ONWARD & PERSEVERE

Sec 2 Express Streaming Talk

16 February 2022

Please scan the QR code to access the digital version of the streaming booklet

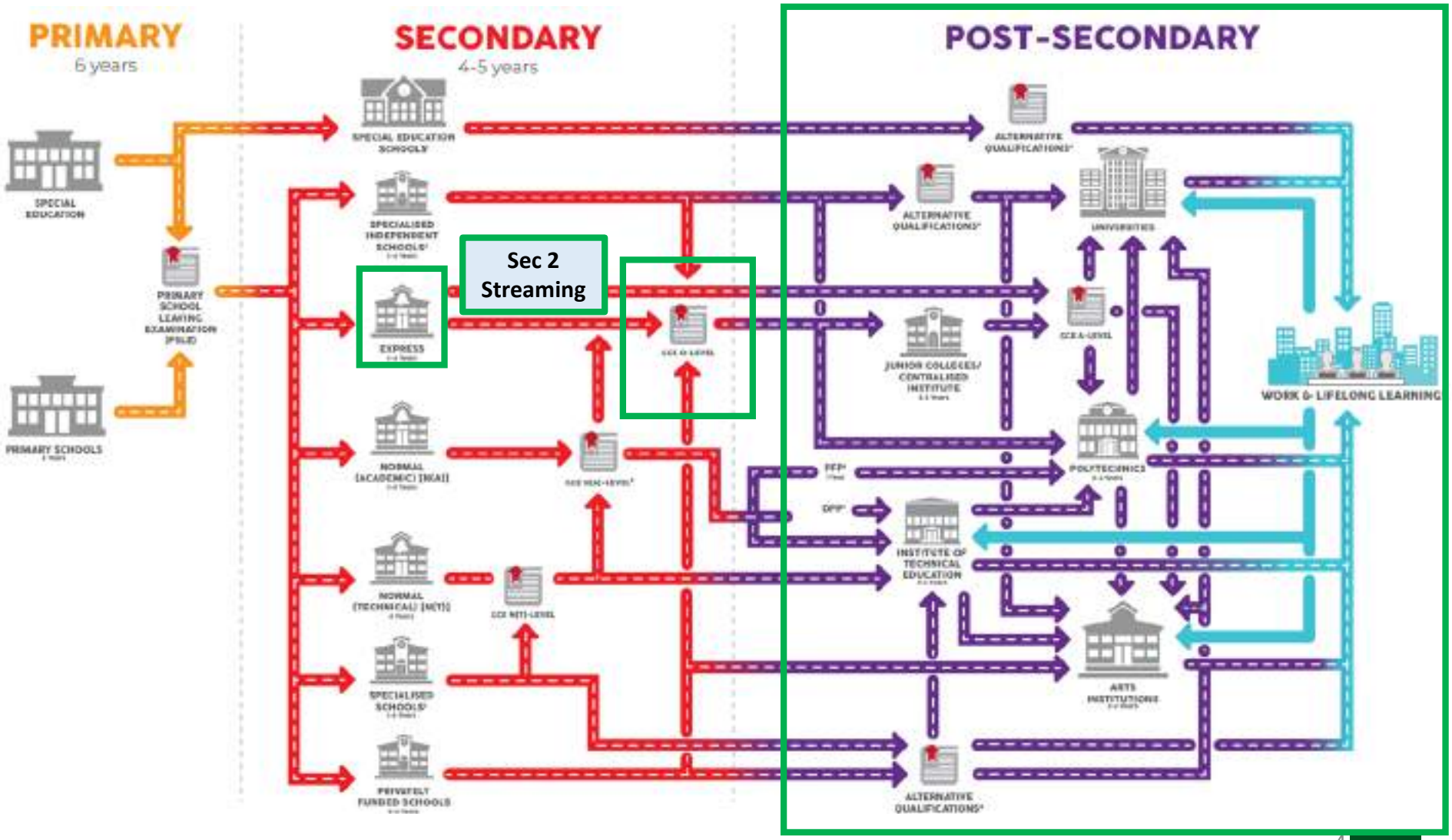
PROGRAMME OUTLINE (2E)

