate citizens who can innovate and seize opportunities in the 21st century, and d) develop a way of thinking to understand how living organisms work to sustain life and use the disciplinary ideas in biology to approach, analyse and solve problems in biological systems.</p>				
Scheme of Assessment				
PAPER	DURATION	DESCRIPTION	MARKS	WEIGHTING
1	1 hr	Multiple Choice	40	30%
2	1h 45m	Structured and Free Response	80	50%
3	1h 50m	Practical	40	20%
Subject Content				
<ol style="list-style-type: none"> 1. Cell Structure and Organisation 2. Movement of Substances 3. Biological Molecules 4. Nutrition in Humans 5. Transport in Humans 6. Respiration in Humans 7. Excretion in Humans 8. Homeostasis, Coordination and Response in Humans 9. Infectious Diseases in Humans 10. Nutrition and Transport in Flowering Plants 11. Organisms and their Environment 12. Molecular Genetics 13. Reproduction 14. Inheritance 				
Additional Information				
-				
Entry Requirement				
Overall Sec 2 Express Results: Science: $\geq 70\%$				

English Language: $\geq 65\%$

Subject	Nutrition and Food Science			
Subject Code	6097			
Stream	Express			
Introduction				
The Nutrition and Food Science (NFS) curriculum is designed to engage students 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				
The assessment domains are weighted to give an indication of their relative importance. They are not intended to provide a precise statement on the number of marks allocated to a particular assessment domain.				
Paper	Assessment Objectives			Total
	AOA Knowledge with understanding	AOB Handling information and solving problems	AOC Application of skills, knowledge and understanding in a variety of contexts	
1 (Written paper)	~ 25%	~ 15%	N.A.	40%
2 (Coursework)	~ 10%	~ 10%	~ 40%	60%
Overall	35%	25%	40%	100%
Subject Content				
In the syllabus document, a content baseline is provided for candidates, specifically in: <ul style="list-style-type: none"> • Nutrition and Health (Nutrients, Water, and Dietary Fibre, Diet and Health Problems), • Food Literacy (Food Management, Smart Consumer), • Food Science (The Science of Food Preparation and Cooking, Reactions in Food during Preparation and Cooking, Evaluation of Food). 				
Examination				

Paper 1	Written Examination (2 hours) [40% of the total mark for the subject]
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Candidates are to answer all questions. The questions will test the candidates' knowledge of theory and practice in response to the assessment objectives. The mark allocation is:

Section A	15 marks (multiple choice questions)
Section B	55 marks (short-answer-type questions and data-response-type questions)
Section C	30 marks (open-ended questions)
Sub-total	100 marks

Paper 2	Coursework (28 hours of curriculum time) [60% of the total mark for the subject]
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Candidates will be given an assignment at the beginning of the examination year which must be conducted under teacher supervision. It should be completed for assessment by the end of July or early August of the examination year. The assignment requires a problem-solving and investigative approach, with an emphasis on investigation work. A total of 28 hours of curriculum time must be assigned to discuss, facilitate, and carry out the investigation and practical work as required.

Assessment will focus on the research of the task; decision making; development of a plan; recording and interpreting experimental results and a methodical approach in the production and presentation of the final products. The evaluation will require candidates to conduct sensory evaluation of the dishes prepared and the outcomes of the execution process.

The coursework report must be word processed and submitted electronically. Digital photographic evidence of the Investigation and the final dishes in the Execution criteria must be included in the report. The page requirement of the report is between **20–25 pages**.

Additional Information

- NFS is a relevant subject 4 or 5 under L1R5 for application to Junior College courses.
- NFS is a relevant subject 3 or 4 under L1R4 for application to Millennia Institute courses.
- NFS is a relevant subject under ELR2B2 for application to polytechnic courses, specifically science-based courses (eg. Food, Nutrition & Culinary Science, Applied Science (Nutrition and Food Science), Applied Science (Urban Agricultural Technology), Chemical Engineering, Pharmaceutical Science, Applied Chemistry), technology courses (eg. Food Science & Technology, Medical Biotechnology, Veterinary Technology, Biologics & Process Technology, Chemical & Pharmaceutical Technology).
- The NFS coursework done at Secondary Three and Four can be showcased as part of a student's portfolio during the polytechnic Early Admissions Exercise interviews, and admissions to tertiary bachelor degrees at NUS and NTU.

Entry Requirement

1. At least a pass in Food and Consumer Education at Secondary Two

Demands of the Syllabus

1. Ability to conduct internet search for research, organisation of data, and use Google Apps for coursework
2. Exhibit basic culinary skills
3. Be self-directed and have good time management and perseverance as coursework requires consistent effort in research, self-study and experimentation
4. Have the desire to innovate
5. Like to work with their hands

Subject	Chemistry
Subject Code	6092
Stream	Express

Introduction

Chemistry, as the study of matter and its changes, influences every facet of our lives and shares many essential ties to other science disciplines. While chemistry seeks to understand the nature of matter by relating the study of energy and particles such as atoms and molecules in physical systems to chemical systems, it also provides a basis for studying and understanding molecules and processes in biological systems.

The Upper Secondary Chemistry syllabus seeks to develop in students the understanding, skills, ethics and attitudes relevant to the Practices of Science, enabling them to

- a) appreciate practical applications of chemistry in the real world,
- b) deepen their interest in chemistry for future learning and work,
- c) become scientifically literate citizens who can innovate and seize opportunities in the 21st century, and
- d) develop a way of thinking to approach, analyse and solve problems by explaining macroscopic characteristics and changes in chemical systems through the use of sub-microscopic and symbolic representations

Scheme of Assessment

Paper	Type of Paper	Duration	Marks	Weighting
1	Multiple Choice	1 hr	40	30 %
2	Structured and Free Response	1 hr 45 min	80	50 %
3	Practical Test	1 hr 50 min	40	20 %

Subject Content

Each of the three sections represents an important aspect of chemistry. In Section 2.1, students explore how the structures at the sub-microscopic level affects the properties exhibited at the macroscopic level. In Section 2.2, students are introduced to different types of chemical reactions and how these reactions can be quantified in terms of the stoichiometric relationship, the energy changes involved and their rates. In the final Section 2.3, students learn how chemistry can be used to make the world a sustainable one.

Sections	Topics
Matter – Structures and Properties	1. Experimental Chemistry
	2. The Particulate Nature of Matter
	3. Chemical Bonding and Structure
Chemical Reactions	4. Chemical Calculations
	5. Acid-Base Chemistry
	6. Qualitative Analysis
	7. Redox Chemistry
	8. Patterns in the Periodic Table
	9. Chemical Energetics
	10. Rate of Reactions
Chemistry in a Sustainable World	11. Organic Chemistry
	12. Maintaining Air Quality
Entry Requirement	
Minimum 70% overall for Sec 2 Science	

Subject	Chinese 华文																												
Subject Code	1160																												
Stream	Express																												
Introduction																													
<p>1. 中学华文课程旨在小学课程的基础上，进一步提高聆听、说话、阅读、写作、口语互动和书面互动六个方面的知识 with 技能。完成课程后，学生能够：</p> <ul style="list-style-type: none"> • 听懂适合程度的话语信息和内容，例如：故事、对话、诗歌、广告、报告、访问、广播剧、演讲、新闻报道、电台节目等。 • 根据情境与要求，清楚流利地讲述见闻，介绍日常事物，针对话题发表感受或看法。 • 理解与分析适合程度的阅读语料，例如：故事、寓言、小说、散文、说明书、书信、海报、广告、传单、杂志、报章等。 • 根据情境与要求，清楚通顺地记叙见闻，介绍事物，针对话题表达感受或看法。 • 根据目的、情境和对象与他人进行口语互动和书面互动，交流情感、传达信息、表达看法。 <p>2. 本科试卷主要考查学生下列语文能力：</p> <ul style="list-style-type: none"> • 聆听 • 会话 • 词语的认识和语言的应用 • 阅读理解 • 写作电子邮件或不同文体的文章 																													
Scheme of Assessment																													
<table border="1"> <thead> <tr> <th>Paper</th> <th>Description</th> <th>Marks</th> <th>Weighting (%)</th> <th>Duration</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>写作</td> <td>60</td> <td>30</td> <td>2 h</td> </tr> <tr> <td>2</td> <td>语文应用与阅读理解</td> <td>70</td> <td>35</td> <td>1 h 30 min</td> </tr> <tr> <td>3</td> <td>口试</td> <td>50</td> <td>25</td> <td>15 min</td> </tr> <tr> <td>3</td> <td>听力</td> <td>20</td> <td>10</td> <td>30 min</td> </tr> </tbody> </table>					Paper	Description	Marks	Weighting (%)	Duration	1	写作	60	30	2 h	2	语文应用与阅读理解	70	35	1 h 30 min	3	口试	50	25	15 min	3	听力	20	10	30 min
Paper	Description	Marks	Weighting (%)	Duration																									
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3	听力	20	10	30 min																									
Subject Content																													
<p>1. 试卷一：写作</p> <p>这份试卷包括实用文和作文两部分。考生在写作时，可以使用考评局规定的词典。</p> <p>第一部分：实用文</p> <p>考生可以从两道试题中任选一题，字数在 150 以上。考生可以根据所提供的电邮内容写一个回复电邮，或者根据所提供的材料，写一个电邮。</p> <p>第二部分：作文</p> <p>考生可以从三道试题中任选一题，字数在 300 以上。考查的文体包括记叙文、说明文和议论文。</p>																													

