SUBJECT SELECTION EXERCISE 2022

OBJECTIVES OF SUBJECT SELECTION EXERCISE

Combinations, Guidelines and Criteria Provided to:

- Develop students' areas of interest / strength;
- Maximise students' potential;
- Match students' aspirations with available and appropriate school resourcing.

SUBJECT COMBINATIONS FOR SEC 3 EXPRESS COURSE

SUBJECT SELECTION OPTIONS FOR 3E COURSE

Pure Science (7 subjects)	Criteria
1. English 2. Mother Tongue 3. Mathematics 4. Humanities (SS/ Geo or SS/ HE or SS/ Lit) 5. Additional Math 6. Pure Chemistry 7. Pure Physics or Pure Biology	• Students must obtain ≥ 65% (overall) for Science and ≥ 60% (overall) for Math to qualify for the Pure Science course. • Students in the Pure Science course will take Additional Math as a compulsory subject.

SUBJECT SELECTION OPTIONS FOR 3E COURSE

Pure Humanities (6 subjects)	Criteria
1. English 2. Mother Tongue 3. Mathematics 4. Combined Sci (Chem/ Bio) **or** (Chem/ Phy) 5. Pure Geography 6. Humanities (SS/ HE **or** SS/ Lit)	• Students must attain ≥ 70 % (overall) for Geography to qualify for Pure Geography. • Pure Geography will only be offered if there is a minimum number of 15 students opting and are eligible for the subject. • Students who opt for Pure Geography, will have to take either SS/HE or SS/Lit as their second Humanities subject. Students will need to pass overall at Sec 2 for the relevant elective chosen (History or Literature).

SUBJECT SELECTION OPTIONS FOR 3E COURSE

Combined Science (7 subjects)	Criteria
1. English 2. Mother Tongue 3. Mathematics 4. Humanities (SS/ GE or SS/ HE or SS/ Lit) 5. Combined Sci (Chem/ Phy) 6. Craft and Tech (DT or Art or Electronics or NFS) 7. Additional Math	• Students must obtain ≥ 60% (overall) for Math to qualify for Additional Math/ Electronics.

SUBJECT SELECTION OPTIONS FOR 3E COURSE

Combined Science (6 subjects)	Criteria
1. English 2. Mother Tongue 3. Mathematics 4. Humanities (SS/GE or SS/ HE or SS/ Lit) 5. Combined Sci (Chem/ Bio) or (Chem/ Phy) 6. Craft and Tech (DT or Art or Electronics or NFS or EMP)	• Students must obtain ≥ 60% (overall) for Math to qualify for Electronics. • Students must attain Grade A for Music and satisfy most of the criteria in the audition test to qualify for Enhanced Music Programme (EMP).

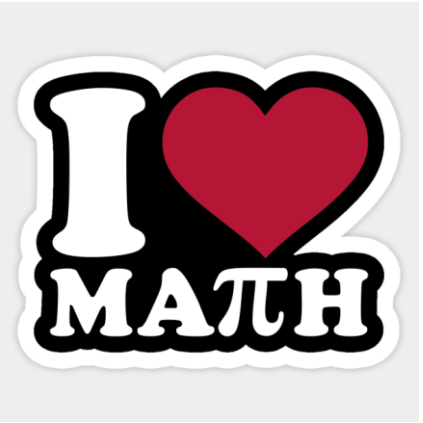
SUBJECTS BRIEFING

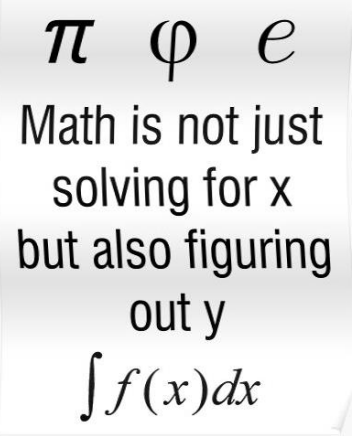
ADDITIONAL MATHEMATICS (A MATH)

THE A MATH SYLLABUS

Aims to enable students who have **higher ability in Math** and a **strong interest** to:

- ✓ Acquire **knowledge and skills** for **higher studies in Math** and support learning in **other subjects, including Science**
- ✓ Develop thinking, reasoning, communication and application in **higher level problem solving**
- ✓ Connect ideas between math and sciences
- ✓ Understand the abstract nature and **power of Math**





ADVANTAGES OF OFFERING A MATH

- A Math students who **learned the subject well** in secondary school have more skills and knowledge, hence able to cope better at post secondary institutions.