1. Streaming Matters and 2023 Subject Combinations
2. Education and Career Guidance (ECG) Sharing
3. Electives Sharing: Pure Geography
4. Electives Sharing: Art
5. Electives Sharing: D&T and F&N
6. Electives Sharing: POA
7. Electives Sharing: Additional Mathematics
8. Q & A Segment

Streaming Matters by Principal, Mr Daniel Chung

Overview

Singapore's Education System:



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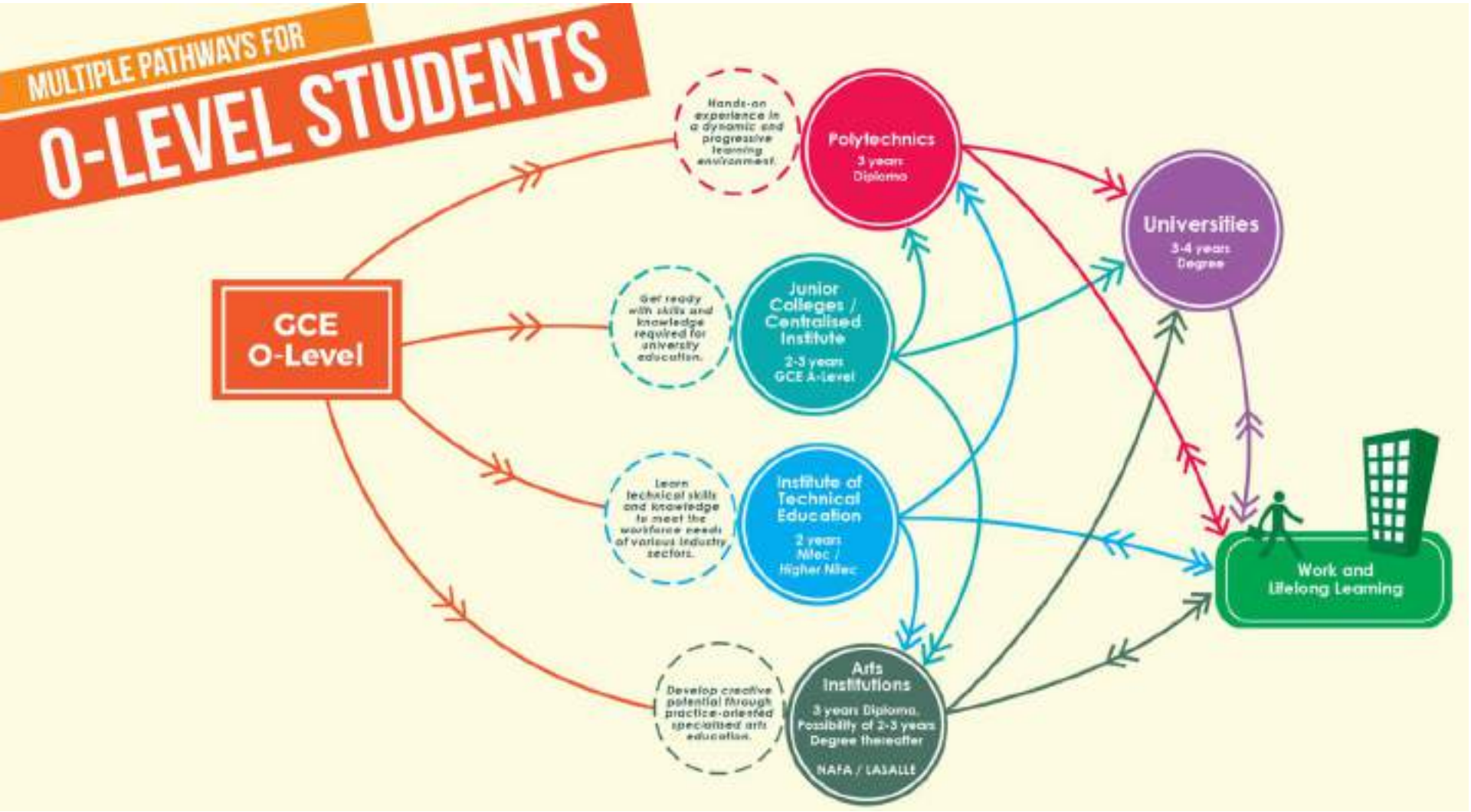
Overview