2. 试卷二：语文应用与阅读理解

这份试卷考查的项目包括：语文应用、阅读理解（一）和阅读理解（二），共有 30 道题目。

第一部分：语文应用

- 综合填空：考生根据所提供的短文内容和上下文的意思，选出最适当的答案。
- 词语替换：考生根据所提供的短文内容和上下文的意思，替换运用不当的词语。

第二部分：阅读理解（一）

考生根据所提供的 2 至 3 个实用性语料或短文的内容，选出最适当的答案。考查的内容包括广告、传单、新闻报道等。

第三部分：阅读理解（二）

考生根据所提供的 2 篇短文的内容回答问题。

3. 试卷三：口试

这份试卷包括朗读短文和会话。在考试前，考生有 10 分钟的时间默读短文和观看录像短片。考生在限定的时间内，可以多次默读短文和观看录像短片。

第一部分：朗读短文

考生必须朗读一个短文。

第二部分：会话

考生针对所提供的录像短片，以及主考员的提问，跟主考员进行一段对话。

4. 试卷三：听力理解

这份试卷包括三个简短对话或语段，以及三个理解篇章，共有 10 道选择题。考生先听录音，然后回答问题。考查的内容包括日常会话、广告、说明、故事和新闻报道等。

Additional Information

NA

Entry Requirement

NA

Subject	Design & Technology				
Subject Code	7059				
Stream	Express				
Introduction					
<p>The Design & Technology (D&T) curriculum is designed to engage students in designing and prototyping ideas through applying technology. The students' learning leverages and builds on their experiences in design and technology, and emphasises on understanding everyday activities and creating possibilities to make life better. Through the design process, students cultivate creative, critical and reflective thinking to make sense of their learning and to develop related dispositions and skills using graphical means and technology.</p>					
Scheme of Assessment					
<p>The assessment domains are weighted to give an indication of their relative importance. They are not intended to provide a precise statement on the number of marks allocated to a particular assessment domain.</p>					
Paper	Duration	Assessment Domains			Total
		A Knowledge with Understanding	B Design Thinking Skills	C Design Manipulating Skills	
1 Written Paper	2 hours	25%	10%	5%	40%
2 Design Project	22 weeks	15%	20%	25%	60%
Overall		40%	30%	30%	100%
Subject Content					
<p>Section 1 (Design) and Section 2 (Technology) in the syllabus document define a content baseline for Centres to provide designing and prototyping opportunities via the Design Process for candidates to:</p> <ul style="list-style-type: none"> • develop design-related dispositions • acquire design techniques and strategies • consolidate a sound working knowledge of technology (materials, workshop processes, structures, mechanisms and electronics). 					

Designing is concerned with creating change to affect empathy, practicality and appropriateness in everyday life. As a way of thinking and doing, it focuses on creating solutions using appropriate technology with purposeful intent. This broadly involves rational thought processes and intuitive responses that are nested within a holistic fabric of analytical, creative and critical thinking. Essential to designing is the ability to imagine and model using doodles/sketches/drawings and mock-ups. These means of modelling ideas also trigger and inform thought processes for experimenting and testing the feasibility of solutions and to help in decision making. Upon thorough and thoughtful development of the idea, the proposed design solution is realised through prototyping. This involves working with suitable resistant materials using workshop processes, and practical application of knowledge in structures, mechanisms and/or electronics. During Prototyping, evaluation and refinement of the proposed design solution should not be ruled out with the aim of achieving a practical and appropriate solution for the identified user.

Examination

Paper 1	Written Examination (2 hours) [40% of the total mark for the subject]				
<p>Candidates are to answer all questions. The questions will be design-centric. Question 1 requires knowledge application of Section 1 Design. Question 2 to Question 4 require knowledge application of Section 2 Technology; specifically structures, mechanisms and electronics. The mark allocation is:</p> <table border="1" data-bbox="220 1171 902 1304"> <tr> <td data-bbox="220 1171 553 1241">Question 1</td> <td data-bbox="553 1171 902 1241">26 out of 80 marks</td> </tr> <tr> <td data-bbox="220 1241 553 1304">Question 2 - 4</td> <td data-bbox="553 1241 902 1304">54 out of 80 marks</td> </tr> </table>		Question 1	26 out of 80 marks	Question 2 - 4	54 out of 80 marks
Question 1	26 out of 80 marks				
Question 2 - 4	54 out of 80 marks				
Paper 2	Design Project (22 weeks) [60% of the total mark for the subject]				
<p>The Design Project is an individual coursework-based examination. The examination will be conducted over 22 weeks from the question paper release, excluding school holidays. Candidates will be required to work on a design and prototyping project based on the examination question.</p> <p>The Design Project will comprise two components: The Design Journal and Presentation Board. The Design Journal is a real-time document that reflects the candidate's attempt at managing his or her personal design process.</p>					

Additional Information

- D&T is a relevant subject 4 or 5 under L1R5 for application to Junior College courses.
- D&T is a relevant subject 3 or 4 under L1R4 for application to Millennia Institute courses.
- D&T is a relevant subject under ELR2B2 for application to polytechnic courses, specifically design courses (eg. product industrial design, architecture, interior design), science-based courses (eg. aerospace electronics, energy systems, mechanical engineering), technology courses (eg. information systems, animation, infocomm technology).
- The D&T Design Journal, mock-up(s) and prototypes done at Secondary Three and Four can be showcased as part of a student's portfolio during the polytechnic Early Admissions Exercise interviews, and admissions to tertiary bachelor degrees at SUTD, NUS and NTU.

Entry Requirement

1. At least a pass in Design & Technology at Secondary Two

Demands of the Syllabus

1. Ability to do basic sketching and idea conceptualisation, make mock-up(s) and prototype
2. Ability to conduct internet search for research, organisation of data, and use Google Apps for coursework
3. Be self-directed and have good time management and perseverance as coursework requires consistent effort in research, self-study and experimentation
4. Have the desire to innovate
5. Like to work with their hands

Subject	Exercise & Sports Science
Subject Code	6081
	Express
Introduction	
<p>The O-Level Exercise and Sports Science syllabus aims to enable candidates to:</p> <ol style="list-style-type: none"> a. acquire and apply the knowledge in exercise physiology, biomechanics, and sports psychology to analyse, evaluate and improve practical performances in physical exercises and sports; b. develop the movement concepts and motor skills to be proficient in the performance of a team and an individual / dual sport; c. understand the benefits and risks associated with physical exercise and sports to manage personal participation in physical activities; and d. examine issues related to sports and participation in physical activities from socio- cultural and global perspectives. 	
Scheme of Assessment	

Paper/ Weighting	Duration	Mode	Components	Descriptions/ Marks allocation
1 (80 marks, 40%) All questions in the paper are compulsory	2 hrs	e-Examination	Section A	Variety of item types e.g. Multiple-choice Questions, Matching, Drag and Drop, Checking of Boxes and Fill in the Blanks. (20 Marks)
			Section B	Short answer and Structured Questions based on texts and pictures (40 Marks)
			Section C	Structured Questions based on ONE video (20 Marks)
2 (80 marks, 60%) This paper is internally assessed and externally moderated	24 weeks	Coursework	Physical Performance of 2 Practical Activities (40%)	Individual/ Dual Practical Activity (20 Marks)
				Team Practical Activity (20 Marks)
			Development Log (20%)	Individual/ Dual Practical Activity Log: Phase 1: Analyse and Plan (15 Marks) Phase 2: Perform, Evaluate and Improve (10 Marks) Phase 3: Consolidate (5 Marks)
				Team Practical Activity Log: Analyse and Justify (10 Marks)

Subject Content

There are five areas of study on which the assessment is based:

Exercise Physiology

- Skeletal System
- Muscular System
- Circulatory System
- Respiratory System
- Training Principles and Methods
- Nutrition

Biomechanics

- State Newton's Laws of motion.
- Explain the effects of the following on biomechanical movement in sports and physical activities
 - force
 - centre of gravity
 - stability
 - mass and weight
 - acceleration
- Know the different classes of levers in the human body and their application in sports and physical activities.
- Explain how summation of forces can be applied to performances in sports and physical activities.
- Describe how projectile motion can influence performance.

- Recognise the phases of performance and use a biomechanical analysis to analyse physical performances.
- Apply concepts in biomechanics to modify physical performance responses for improvement.

Sports Psychology

- Self-Efficacy
- Motivation
- Arousal & Performance
- Anxiety
- Factors influencing exercise participation

Sports Sociology

- Equity
 - Discuss the factors affecting participation in exercise and sport with regard to
 - gender
 - race
 - disability
- Commercialisation
 - Discuss the issue of sponsorship in sports
 - Recognise and discuss the issue of media (social, internet, visual and print) and sport
- Ethics
 - Discuss the issue of drugs in sport
 - Recognise and discuss the issue of sportsmanship and gamesmanship in sports

Motor Learning and Development

- Show an understanding of the Skills Classification.
- Explain the factors affecting variations in skill level in motor development and motor learning.
- Explain the differences between the skills of Novice and Expert performer in relation to
 - Information Processing Model
 - Different types of feedback and their importance
- Explain key considerations in design of practice when acquiring a new skill.
- Demonstrate the understanding of movement concepts using the BSER framework.
- Apply the activity-specific movement concepts in different practical activities.
- Show an understanding of game-related concepts and apply these concepts in different practical activities.

Additional Information

Paper 2 Coursework assesses candidates' proficiency in performing practical activities and their ability to analyse, evaluate and make improvement on their physical performance through a Development Log.

Candidates must choose ONE practical activity from EACH of the categories below:

Categories	Practical Activities
Individual / Dual	Individual <ul style="list-style-type: none"> • Cross-country Running • Swimming • Track and Field Dual <ul style="list-style-type: none"> • Badminton • Table Tennis • Tennis
Team	<ul style="list-style-type: none"> • Basketball • Floorball • Football • Hockey • Netball • Softball • Volleyball

For this component of Coursework, candidates will also be assessed on their ability to

- participate in a recognised version of a practical activity with regard for the safety of self and others.
- perform a variety of skills with precision, control and fluency, which are applied appropriately in authentic performance situations.
- respond to the actions of other players with awareness of own role and apply appropriate tactics to gain advantage during play for a dual or team practical activity.
- achieve the quantitative standard where applicable for an individual practical activity.

Entry Requirement

Students choosing ESS should have a natural predisposition towards sports and preferably have a competitive sporting background. The ideal candidate should also be strong in their sciences.