CONSIDERATIONS

- As students will be **learning Math at a higher level**, they must be prepared to work on **more demanding problems** and exercise resilience and responsibility in completing their assignments.

- Students are expected to **invest twice the amount of time in studying Math** as the content for **EM and AM are different,** hence more time required to complete assignments.

O-LEVEL ELECTRONICS
(AN MOE APPLIED SUBJECT)

WHAT IS O-LEVEL ELECTRONICS?

- **O-Level Electronics** is an O-level Applied Subject (AS) for upper secondary students.
- As an engineering subject, the subject involves the application of the science of electronics to solve real-world problems.

CHOOSING O-LEVEL ELECTRONICS

Gain knowledge of electronics & build a strong foundation for further study

- The content of the syllabus covers important areas of electronics:

System	Fundamentals of Electricity	Circuit Theories
Analogue Electronics	Digital Electronics	Engineering Design Process

ASSESSMENT MODE

Paper 1 – Written Paper

This written paper consists of two sections.
All questions are compulsory.

- Section A: Six to ten short answer questions
- Section B: Four 15-mark questions

Paper 2 - Coursework

This is an application-specific electronic project which involves the design, building and testing of an electronic circuit to solve a specific problem.

- **Project is carried out over a period of 32 hrs in Secondary 4.**

CERTIFICATION AND PROGRESSION

- For admission to JCs & MI:
  - Could be considered as one of the elective subjects in the computation of L1R5 (as R4 or R5) and L1R4 (as R3 or R4)
- For admission to polytechnics:
  - Depending on the polytechnic course applied for, it could be counted as a relevant subject, or at least a best subject in the computation of ELR2B2
  - Strong candidates for early admission application to polytechnic Electronics and related Engineering courses

PURE SCIENCE/ COMBINED SCIENCE

PURE SCIENCE VS COMBINED SCIENCE

JUNIOR COLLEGE

1. Pure Science subjects are generally required to qualify for H2 Science subjects at the A Levels. However, students who take combined Science can still enter JCs.

2. **More Handling/ Problem Solving Questions**

   Approximately 55% of the paper has to do with handling information and problem solving

3. **Higher Practical Weightage**

   Practical component takes up 20% of the overall marks

4. **More Timetabled Time**

   17 periods per week for 2 Pure Science subject (5 hrs 40 mins)

POLYTECHNIC

1. Combined Science subjects will allow students to offer Science courses at the Polytechnics

2. **More Knowledge with Understanding/Recall questions**

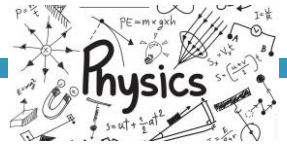
   Approximately 50% of the paper is about knowledge with understanding with 20% recall questions

3. **Lower Practical Weightage**

   Practical component takes up 15% of the overall marks

4. **Less Timetabled Time**

   10 periods per week for combined Science (3 hrs 20 mins)



Physics vs Biology

- Chemistry is a common Science regardless of whether students choose Pure or Combined Science, as it is a pre-requisite for most post-secondary school courses.

1

Choice does not affect Post-Secondary Pathway @ Polytechnic

Choosing Physics / Biology does not affect your post-Secondary pathways – students who have not taken the Biology can still qualify for Biology related courses at the Polytechnics for example. Students may be required to take bridging courses.

2

Do not choose Biology just because you do not like Physics/Mathematics

Biology requires much conceptual understanding and memorising which may not be easier than the calculations for Physics/Mathematics

3

Consider your personal interests!

Do consider the topics taught for Physics (e.g. Electricity, Waves, Kinematics, Forces) as well as Biology (Plant/Animal transport system, digestive system) to consider the ones you might be more interested in

4

Consider your aptitude

Students sometimes choose one subject over the other because of their subject teachers at Sec 2. Do consider which subject you are more likely to do better at the O Levels!

Thank you!