MULTIPLE PATHWAYS FOR
O-LEVEL STUDENTS
GCE O-Level
Hands-on experience in a dynamic and progressive learning environment.
Polytechnics
3 years Diploma
Get ready with skills and knowledge required for university education.
Junior Colleges / Centralised Institute
2-3 years GCE A-Level
Learn technical skills and knowledge to meet the workforce needs of various industry sectors.
Institute of Technical Education
2 years Nitec / Higher Nitec
Develop creative potential through practice-oriented specialised arts education.
Arts Institutions
3 years Diploma. Possibility of 2-3 years Degree thereafter
NAFA / LASALLE
Universities
3-4 years Degree
Work and Lifelong Learning

5

STREAMING YEAR

Streaming at the end of Secondary 2 is an **important crossroad**.

Parents
Class Mentors
Subject Teachers
IP HODs
Year Heads
Pupil Development Team

Knowing the Child

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

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

- Factors to consider when making options
- Subjects that are offered
- Criteria for subject combination
- Streaming Process

FACTORS TO CONSIDER

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

- **Subject combination must equip your child with the passion, self-confidence and the belief to progress to more advanced levels after OPSS.**
- **There must be positive outcomes – student engagement and achievement.**

SUBJECTS OFFERED AT SEC 3

(Express)

Compulsory Subjects:

- English Language
- Mother Tongue/ Higher Mother Tongue Language
- Elementary Mathematics
- Physical Education (PE)
- Character & Citizenship Education (CCE)

SUBJECTS OFFERED AT SEC 3

(Express)

Subj 1	Subj 2	Subj 3	Subj 4	Subj 5	Subj 6	Subj 7	Subj 8
English Language	Mother Tongue Language	Humanities SS/Geo or SS/Hist or SS/Lit in EL	Elementary Mathematics	Chemistry or Science (Chem/Phy) or Science (Chem/Bio)	Additional Mathematics or Principles of Accounts	Biology or Physics or Art or Geography or Design and Technology or Nutrition and Food Science	Physics or Art or Geography [for students who are not offering these subjects as a 7th subject]

SUBJECTS WITH ELIGIBILITY REQUIREMENTS (3E)

To be eligible for	Criteria *Subject to changes
8-subjects combination	• Mathematics (overall) ≥ 75% • Science (overall) ≥75% • Overall Sec 2 results ≥ 70%
Double Pure Science combination	• Mathematics (overall) ≥ 70% • Science (overall) ≥70% • Overall Sec 2 results ≥ 65%
Additional Mathematics	• Mathematics (overall) ≥ 70%
Pure Geography	• Geography (overall) ≥ 65% • English (overall) ≥60%

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

13

STREAMING PROCESS

The allocation of subjects is based on the following:

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

STREAMING PROCESS

1	Streaming talk for parents	16 February
2	Subject Exposure + Online interest survey for students	Mid-May
3	2nd Streaming Talk for students	Mid-October
4	**Actual:** Submission of choices	End of October
5	Release of streaming results	Early November
6	Appeals	Mid-November
7	Release of appeal results	End of November