Students choosing ESS will undergo a physical performance test to help them decide if they are suitable in meeting the physical performance demands of the subject.

Subject	Higher Chinese 高级华文																							
Subject Code	1116																							
Stream	Express																							
Introduction																								
<p>1. 中学高级华文课程旨在小学课程的基础上，进一步提高聆听、说话、阅读、写作、口语互动和书面互动六个方面的知识。完成课程后，学生能够：</p> <ul style="list-style-type: none"> • 听懂适合程度的话语信息和内容，例如：故事、对话、诗歌、广告、报告、访问、广播剧、演讲、新闻报道、电台节目等。 • 根据情境与要求，清楚流利地讲述见闻，介绍或描述日常事物，针对话题发表感受或看法。 • 理解与分析适合程度的阅读语料，例如：故事、寓言、小说、散文、说明书、书信、海报、广告、传单、杂志、报章等。 • 根据情境与要求，清楚通顺地记叙见闻，介绍事物，针对话题表达感受或看法。 • 根据目的、情境和对象与他人进行口语互动和书面互动，交流情感、传达信息、表达看法。 <p>2. 本科试卷主要考查学生下列语文能力：</p> <ul style="list-style-type: none"> • 聆听 • 口头报告 • 讨论 • 词语的认识和语言的应用 • 阅读理解 • 写作 																								
Scheme of Assessment																								
<table border="1"> <thead> <tr> <th>Paper</th> <th>Description</th> <th>Marks</th> <th>Weighting (%)</th> <th>Duration</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>写作</td> <td>80</td> <td>40</td> <td>2 h</td> </tr> <tr> <td>2</td> <td>语文应用与阅读理解</td> <td>80</td> <td>40</td> <td>1 h 45 min</td> </tr> <tr> <td>3</td> <td>口试</td> <td>40</td> <td>20</td> <td>20 min</td> </tr> </tbody> </table>					Paper	Description	Marks	Weighting (%)	Duration	1	写作	80	40	2 h	2	语文应用与阅读理解	80	40	1 h 45 min	3	口试	40	20	20 min
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2	语文应用与阅读理解	80	40	1 h 45 min																				
3	口试	40	20	20 min																				
Subject Content																								
<p>1. 试卷一：写作</p> <p>这份试卷包括实用文和作文两部分。考生在写作时，可以使用考评局规定的词典。</p> <p>第一部分：实用文</p> <p>考生必须从两道试题中任选一题，字数在 220 以上。考生可以根据所提供的材料写一则电邮；也可以针对话题，结合所提供的言论，在网上论坛发表看法。</p> <p>第二部分：作文</p> <p>考生必须从三道试题中任选一题，字数在 500 以上。考查的文体包括记叙文、说明文和议论文（包括演讲词）。</p> <p>2. 试卷二：语文应用与阅读理解</p> <p>这份试卷包括短文填充、病句改正、阅读理解一、阅读理解二和片段缩写。</p>																								

第一部分：语文应用

- 短文填充：考生根据短文的内容和上下文的意思，从括号中选出最适当的答案。
- 病句改正：考生根据短文的内容和上下文的意思，改正有语病（画线部分）的句子。

第二部分：阅读理解（一）

考生根据篇章的内容，选出最适当的答案或回答问题。

第三部分：阅读理解（二）

考生根据两个篇章的内容回答问题。

第四部分：片段缩写

考生根据阅读理解二篇章的段落缩写成约 80 字的短文。

3. 试卷三：口试

这份试卷包括口头报告和讨论。在考试前，考生有 10 分钟的时间观看一个录像短片并为口头报告做准备。考生在限定的时间内，可以多次观看录像短片，也可以记下要点。

第一部分：口头报告

考生必须根据所提供的话题，结合录像短片的内容，呈献一个不超过 2 分钟的口头报告。

第二部分：讨论

主考员将根据口头报告的内容，跟考生进行讨论。

Additional Information

NA

Entry Requirement

Minimum 80% overall for Sec 2 Chinese Language and 60% overall for all subjects.

Subject	Bahasa Melayu Lanjutan (Higher Malay Language)
Subject Code	1117
Stream	Express

Introduction

Berdasarkan Sukatan Pelajaran Bahasa Melayu Sekolah Menengah 2021 yang dihasilkan oleh Bahagian Perancangan dan Pembangunan Kurikulum, Kementerian Pendidikan, pada akhir pendidikan sekolah menengah kursus Bahasa Melayu GCE Peringkat Biasa, pelajar harus berupaya untuk:

- a. mendengar pelbagai jenis teks lisan (sama ada dengan penyertaan keupayaan melihat atau sebaliknya) untuk memberikan respons berdasarkan konteks, tujuan dan khalayak;
- b. bertutur dengan fasih sesuai dengan konteks, tujuan dan khalayak;
- c. berinteraksi secara lisan dengan jelas, lancar dan berkesan sesuai dengan konteks, tujuan dan khalayak;
- d. membaca pelbagai teks (sama ada dengan penyertaan keupayaan melihat atau sebaliknya) untuk memberikan respons yang sesuai berdasarkan tujuan, situasi dan khalayak;
- e. menulis pelbagai jenis teks dengan jelas dan berkesan secara berkesan sesuai dengan konteks, tujuan dan khalayak (menggunakan kosa kata yang sesuai, bahasa yang gramatis dan gaya bahasa yang betul); dan
- f. berinteraksi melalui penulisan (sama ada dengan penyertaan keupayaan melihat atau sebaliknya) dengan jelas dan berkesan untuk memberikan respons yang sesuai mengikut konteks, tujuan dan khalayak.

Scheme of Assessment

Paper	Description	Marks	Weighting (%)	Duration
1	Paper 1 (Functional & Essay Writing)	80	40	2 h 00 min
2	Paper 2 (Language & Comprehension)	80	40	1 h 45 min
3	Paper 3 (Oral)	40	20	15 min

Subject Content

Kertas 1: Penulisan Fungsional dan Karangan – 80 markah

Kertas 1 terbahagi kepada Bahagian A dan Bahagian B. Calon dikehendaki menjawab dua soalan; satu daripada Bahagian A dan satu lagi daripada Bahagian B. Masa yang diperuntukkan ialah dua jam. Kamus yang diluluskan boleh digunakan.

Bahagian A: Penulisan Fungsional (20 markah)

Bahagian A mengandungi dua soalan. Calon perlu menjawab satu daripada dua soalan yang dikemukakan. Panjangnya respons calon haruslah sekurang-kurangnya 140 patah perkataan.

- E-mel (konteks formal) Calon dikehendaki menulis respons berdasarkan maklumat yang diberikan dalam bentuk e-mel.
- Forum (konteks tidak formal) Calon dikehendaki menulis respons peribadi berupa hantaran secara dalam talian berdasarkan maklumat yang diberikan dalam bentuk forum.

Bahagian B: Penulisan Karangan (60 markah)

Bahagian B mengandungi tiga soalan. Calon perlu menjawab satu soalan sahaja. Panjangnya karangan calon haruslah sekurang-kurangnya 380 patah perkataan.

Kertas 2: Penggunaan Bahasa dan Kefahaman – 80 markah

Kertas 2 terbahagi kepada Bahagian A, B, C dan D. Calon dikehendaki menjawab semua soalan. Masa yang diperuntukkan ialah 1 jam 45 minit.

Bahagian A (20 markah)

Bahagian ini mengandungi soalan tatabahasa.

Soalan A1: Golongan Kata (10 markah)

Bahagian ini mengandungi lima soalan berbentuk respons bebas. Calon dikehendaki melengkapkan teks yang disediakan dengan perkataan yang sesuai.

Soalan A2: Menggantikan Perkataan (10 markah)

Bahagian ini mengandungi lima soalan berbentuk respons bebas. Calon dikehendaki mengenal pasti lima patah perkataan yang disalah imbuah atau disalah guna. Kemudian, calon dikehendaki membetulkan perkataan yang disalah imbuah dengan imbuhan yang betul dan menggantikan perkataan yang disalah guna dengan perkataan yang sesuai mengikut penggunaannya dalam teks.

Bahagian B: Kefahaman 1 (10 markah)

Bahagian ini mengandungi lima soalan berbentuk aneka pilihan (MCQ) dan respons bebas berdasarkan satu teks yang panjangnya lebih kurang 200 patah perkataan. Calon dikehendaki menjawab lima soalan kefahaman.

Bahagian C: Kefahaman 2 (38 markah)

Bahagian ini terbahagi kepada Soalan C1 dan Soalan C2

Soalan C1 (22 markah)

Bahagian ini mengandungi lima soalan berbentuk respons bebas berdasarkan satu teks yang panjangnya lebih kurang 390 patah perkataan.

Soalan C2 (16 markah)

Bahagian ini mengandungi lima soalan berbentuk aneka pilihan (MCQ) dan respons bebas berdasarkan satu teks yang panjangnya lebih kurang 390 patah perkataan. Calon dikehendaki menjawab tiga soalan kefahaman. Bagi soalan kosa kata, calon dikehendaki memberikan maksud perkataan dan/atau frasa yang diberikan mengikut konteks.

Bahagian D: Peringkasan (12 markah)

Calon dikehendaki menulis ringkasan berdasarkan teks dalam Soalan C2 dengan menggunakan tidak lebih daripada 60 patah perkataan.

Kertas 3: Lisan – 40 markah

Kertas 3 terbahagi kepada dua bahagian. Masa yang diperuntukkan adalah lebih kurang 15 minit. Calon diberi 10 minit untuk menonton klip video dan membuat persiapan bagi penyampaian lisan berdasarkan topik yang diberikan. Sewaktu persiapan, calon boleh membuat catatan. Catatan tersebut boleh dibawa bersama calon sebagai bahan rujukan semasa peperiksaan lisan dijalankan.