GETTING YOUR CHOICE SUBJECT COMBINATION …

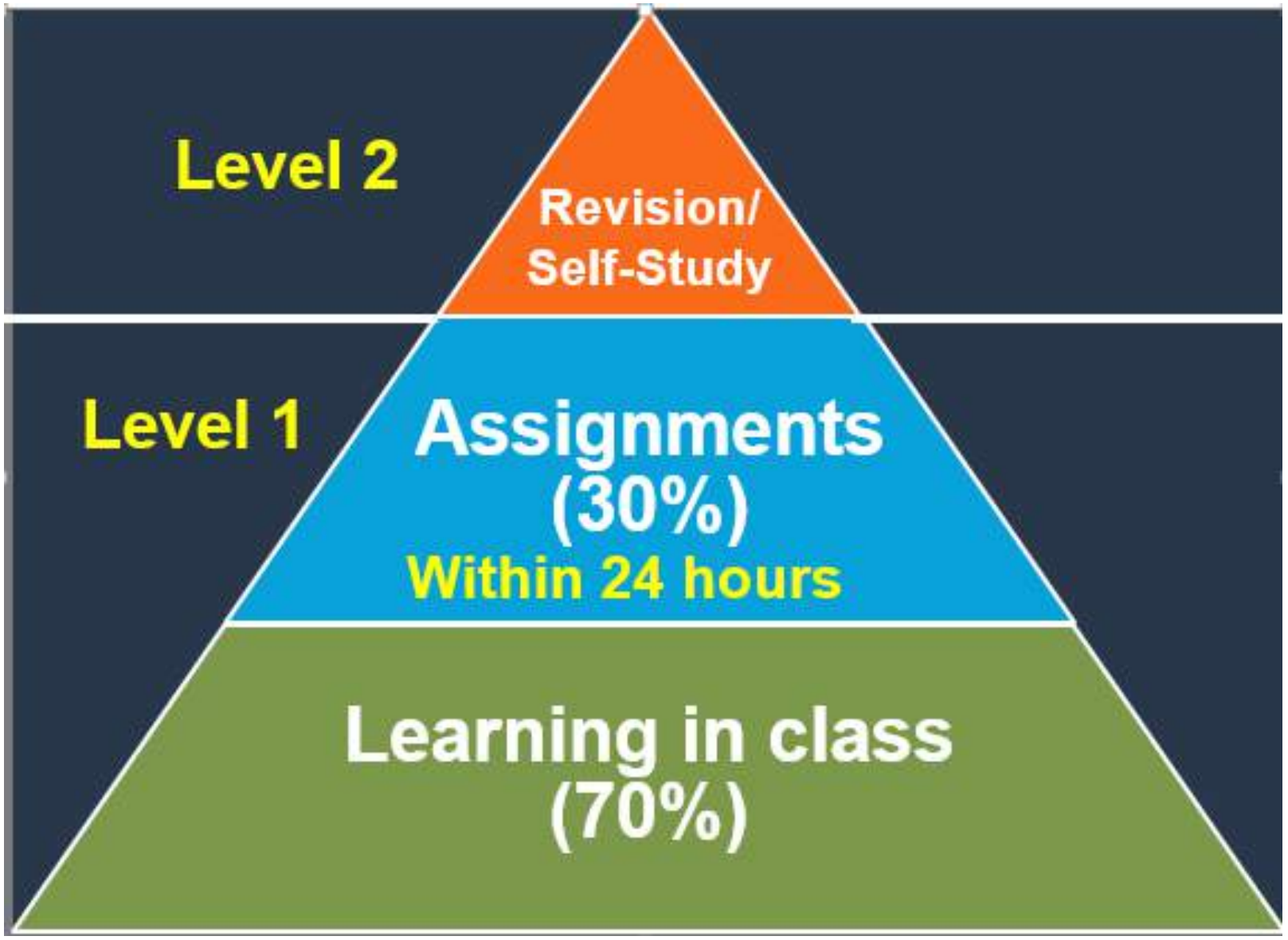
✓ Consistent hard work

	Assessment Weighting (%)		Date
2E	Weighted Assessment 1 (WA1)	15%	Term 1
	WA2	15%	Term 2
	WA3	15%	Term 3
	End-of-Year Exam	55%	Term 4

✓ Selecting your combinations wisely

4As to Success

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


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

CCA

LEAPS 2.0

- Leadership
- Achievement
- Participation
- Service

LEAPS 2.0

- Recognition of Students' Co-Curricular Attainment

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

Sharing on ECG Matters

Supporting Your Child's ECG Journey

Jerlyn Poh, ECG Counsellor
Orchid Park Secondary School
16 Feb 2022

Overview

01 Changing World of Work

02 Evolving Education Landscape

03 Supporting your Child's ECG Journey

Source : https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/
Credit : Illustration by Storyset

World of Work

Credit : Image from Canva

What is the 4th Industrial Revolution?