Bahagian A: Penyampaian Lisan (20 markah)

Calon dikehendaki membuat penyampaian lisan yang panjangnya tidak lebih daripada 2 minit berdasarkan topik yang diberikan dengan menggunakan video sebagai rangsangan.

Bahagian B: Perbincangan berdasarkan Penyampaian Lisan (20 markah)

Calon dikehendaki melibatkan diri dalam perbincangan dengan Pemeriksa Lisan berdasarkan penyampaian lisan yang telah dibuatnya.

Additional Information

NA

Entry Requirement

NA

Subject	Bahasa Melayu (Malay Language)
Subject Code	1148
Stream	Express

Introduction

Berdasarkan Sukatan Pelajaran Bahasa Melayu Sekolah Menengah 2021 yang dihasilkan oleh Bahagian Perancangan dan Pembangunan Kurikulum, Kementerian Pendidikan, pada akhir pendidikan sekolah menengah kursus Bahasa Melayu GCE Peringkat Biasa, pelajar harus berupaya untuk:

- a. mendengar pelbagai jenis teks lisan (sama ada dengan penyertaan keupayaan melihat atau sebaliknya) untuk memberikan respons berdasarkan konteks, tujuan dan khalayak;
- b. bertutur dengan fasih sesuai dengan konteks, tujuan dan khalayak;
- c. berinteraksi secara lisan dengan jelas, lancar dan berkesan sesuai dengan konteks, tujuan dan khalayak;
- d. membaca pelbagai teks (sama ada dengan penyertaan keupayaan melihat atau sebaliknya) untuk memberikan respons yang sesuai berdasarkan tujuan, situasi dan khalayak;
- e. menulis pelbagai jenis teks dengan jelas dan berkesan secara berkesan sesuai dengan konteks, tujuan dan khalayak (menggunakan kosa kata yang sesuai, bahasa yang gramatis dan gaya bahasa yang betul); dan
- f. berinteraksi melalui penulisan (sama ada dengan penyertaan keupayaan melihat atau sebaliknya) dengan jelas dan berkesan untuk memberikan respons yang sesuai mengikut konteks, tujuan dan khalayak.

Scheme of Assessment

Paper	Description	Marks	Weighting (%)	Duration
1	Paper 1 (Functional & Essay Writing)	70	35	2 h 00 min
2	Paper 2 (Language & Comprehension)	60	30	1 h 30 min
3	Paper 3 (Oral)	50	25	15 min
	Listening Comprehension	20	10	30 min

Subject Content

Kertas 1: Penulisan Fungsional dan Karangan – 60 markah (30%)

Kertas 1 terbahagi kepada dua bahagian; Bahagian A dan Bahagian B. Calon dikehendaki menjawab dua soalan; satu daripada Bahagian A dan satu lagi daripada Bahagian B. Masa yang diperuntukkan ialah 2 jam. Kamus yang diluluskan boleh digunakan.

Bahagian A: Penulisan Fungsional – 20 markah (10%)

Bahagian A mengandungi dua soalan. Calon perlu menjawab satu daripada dua soalan yang dikemukakan. Panjangnya respons calon haruslah sekurang-kurangnya 120 patah perkataan.

- Forum/blog (Konteks tidak formal) Calon dikehendaki menulis respons peribadi berupa hantaran secara dalam talian berdasarkan maklumat yang diberikan dalam bentuk forum atau blog.
- E-mel (Konteks formal) Calon dikehendaki menulis respons berdasarkan maklumat yang diberikan dalam bentuk e-mel. Sebagai contoh, untuk memberikan pujian, melaporkan insiden, membuat aduan dan lain-lain lagi.

Bahagian B: Penulisan Karangan (40 markah)

Bahagian B mengandungi tiga soalan. Calon perlu menjawab satu sahaja. Panjangnya karangan calon haruslah sekurang-kurangnya 240 patah perkataan.

Kertas 2: Penggunaan Bahasa dan Kefahaman (70 markah)

Kertas 2 terbahagi kepada tiga bahagian; Bahagian A, B dan C. Calon dikehendaki menjawab semua soalan. Masa yang diperuntukkan ialah 1 jam 30 minit.

Bahagian A: Penggunaan Bahasa (20 markah)**Soalan A1 (10 markah)**

Bahagian ini mengandungi lima soalan berbentuk aneka pilihan (MCQ). Calon dikehendaki memilih perkataan yang tepat daripada golongan Kata Nama, Kata Kerja, Kata Adjektif atau Kata Tugas untuk melengkapkan satu teks ekspositori yang diberikan.

Soalan A2 (10 markah)

Bahagian ini mengandungi lima soalan respons bebas. Terdapat perkataan yang telah digarisi kerana penggunaannya salah dari segi Kata Nama, Kata Kerja atau Kata Adjektif. Calon dikehendaki menggantikan perkataan yang telah digarisi dengan perkataan yang sesuai mengikut penggunaannya dalam teks.

Bahagian B: Kefahaman 1 (20 markah)**Soalan B1 (10 markah)**

Bahagian ini mengandungi lima soalan berbentuk aneka pilihan (MCQ). Terdapat dua teks yang disediakan. Calon dikehendaki menyatakan sama ada penerangan yang diberikan berkaitan dengan teks tersebut betul atau salah dengan membubuh tanda ✓ di tempat kosong yang disediakan.

Soalan B2 (10 markah)

Bahagian ini mengandungi lima soalan kefahaman berbentuk aneka pilihan (MCQ). Calon dikehendaki menjawab soalan berdasarkan dua teks autentik seperti iklan, brosur, poster, risalah, rencana dan lain-lain lagi.

Bahagian C: Kefahaman 2 (30 markah)

Bahagian ini mengandungi 10 soalan berbentuk respons bebas berdasarkan satu teks naratif. Calon dikehendaki menjawab enam soalan kefahaman. Bagi soalan kosa kata, terdapat empat kosa kata yang diuji. Calon dikehendaki mengenal pasti perkataan yang terdapat dalam teks yang mempunyai maksud yang sama dengan frasa yang diberikan bagi dua soalan kosa kata dan memberikan maksud perkataan/frasa mengikut konteks yang diberikan bagi dua lagi soalan kosa kata.

Kertas 3: Lisan dan Kefahaman Mendengar (70 markah)

Kertas 3 mengandungi dua komponen.

Lisan (50 markah)

Peperiksaan Lisan terdiri daripada dua bahagian. Masa yang diperuntukkan adalah lebih kurang 15 minit. Calon diberi 10 minit untuk membuat persiapan.

Bahagian A: Bacaan Lantang (10 markah)

Calon dikehendaki membaca dengan lantang teks yang dipaparkan pada skrin komputer.

Bahagian B: Perbualan (40 markah)

Calon dikehendaki menonton klip video (55-60 saat) dan melibatkan diri dalam perbualan dengan pemeriksa lisan berdasarkan topik yang berkaitan dengan tema klip video yang telah ditonton.

Kefahaman Mendengar (20 markah)

Bahagian ini mengandungi 10 soalan berbentuk aneka pilihan (MCQ). Calon dikehendaki menjawab soalan berdasarkan enam teks autentik pelbagai genre seperti rencana, iklan, pengumuman, cerpen dan lain-lain lagi. Tiga daripada teks tersebut merupakan teks pendek (satu soalan bagi setiap teks pendek). Masa yang diperuntukkan adalah lebih kurang 30 minit.

Additional Information

NA

Entry Requirement

NA

Subject	Mathematics
Subject Code	4052
Stream	Express

Introduction

The O-Level Mathematics syllabus aims to enable students to:

- acquire mathematical concepts and skills for continuous learning in mathematics and to support learning in other subjects;
- develop thinking, reasoning, communication, application and metacognitive skills through a mathematical approach to problem solving;
- connect ideas within mathematics and between mathematics and other subjects through applications of mathematics; and
- build confidence and foster interest in mathematics.

Students will be solving problems in real-world contexts as part of the learning experiences of every student. These experiences give students the opportunities to apply the concepts and skills that they have learnt and to appreciate the value of and develop an interest in mathematics. Problems in real-world contexts can be included in every strand and level, and may require concepts and skills from more than one strand.

Students are expected to be familiar with the following contexts and solve problems based on these contexts over the four years of their secondary education:

- In everyday life, including travel/excursion plans, transport schedules, sports and games, recipes, floor plans, navigation etc.
- In personal and household finance, including simple and compound interest, taxation, instalments, utilities bills, money exchange, etc.
- In interpreting and analysing data from tables and graphs, including distance-time and speed-time graphs. The list above is by no means exhaustive or exclusive.

Through the process of solving such problems, students will experience all or part of the mathematical modelling process.

This includes:

- formulating the problem, including making suitable assumptions and simplifications;

- making sense of and discussing data, including real data presented as graphs and tables;
- selecting and applying the appropriate concepts and skills to solve the problem; and
- interpreting the mathematical solutions in the context of the problem.

Scheme of Assessment

O-Level Mathematics (First Year of Examination -2023)

PAPER	DURATION	DESCRIPTION	MARKS	WEIGHTING
Paper 1	2 hours	There will be about 26 short answer questions. Candidates are required to answer all questions.	90	50%
Paper 2	2 hours	There will be 9 to 10 questions of varying marks and lengths. The last question in this paper will focus specifically on applying mathematics to a real-world scenario. Candidates are required to answer all questions.	90	50%

Subject Content

The concepts and skills covered in the syllabus are organised along 3 content strands. The development of processes, metacognition and attitudes are embedded in the learning experiences that are associated with the content.

Concept and Skills		
Number and Algebra	Geometry and Measurement	Statistics and Probability
Learning Experiences (Processes, Metacognition and Attitudes)		

Additional Information

Entry Requirement

-

Subject	Physics			
Subject Code	6091			
Stream	Express			
Introduction				
<p>The Upper Secondary Physics syllabus seeks to develop in students the understanding, skills, ethics and attitudes relevant to the Practices of Science, enabling them to</p> <p>a) appreciate practical applications of physics in the real world, b) deepen their interest in physics for future learning and work, c) become scientifically literate citizens who can innovate and seize opportunities in the 21st century, and d) appreciate that a small number of basic principles and disciplinary ideas can be applied to explain, analyse and solve problems in the physical world.</p>				
Scheme of Assessment				
PAPER	DURATION	DESCRIPTION	MARKS	WEIGHTING
1	1 hr	Multiple Choice	40	30%
2	1h 45m	Structured and Free Response	80	50%
3	1h 50m	Practical	40	20%
Subject Content				
Measurements				
1. Physical Quantities, Units and Measurements				
Newtonian Mechanics				
2. Kinematics				
3. Dynamics				
4. Turning Effects of Forces				
5. Pressure				
6. Energy				
Thermal Physics				
7. Kinetic Particle Model of Matter				
8. Thermal Processes				
9. Thermal Properties of Matter				
Waves				
10. General Wave Properties				
11. Electromagnetic Spectrum				
12. Light				
Electricity and Magnetism				
13. Static Electricity				
14. Current of Electricity				
15. D.C. Circuits				

- 16. Practical Electricity
- 17. Magnetism
- 18. Electromagnetism
- 19. Electromagnetic Induction
- Radioactivity**
- 20. Radioactivity

Additional Information

-

Entry Requirement

Overall Sec 2 Express Results:

Science: $\geq 70\%$

Mathematics: $\geq 70\%$

Subject	Science: Physics, Chemistry Science: Chemistry, Biology
Subject Code	5086 Science: Physics, Chemistry 5088 Science: Chemistry, Biology
Stream	Express

Introduction

Science Physics (5086)

The Ordinary Level Science (Physics) Syllabus provides students with a coherent understanding of energy, matter, and their interrelationships. It focuses on investigating natural phenomena and then applying patterns, models (including mathematical ones), principles, theories and laws to explain the physical behaviour of the universe. The theories and concepts presented in this syllabus belong to a branch of physics commonly referred to as classical physics. Modern physics, developed to explain the quantum properties at the atomic and sub-atomic level, is built on knowledge of these classical theories and concepts.

The disciplinary ideas of Physics represent the overarching ideas essential for the understanding of Physics. An understanding of these ideas helps students see the interconnectedness of ideas within and across the sub-disciplines of Physics. Equipping students with a coherent view and conceptual framework facilitates the application and transfer of learning. These disciplinary ideas can be revisited and deepened at higher levels of learning and beyond the schooling years.

Disciplinary ideas are introduced at the upper secondary levels when students begin to specialise in the subdisciplines of science.

1. Matter and energy make up the Universe
2. Matter interacts through forces and fields
3. Forces help us understand motion
4. Waves can transfer energy without transferring matter
5. Conservation laws constrain the changes in systems
6. Microscopic models can explain macroscopic phenomena

Science Chemistry (5086, 5088)

The Ordinary Level Science (Chemistry) Syllabus is designed to place less emphasis on factual materials while having a greater emphasis on the understanding and application of scientific concepts and principles. This approach has been adopted in recognition of the need for students to develop skills that will be of longterm value in an increasingly complex and globalised world, rather than focusing on large quantities of factual materials, which may have only short-term relevance.

The disciplinary ideas of Chemistry described below represent the overarching ideas which can be applied to explain, analyse and solve a variety of problems that seek to address the broader questions of what matter is and how particles interact with one another. Equipping students with a coherent view and conceptual framework facilitates the application and transfer of learning. These disciplinary ideas can be revisited and deepened at higher levels of learning and beyond the schooling years.

1. Matter is made up of a variety of chemical elements, each with characteristic properties, and the smallest particle that characterises a chemical element is an atom.
2. The structure of matter and its chemical and physical properties are determined by the arrangement of particles and electrostatic interactions between them.
3. Energy changes across and within systems usually occur during physical and chemical changes, when there is rearrangement of particles.
4. Energy plays a key role in influencing the rate and extent of physical and chemical changes.

5. Matter and energy are conserved in all physical and chemical changes.

Science Biology (5088)

The Ordinary Level Science (Biology) Syllabus is designed to have less emphasis on factual materials, but a much greater emphasis on the understanding and application of scientific concepts and principles. This approach has been adopted in recognition of the need for students to develop skills that will be of long-term value in an increasingly complex and globalised world, rather than focusing on large quantities of factual material, which may have only short-term relevance.

The disciplinary ideas of Biology described below represent the overarching ideas which can be applied to explain, analyse and solve a variety of problems that seek to address the broader question of how living organisms work to sustain life. The purpose of equipping students with an understanding of these ideas is to develop in them a coherent view and conceptual framework of scientific knowledge to facilitate the application and transfer of learning. These ideas can be revisited throughout the syllabus, deepened at higher levels of learning and beyond the schooling years.

1. The Cell – Diverse life forms are similar in that their basic unit are cells.
2. Structure and Function – Structure and function of organisms from the molecular to the organ system levels are related to each other.
3. Systems – Biological systems interact among themselves and with the environment resulting in the flow of energy and nutrients.
4. Energy – To ensure survival, living organisms obtain, transform and utilise energy from the external world.
5. Homeostasis, Co-ordination and Response – Living organisms detect changes both from the surrounding environment and within themselves so that they are able to respond to these changes to maintain a constant internal environment needed for sustaining life.
6. Heredity – Genetic information is passed down from parents to offspring during reproduction to ensure the continuity of life.
7. Evolution – The diversity of living organisms is achieved through a process of evolution, driven by mechanisms such as natural selection.

Scheme of Assessment

Paper	Type of Paper	Duration	Marks	Weighting
1	Multiple Choice	1 h	40	20.0%
2	Structured and Free Response (Physics)	1 h 15 min	65	32.5%
3	Structured and Free Response (Chemistry)	1 h 15 min	65	32.5%
4	Structured and Free Response (Biology)	1 h 15 min	65	32.5%
5	Practical Test	1 h 30 min	30	15.0%

Science (Physics, Chemistry), Syllabus 5086

Paper 1 will be based on the Physics and Chemistry sections of the syllabus.

Paper 2 will be based on the Physics section of the syllabus.

Paper 3 will be based on the Chemistry section of the syllabus.

Paper 5 will be based on the Physics and Chemistry sections of the syllabus.

Science (Physics, Biology), Syllabus 5087

Paper 1 will be based on the Physics and Biology sections of the syllabus.

Paper 2 will be based on the Physics section of the syllabus.

Paper 4 will be based on the Biology section of the syllabus.

Paper 5 will be based on the Physics and Biology sections of the syllabus.

Science (Chemistry, Biology), Syllabus 5088

Paper 1 will be based on the Chemistry and Biology sections of the syllabus.

Paper 3 will be based on the Chemistry section of the syllabus.

Paper 4 will be based on the Biology section of the syllabus.

Paper 5 will be based on the Chemistry and Biology sections of the syllabus.

Subject Content

Science Physics

Section	Topics
I. Measurement	1. Physical Quantities, Units and Measurement
II. Newtonian Mechanics	2. Kinematics 3. Force and Pressure 4. Dynamics 5. Turning Effect of Forces 6. Energy
III. Thermal Physics	7. Kinetic Particle Model of Matter 8. Thermal Processes
IV. Waves	9. General Wave Properties 10. Electromagnetic Spectrum 11. Light
V. Electricity and Magnetism	12. Electric Charge and Current of Electricity 13. D.C. Circuits 14. Practical Electricity 15. Magnetism and Electromagnetism
VI. Radioactivity	16. Radioactivity

Science Chemistry

Section	Topics
I. Matter – Structures and Properties	1. Experimental Chemistry 2. The Particulate Nature of Matter 3. Chemical Bonding and Structure
II. Chemical Reactions	4. Chemical Calculations 5. Acid-Base Chemistry 6. Qualitative Analysis 7. Redox Chemistry 8. Patterns in the Periodic Table 9. Chemical Energetics 10. Rate of Reactions
III. Chemistry in a Sustainable World	11. Organic Chemistry 12. Maintaining Air Quality

Science Biology

Section	Topics
I. CELLS AND THE CHEMISTRY OF LIFE	1. Cell Structure and Organisation 2. Movement of Substances 3. Biological Molecules
II. THE HUMAN BODY – MAINTAINING LIFE	4. Nutrition in Humans 5. Transport in Humans 6. Respiration in Humans 7. Infectious Diseases in Humans
III. LIVING TOGETHER – PLANTS, ANIMALS AND ECOSYSTEMS	8. Nutrition and Transport in Flowering Plants 9. Organisms and their Environment
IV. CONTINUITY OF LIFE	10. Molecular Genetics 11. Reproduction in Humans 12. Inheritance

Entry Requirement

NA

Subject	Tamil
Subject Code	1157
Stream	Express

Introduction

கல்வி அமைச்சின் பாடக்கலைத்திட்ட வரைவு, மேம்பாட்டுப் பிரிவினால் உருவாக்கப்பட்ட உயர்நிலை வகுப்புகளுக்கான தமிழ்மொழிப் பாடத்திட்டத்தின் முக்கிய நோக்கம் கேட்டல், பேசுதல், படித்தல், எழுதுதல் ஆகிய நான்கு அடிப்படை மொழித்திறன்களோடு இருவழிக் கருத்துப்பரிமாற்றத் திறன்களிலும் மாணவர்களுக்குப் பயிற்சியளித்தலாகும். இவற்றோடு தமிழ் மரபுக் கூறுகளையும் பண்பாட்டுக் கூறுகளையும் மாணவர்களுக்கு நன்கு விளக்குவதோடு நாட்டுருவாக்கத்துக்குத் தேவையான பண்புநலன்களையும் அவர்களிடத்தில் வளர்த்தலாகும். எனவே, உயர்நிலை வகுப்புகளுக்குரிய தமிழ்மொழிப் பாடத்திட்டம் பின்வரும் கற்றல் அடைவுநிலைகளை அடிப்படையாகக்கொண்டு வடிவமைக்கப்பட்டுள்ளது:

கேட்டலும் நோக்கலும்:

மாணவர்கள் பல்வகையான கேட்டல் நோக்கல் வளங்களைக் கேட்டும் பார்த்தும் தக்க வகையில் புரிந்துணர்வை வெளிப்படுத்துவர்.

பேசுதல்:

மாணவர்கள் பல்வேறு சூழல்களுக்கேற்பப் பேச்சுத்தமிழிலும் எழுத்துத்தமிழிலும் தெளிவாகவும் சரளமாகவும் பேசுவர்.

பேச்சுவழிக் கருத்துப்பரிமாற்றம்:

மாணவர்கள் சூழலுக்குத் தக்கவாறு பொருத்தமான முறையில் பேச்சுவழிக் கருத்துப்பரிமாற்றத்தில் ஈடுபடுவர்.

படித்தலும் நோக்கலும்:

மாணவர்கள் பல்வகையான பனுவல்களைப் பார்த்தும் படித்தும் தக்க வகையில் புரிந்துணர்வை வெளிப்படுத்துவர்.

எழுதுதல்:

மாணவர்கள் சரியான மொழியமைப்புடனும் படைப்பாக்கத் திறனுடனும் தங்கள் கருத்துகளைப் பல்வேறு வடிவங்களில் வெளிப்படுத்துவர்.

எழுத்துவழிக் கருத்துப்பரிமாற்றம்:

மாணவர்கள் சூழலுக்கேற்பப் பொருத்தமான மொழியமைப்பையும் வடிவத்தையும் பயன்படுத்தி எழுத்துவழியே கருத்துப்பரிமாறிக் கொள்வர்.

Scheme of Assessment

Paper	Description	Marks	Weighting (%)	Duration
1	கட்டுரை	60	30	2 h 00 min
2	மொழி மரபும் பயன்பாடும் மற்றும் கருத்தறிதல்	70	35	1 h 30 min
3	வாய்மொழி	50	25	15 min
	கேட்டல் கருத்தறிதல்	20	10	30 min

Subject Content

இப்பாடம் மொத்தம் 3 வினாத்தாள்களைக் கொண்டது.

தாள் 1: (60 மதிப்பெண்கள், 30%)

'அ' பிரிவு: நடைமுறை சார்ந்த எழுத்துப் படைப்பு - மின்னஞ்சல்

இப்பிரிவில் கொடுக்கப்படும் இரண்டு தலைப்புகளுள் ஏதேனும் ஒன்றினைப்பற்றி 110 சொற்களுக்குக் குறையாமல் விடையெழுத்துத் தலைப்புகளும் வேண்டும். உறவுமுறை, தொழில்முறை மின்னஞ்சல் வகைகளுள் ஏதேனும் ஒன்றுக்கு விடையளிக்க வேண்டும். பொருள், மொழி, அமைப்புமுறை ஆகியவற்றைக் கருத்திற்கொண்டு தேர்வெழுதுபவரின் படைப்பு மதிப்பிடப்படும்.

'ஆ' பிரிவு: கட்டுரை

இப்பிரிவில் 3 கட்டுரைத் தலைப்புகள் இடம்பெற்றிருக்கும். அவற்றுள் ஏதேனும் ஒன்றினைப்பற்றி 200 சொற்களுக்குக் குறையாமல் ஒரு கட்டுரை/கதை எழுத வேண்டும். பொருள், மொழி, அமைப்புமுறை ஆகியவற்றைக் கருத்திற்கொண்டு தேர்வெழுதுபவரின் படைப்பு மதிப்பிடப்படும்.

தாள் 2: (70 மதிப்பெண்கள், 35%)

'அ' பிரிவு: மொழி மரபும் பயன்பாடும்

இப்பிரிவில் மரபுத்தொடர்கள்/இணைமொழிகள் சார்ந்து 5 வினாக்களும் முன்னுணர்வுக் கருத்தறிதல் பகுதியில் 5 வினாக்களும் இடம்பெறும். அவை அனைத்திற்கும் விடையளித்தல் வேண்டும்.

'ஆ' பிரிவு: தெரிவுவிடைக் கருத்தறிதல் மற்றும் பிழை திருத்தம்

இப்பிரிவில் இடம்பெறும் இரண்டு பனுவல்களையொட்டி 5 தெரிவுவிடை வினாக்கள் இடம்பெறும். 'பிழை திருத்தம்' எனும் தலைப்பின்கீழ்ப் பாடத்திட்டத்திலுள்ள இலக்கணக் கூறுகளைச் சோதிக்கும் வகையில் ஒரு பனுவலை அடிப்படையாகக்கொண்டு 5 வினாக்கள் இடம்பெறும். கொடுக்கப்பட்டிருக்கும் பகுதியிலுள்ள 5 பிழையான சொற்களைக் கண்டறிந்து அவற்றைத் திருத்திச் சரியான சொல்லை எழுத வேண்டும்.

'இ' பிரிவு: சுயவிடைக் கருத்தறிதல் மற்றும் சொற்பொருள்

இப்பிரிவில் ஒரு பனுவலையொட்டி 5 சுயவிடை வினாக்களும் 5 சொற்பொருளைச் சோதிக்கும் வினாக்களும் இடம்பெறும். சுயவிடை வினாக்களுக்குரிய விடைகளைப் பகுதியின் துணைகொண்டு கண்டறிந்து சொந்த நடையில் எழுதவேண்டும்.

தாள் 3: வாய்மொழியும் கேட்டல் கருத்தறிதலும் (70 மதிப்பெண்கள், 35%)

பகுதி 1: வாய்மொழித் தேர்வு (50 மதிப்பெண்கள்)

இத்தேர்வு கீழ்க்காணும் 2 கூறுகளை உள்ளடக்கியது.

1. வாய்விட்டு வாசித்தல்
2. ஒளிக்காட்சியை ஒட்டிய உரையாடல்

பகுதி 2: கேட்டல் கருத்தறிதல் (20 மதிப்பெண்கள்)

செய்தி, உரையாடல், சிற்றுரை, கதை, அறிக்கை, விளம்பரம், அறிவிப்பு எனப் பலவகையான பனுவல்களைக் கேட்டு மாணவர்கள் 10 தெரிவுவிடை வினாக்களுக்கு விடையளிக்க வேண்டும்..

Entry Requirement

NA

Subject	Higher Tamil
Subject Code	1147
Stream	Express

Introduction

கல்வி அமைச்சின் பாடக்கலைத்திட்ட வரைவு, மேம்பாட்டுப் பிரிவினால் உருவாக்கப்பட்ட உயர்நிலை வகுப்புகளுக்கான தமிழ்மொழிப் பாடத்திட்டத்தின் முக்கிய நோக்கம் கேட்டல், பேசுதல், படித்தல், எழுதுதல் ஆகிய நான்கு அடிப்படை மொழித்திறன்களோடு இருவழிக் கருத்துப்பரிமாற்றத் திறன்களிலும் மாணவர்களுக்குப் பயிற்சியளித்தலாகும். இவற்றோடு தமிழ் மரபுக் கூறுகளையும் பண்பாட்டுக் கூறுகளையும் மாணவர்களுக்கு நன்கு விளக்குவதோடு நாட்டுருவாக்கத்துக்குத் தேவையான பண்புநலன்களையும் அவர்களிடத்தில் வளர்த்தலாகும். எனவே, உயர்நிலை வகுப்புகளுக்குரிய தமிழ்மொழிப் பாடத்திட்டம் பின்வரும் கற்றல் அடைவுநிலைகளை அடிப்படையாகக்கொண்டு வடிவமைக்கப்பட்டுள்ளது:

கேட்டலும் நோக்கலும்:

மாணவர்கள் பல்வகையான கேட்டல் நோக்கல் வளங்களைக் கேட்டும் பார்த்தும் தக்க வகையில் புரிந்துணர்வை வெளிப்படுத்துவர்.

பேசுதல்:

மாணவர்கள் பல்வேறு சூழல்களுக்கேற்பப் பேச்சுத்தமிழிலும் எழுத்துத்தமிழிலும் தெளிவாகவும் சரளமாகவும் பேசுவர்.

பேச்சுவழிக் கருத்துப்பரிமாற்றம்:

மாணவர்கள் சூழலுக்குத் தக்கவாறு பொருத்தமான முறையில் பேச்சுவழிக் கருத்துப்பரிமாற்றத்தில் ஈடுபடுவர்.

படித்தலும் நோக்கலும்:

மாணவர்கள் பல்வகையான பனுவல்களைப் பார்த்தும் படித்தும் தக்க வகையில் புரிந்துணர்வை வெளிப்படுத்துவர்.

எழுதுதல்:

மாணவர்கள் சரியான மொழியமைப்புடனும் படைப்பாக்கத் திறனுடனும் தங்கள் கருத்துகளைப் பல்வேறு வடிவங்களில் வெளிப்படுத்துவர்.

எழுத்துவழிக் கருத்துப்பரிமாற்றம்:

மாணவர்கள் சூழலுக்கேற்பப் பொருத்தமான மொழியமைப்பையும் வடிவத்தையும் பயன்படுத்தி எழுத்துவழியே கருத்துப்பரிமாறிக் கொள்வர்.

Scheme of Assessment

Paper	Description	Marks	Weighting (%)	Duration
1	கட்டுரை	80	40	2 h 00 min
2	மொழி மரபும் பயன்பாடும் மற்றும் கருத்தறிதலும்	80	40	1 h 45 min
3	வாய்மொழி	40	20	15 min

Subject Content

இப்பாடம் மொத்தம் 3 வினாத்தாள்களைக் கொண்டது.

தாள் 1: (80 மதிப்பெண்கள், 40%)

'அ' பிரிவு: நடைமுறை சார்ந்த எழுத்துப் படைப்பு – (மின்னஞ்சல், கருத்துக்களம்)

இப்பிரிவில் கொடுக்கப்படும் இரண்டு தலைப்புகளுள் ஏதேனும் ஒன்றினைப்பற்றி 130 சொற்களுக்குக் குறையாமல் விடையெழுத்துத் தலைப்புகள் வேண்டும். மின்னஞ்சல் (அலுவல் சார்ந்தது), கருத்துக்களம் (அலுவல் சாராதது) ஆகிய வடிவங்களில் அமைந்த இரண்டு வினாக்கள் இடம்பெறும். பொருள், மொழி, அமைப்புமுறை ஆகியவற்றைக் கருத்திற்கொண்டு தேர்வெழுதுபவரின் படைப்பு மதிப்பிடப்படும்.

'ஆ' பிரிவு: கட்டுரை

இப்பிரிவில் 3 கட்டுரைத் தலைப்புகள் இடம்பெற்றிருக்கும். அவற்றுள் ஏதேனும் ஒன்றினைப்பற்றி 300 சொற்களுக்குக் குறையாமல் ஒரு கட்டுரை எழுத வேண்டும். பொருள், மொழி, அமைப்புமுறை ஆகியவற்றைக் கருத்திற்கொண்டு தேர்வெழுதுபவரின் படைப்பு மதிப்பிடப்படும்.

தாள் 2: (80 மதிப்பெண்கள், 40%)

'அ' பிரிவு: (முன்னுணர்வுக் கருத்தறிதல், பிழைத்திருத்தம்)

இப்பிரிவில் 'முன்னுணர்வுக் கருத்தறிதல்', 'பிழை திருத்தம்' ஆகிய தலைப்புகளில் வினாக்கள் இடம்பெறும். முன்னுணர்வுக் கருத்தறிதல் பனுவலில் 5 கோடிட்ட இடங்கள் இடம்பெறும். தேர்வெழுதுவோர் ஒவ்வொரு கோடிட்ட இடத்திலும் மிகச் சரியான சொல்லை எழுதவேண்டும். பிழை திருத்தம் பனுவலில் பாடத்திட்டத்திலுள்ள இலக்கணக்கூறுகளைச் சோதிக்கும் வகையில் 5 வினாக்கள் இடம்பெறும். தேர்வெழுதுவோர் அப்பனுவலிலுள்ள 5 பிழையான சொற்களைக் கண்டறிந்து அவற்றைத் திருத்திச் சரியான வடிவத்தை எழுதவேண்டும்.

'ஆ' பிரிவு: (சொற்புணர்ச்சி)

இப்பிரிவில் 5 சொற்புணர்ச்சி வினாக்கள் இடம்பெறும். அவ்வினாக்கள் சொற்களைச் சேர்த்தெழுதுதலாகவோ பிரித்தெழுதுதலாகவோ அமையலாம்.

'இ' பிரிவு: (கருத்தறிதல் 1)

இப்பிரிவில் ஒரு பனுவலையொட்டி 3 தெரிவுவிடை வினாக்கள், ஓர் இலக்கண வினா, ஒரு சுருக்கி வரைதல் வினா ஆகியவை இடம்பெறும்.

'ஈ' பிரிவு: (கருத்தறிதல் 2)

இப்பிரிவில் ஒரு பனுவலையொட்டி 5 சுயவிடை வினாக்கள் இடம்பெறும். அவற்றுள் ஒன்று சொற்பொருளையொட்டி அமையும். சொற்பொருள் வினாவில் இடம்பெறும் நான்கு சொற்களுக்கு இடம்நோக்கிப் பொருள் கூறுதல் வேண்டும்.

தாள் 3: வாய்மொழி (40 மதிப்பெண்கள், 20%)

இத்தேர்வு கீழ்க்காணும் 2 கூறுகளை உள்ளடக்கியது.

1. வாய்மொழிப் படைப்பு
2. வாய்மொழிப் படைப்பை ஒட்டிய உரையாடல்

Entry Requirement

உயர்நிலை 2 விரைவில் தமிழில் 80% மதிப்பெண்களும், மொத்தப் பாடங்களின் விழுக்காடு 65% இருக்க வேண்டும்.

Subject	English Language
Subject Code	1184
Stream	Express

Introduction

By the end of Secondary education, pupils will be able to communicate effectively in English as a result of their development in the following areas:

1. Listen, read and view critically and with accuracy, understanding and appreciation, a wide range of literary and informational/functional texts from print and non-print sources.
2. Speak, write and represent in internationally acceptable English (Standard English) that is grammatical, fluent, mutually intelligible and appropriate for different purposes, audiences, contexts and cultures.
3. Understand and use internationally acceptable English (Standard English) grammar and vocabulary accurately and appropriately as well as understand how speakers/writers put words together and use language to communicate meaning and achieve impact.

Scheme of Assessment

Paper	Description	Marks	Weighting (%)	Duration
1	Writing	70	35	1 h 50 min
2	Comprehension	50	35	1 h 50 min
3	Listening	30	10	45 min
4	Oral Communication	30	20	20 min

Subject Content

Paper 1 Writing

Section A:

Editing - Candidates identify and edit grammatical errors in a short written text.

Section B:

Situational Writing -Candidates write 250–350 words on a given situation which will involve viewing a visual text.

Section C:

Continuous Writing - Candidates write 350–500 words on one of four topics set.

Paper 2 Comprehension

Section A:

Candidates respond to questions based on Texts 1 and 2, one of which is a visual text.

Section B:

Candidates respond to a variety of questions based on Text 3 which is a narrative or a recount.

Section C:

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.

Paper 3 Listening

Section A:

Candidates respond to a variety of listening tasks based on a number of audio recordings which the candidates will hear twice.

Section B: Candidates listen to an audio recording and do a simple note-taking exercise. Candidates will hear the recording only once.

Paper 4 Oral Communication

The two parts in this paper may be thematically linked.

Part 1: Planned Response

Candidates plan and deliver a response to a video clip and accompanying prompt presented on a computer screen.

Part 2: Spoken Interaction

Candidates engage in a discussion with the Examiners on a topic based on the same video clip.

Additional Information

Students are encouraged to read widely on a range of topics to familiarise themselves with current affairs and to experience good writing. They should also build up their store of vocabulary and appropriate expressions, in order to communicate effectively in both speaking and writing.

Entry Requirement

NA

Subject	Geography Elective
Subject Code	2279 1/2
Stream	Express

Introduction

The Upper Secondary Geography syllabus is aligned to the Framework for 21st Century Competencies (21CC) and Student Outcomes, and it enables students to develop competencies necessary for them to thrive in a globalised and fast-changing world. Learning Geography supports the acquisition of the 21CC through inquiries, developing well-constructed explanations and responses to phenomena or issues affecting their everyday lives. Geography also introduces investigative and communication tools including maps, fieldwork and Geographic Information Systems (GIS), which offer unique opportunities to make sense of the modern world. Geography students 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.

Scheme of Assessment

2279 O-Level Geography

<p>Paper 1</p> <p>Duration: 1hr 45 mins</p> <p>Total Marks: 50</p> <p>Weighting: 50%</p>	<p>Candidates answer three compulsory structured questions from these Clusters:</p> <ul style="list-style-type: none"> • Question 1: Geography in Everyday Life – Topic 3 (Fieldwork) (20m) • Question 2: Tourism (15m) • Question 3: Climate (15m) <p>Each structured question will consist of no more than 9 sub-parts.</p> <p>Candidates will be required to answer <u>one</u> 9 marks question testing on AO3 in <i>either</i> Question 2 <i>or</i> Question 3. This AO3 question carrying 9 marks will be marked using a generic holistic rubric. All other questions in this paper will be marked using point marking.</p> <p>The fieldwork context for Question 1 in this paper may or may not relate to the clusters covered in the syllabus content.</p>
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<p>Paper 2</p> <p>Duration: 1hr 45 mins</p> <p>Total Marks: 50</p> <p>Weighting: 50%</p>	<p>Candidates answer three compulsory structured questions from these Clusters:</p> <ul style="list-style-type: none"> • Question 1: Geography in Everyday Life Cluster – Topics 1 and 2 (15m) • Question 2: Tectonics (15m) • Question 3: Singapore (20m) <p>Each structured question will consist of no more than 9 sub-parts.</p> <p>Candidates will be required to answer <u>one</u> 9 marks question testing on AO3 in <i>either</i> Question 2 <i>or</i> Question 3. This AO3 question carrying 9 marks will be marked using a generic holistic rubric. All other questions in this paper will be marked using point marking.</p>
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Subject Content

Content Overview

This syllabus is divided into **five** clusters of topics.

Geography in Everyday Life Cluster

- Topic 1 – Thinking Geographically
- Topic 2 – Sustainable Development
- Topic 3 – Geographical Methods

Tourism Cluster

- Topic 1 – Tourism Activity
- Topic 2 – Tourism Development
- Topic 3 – Sustainable Tourism Development

Climate Cluster

- Topic 1 – Weather and Climate
- Topic 2 – Climate Change
- Topic 3 – Climate Action

Tectonics Cluster

- Topic 1 – Plate Tectonics
- Topic 2 – Earthquakes and Volcanoes
- Topic 3 – Disaster Risk Management

Singapore Cluster

- Topic 1 – Small Island City-State
- Topic 2 – Opportunities and Challenges
- Topic 3 – Sustainable and Resilient Singapore

Extended Fieldwork (10 weeks)

Assessment Specification Grid

The table below shows the approximate weighting of the AOs in the syllabus.

Assessment Objectives	Weightings for Paper 1 and Paper 2 each
AO1: Knowledge with Understanding	15%
AO2: Skills and Analysis	20%
AO3: Judgement and Decision-making	15%
Total	50%

Additional Information

Nil

Entry Requirement

- Students who wish to take Full Geography should have an interest in the subject and possess a decent command in the English Language and a flair for writing and reading.

- Students should score 65% and above for English Language and Geography overall at the Lower Secondary level.

Subject	Geography Elective
Subject Code	2260/2
Stream	Express
Introduction	
<p>The Upper Secondary Geography syllabus is aligned to the Framework for 21st Century Competencies (21CC) and Student Outcomes, and it enables students to develop competencies necessary for them to thrive in a globalised and fast-changing world. Learning Geography supports the acquisition of the 21CC through inquiries, developing well-constructed explanations and responses to phenomena or issues affecting their everyday lives. Geography also introduces investigative and communication tools including maps, fieldwork and Geographic Information Systems (GIS), which offer unique opportunities to make sense of the modern world. Geography students 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.</p>	

Scheme of Assessment

2260 O-Level Humanities (Geography)

Duration:
1hr 45 mins

Total Marks: **50**

Weighting: 50%

Candidates answer **Questions 1 and 2, and *either* Question 3 *or* 4** based on the Cluster studied:

- Question 1: Geography in Everyday Life (14m)
- Question 2: Tourism (18m)

EITHER

- Question 3: Climate (18m)

OR

- Question 4: Tectonics (18m)

Each structured question will consist of **no more than 8 sub-parts**.

Candidates will be required to answer one 9 marks question testing on AO3 in *either* Question 2 *or* Question 3/Question 4. This AO3 question carrying 9 marks will be marked using a generic holistic rubric. All other questions in this paper will be marked using point marking.

Subject Content

Content Overview

This syllabus is divided into **four** clusters of topics.

Geography in Everyday Life Cluster

- Topic 1 – Thinking Geographically
- Topic 2 – Sustainable Development
- Topic 3 – Geographical Methods

Tourism Cluster

- Topic 1 – Tourism Activity
- Topic 2 – Tourism Development
- Topic 3 – Sustainable Tourism Development

EITHER

Climate Cluster

- Topic 1 – Weather and Climate
- Topic 2 – Climate Change
- Topic 3 – Climate Action

OR

Tectonics Cluster

- Topic 1 – Plate Tectonics
- Topic 2 – Earthquakes and Volcanoes
- Topic 3 – Disaster Risk Management

Assessment Specification Grid

The table below shows the approximate weighting of the AOs in the syllabus.

Assessment Objectives	Weightings for Paper 2
AO1: Knowledge with Understanding	15%
AO2: Skills and Analysis	20%
AO3: Judgement and Decision-making	15%
Total	50%

Additional Information

Nil

Entry Requirement

Minimum a pass in Sec 2 Geography

Subject	Elective History
Subject Code	2261/02
Stream	G3
Introduction	
<p>In the History classroom, lessons are conducted with the goal of ensuring that students are empowered to draw connections between the past and present by understanding how the nature and impact of past developments explain today's world.</p> <p>Why does History matter?</p> <p>The study of History aims to develop students that are:</p> <ol style="list-style-type: none"> 1. Enquiring Develops an inquisitive mind by asking useful questions for uncovering and understanding the past. 2. Balanced Considers and acknowledges different viewpoints when constructing own historical interpretation. 3. Knowledgeable Develops a sound awareness of and familiarity with key forces and personalities that have shaped the international and regional landscapes. 4. Empathetic Understands the reasons behind past developments without imposing judgement using present day norms. 5. Methodical Employs comprehensive effort when engaged in historical enquiry by covering a range of sources, selecting and organising knowledge effectively. 6. Reasoned Constructs historical interpretation based on substantiated arguments. <p>These are qualities that are essential to help students confront an increasingly ambiguous and complex world.</p>	
Scheme of Assessment	
<p>The examination consists of one paper and the duration of the paper is 1 hour 40 minutes. The assessment modes comprise source-based case study and essay questions.</p>	

The Making of the 20th Century Modern World, 1910s–1991

Section A: Source-Based Case Study (30%)

- Maximum of 6 sources
- Q1(a)-(e): source-based questions (AO1+AO3)

30m

Section B: Essay Questions (20%)

- Answer 2 out of 3 questions set (AO1+AO2)
- The questions require candidates to analyse, evaluate and make judgement on historical events and / or issues
- Each question carries 10 marks.

20m

Total marks for Paper

50m

Subject Content

Unit 1 (Content taught in Secondary 3)

- Aims of the Paris Peace Conference and its immediate impact on Europe in the 1920s
- Rise of authoritarian regimes and its impact in the interwar years
 - Case study of Militarist Japan
 - *Case study of Nazi Germany
- World War II in Europe and the Asia–Pacific
 - Outbreak of World War II in * Europe and the Asia Pacific

Unit 2 (Content taught in Secondary 4)

- End of WWII in Europe and Asia Pacific
- Cold War and the bi-polar world order
 - *Reasons for the Cold War in Europe
- Manifestation of the Cold War outside Europe
 - *Case study of Korean War, 1950–53
 - Case study of The Vietnam War, 1954 - 1975
- Reasons for the end of the Cold War

Source based studies will only be set on the case studies indicated by the symbol [*].

Entry Requirement

Students who wish to take Elective History should have an interest in the subject and Students should score 50% and above for History at the Lower Secondary level.

Subject	Full History
Subject Code	2174
Stream	Express
Introduction	
<p>In the History classroom, lessons are conducted with the goal of ensuring that students are empowered to draw connections between the past and present by understanding how the nature and impact of past developments explain today's world. In the Full History classroom, students pay additional attention to the region of Southeast Asia, their home region, and in doing so, understand the importance of Southeast Asia vis-a-vie global developments.</p> <p>Why does History matter?</p> <p>The study of History aims to develop students that are:</p> <ol style="list-style-type: none"> 1. Enquiring Develops an inquisitive mind by asking useful questions for uncovering and understanding the past. 2. Balanced Considers and acknowledges different viewpoints when constructing own historical interpretation. 3. Knowledgeable Develops a sound awareness of and familiarity with key forces and personalities that have shaped the international and regional landscapes. 4. Empathetic Understands the reasons behind past developments without imposing judgement using present day norms. 5. Methodical Employs comprehensive effort when engaged in historical enquiry by covering a range of sources, selecting and organising knowledge effectively. 6. Reasoned Constructs historical interpretation based on substantiated arguments. <p>These are qualities that are essential to help students confront an increasingly ambiguous and complex world.</p>	
Scheme of Assessment	
<p>The examination consists of two papers – Paper 1 and Paper 2, taken at separate sittings. The duration of each paper is 1 hour 40 minutes. The assessment modes comprise source-based case study and structured-essay questions for each paper.</p>	

Paper 1:

Content taught in Unit 1 and 2

Paper 2:

Content taught in Unit 3 and 4

Format for each paper:

Section A: Source Base Case Study - 30 %

Section B: Essay Questions - 20 %

Subject Content

Unit 1 (Content taught in Secondary 3)

*The case study of *Malaya (1874 - 1900) and the case study of Indonesia (1870s - 1900) will be studied in the context of European dominance and expansion in the late 19th century.*

- Reasons for European interest and expansion in Southeast Asia
- Responses of Southeast Asian states to European expansion
- Impact of colonial rule on Southeast Asia

Unit 2 (Content taught in Secondary 3)

- Aims of the Paris Peace Conference and its immediate impact on Europe in the 1920s
- Rise of authoritarian regimes and its impact in the interwar years
 - Case study of Militarist Japan
 - *Case study of Nazi Germany
- World War II in Europe and the Asia–Pacific
 - Reasons for outbreak of World War II in * Europe and the Asia Pacific
 - Reasons for the End of WWII in Europe and Asia Pacific

Unit 2 (Content taught in Secondary 4)

- Cold War and the bi-polar world order
 - *Reasons for the Cold War in Europe
- Manifestation of the Cold War outside Europe
 - *Case study of Korean War, 1950–53
 - Case study of The Vietnam War, 1954 - 1975
- Reasons for the end of the Cold War

Unit 4 (Content taught in Secondary 4)

The case study of *Malaya and the case study of Indonesia will be studied in the context of decolonisation and emergence of nation-states in the post-war years.

- Decolonisation and emergence of nation-states in Southeast Asia
 - Overview of nationalism in Southeast Asian states (non-examinable)
 - Struggles for independence in Southeast Asian states in the post-World War II period
 - Establishment of newly independent states in Southeast Asia

Source based studies will only be set on the case studies indicated by the symbol [*].

Entry Requirement

Students who wish to take Full History should have an interest in the subject and possess a decent command in the English Language and a flair for writing and reading.

Students should score 65% and above for English Language and History at the Lower Secondary level.

Subject	Literature in English
Subject Code	Full Literature – 2065
Stream	Express
Introduction	
<p>In the Literature classroom, students and teachers actively engage with texts and collaborate in the meaning-making process. While students may engage personally and retrospectively with texts and analysis, there also needs to be the expression of personal responses through dialogue and writing to stimulate meaningful discourse around texts.</p> <p><i>Why does Literature matter?</i></p> <p>The study of Literature in schools aims to develop students who are:</p> <ul style="list-style-type: none"> • Empathetic and Global Thinkers • Critical Readers • Creative Meaning-makers • Convincing Communicators <p>These are qualities that we believe are essential in developing our students for the times to come.</p>	
Subject Content	
<p>Upper Secondary (Full Literature - 2065)</p> <p>Students will be assessed in their understanding of the following:</p> <ul style="list-style-type: none"> • Set Text Prose – a novel in its entirety, or a collection of short stories • Unseen Poetry – a range of poems from Singapore and other parts of the world • Set Text Drama – a play in its entirety 	
Scheme of Assessment	
<p>Full Literature (2065)</p> <p>Paper 1: (Based on Set Text Prose and Unseen Poem)</p> <ul style="list-style-type: none"> • Prose – Essay Question or Passage-based Question (25%) • Unseen Poem (choice between a Local or Global poem) (25%) <p>Paper 2 (Based on Set Text Drama)</p> <ul style="list-style-type: none"> • Drama – Essay question (25%) and Compulsory Passage-based Question (25%) 	
Entry Requirement	
<p>Students who wish to take Full or Elective Literature should possess a good command in the English Language and a flair for writing and reading.</p> <p>Students should score 65% and above for English Language and Literature at Lower Secondary level.</p>	