Source : https://www.youtube.com/watch?v=Ko2esJeGsrI

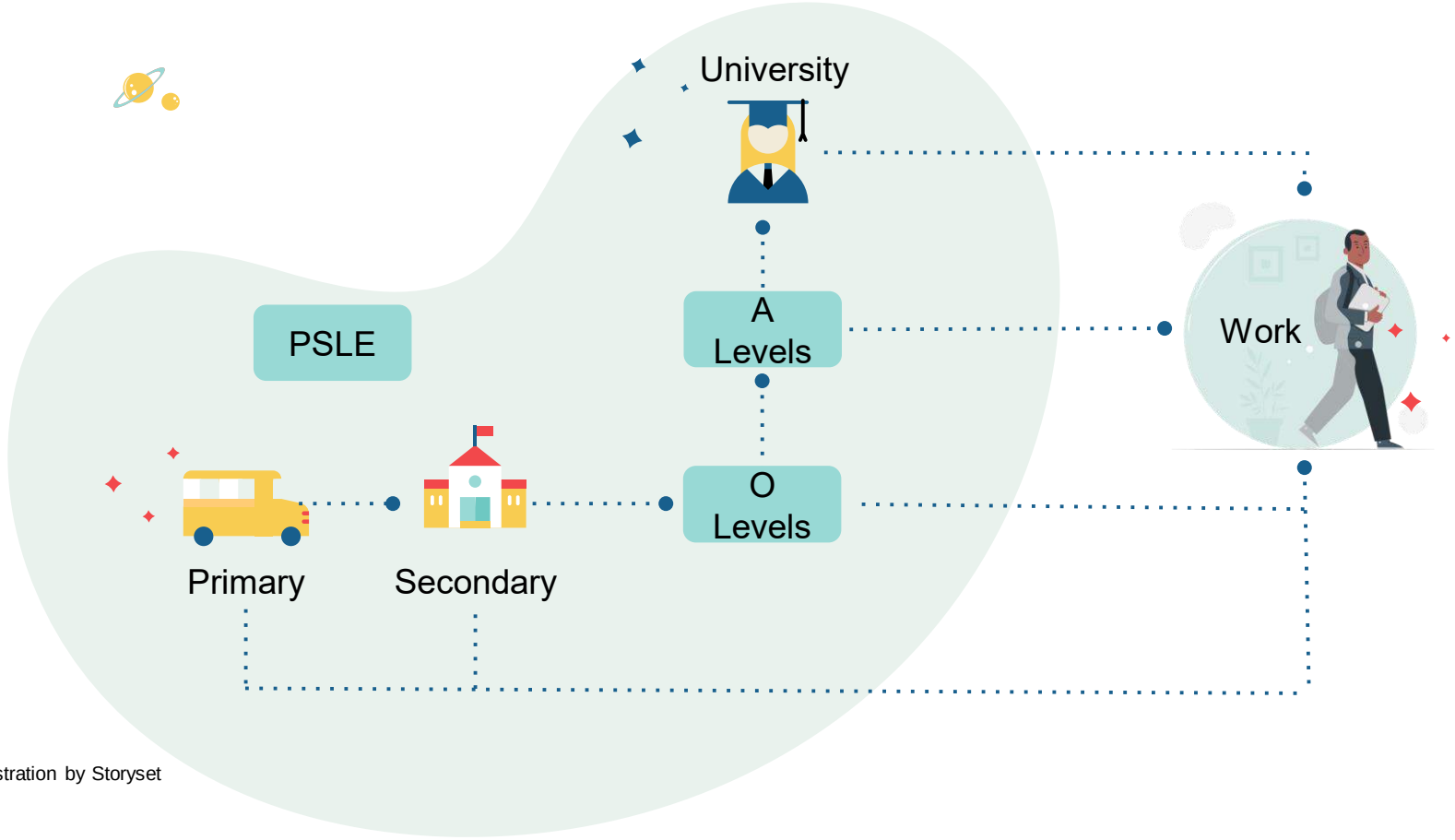
Top 10 Job Skills of Tomorrow

Source: https://www.weforum.org/agenda/2020/10/top-10-work-skills-of-tomorrow-how-long-it-takes-to-learn-them/

Changing Education Landscape

Credit : Image from Canva

Education Pathway used to be Simple



Credit : Illustration by Storyset

Today the Education Landscape is Dynamic

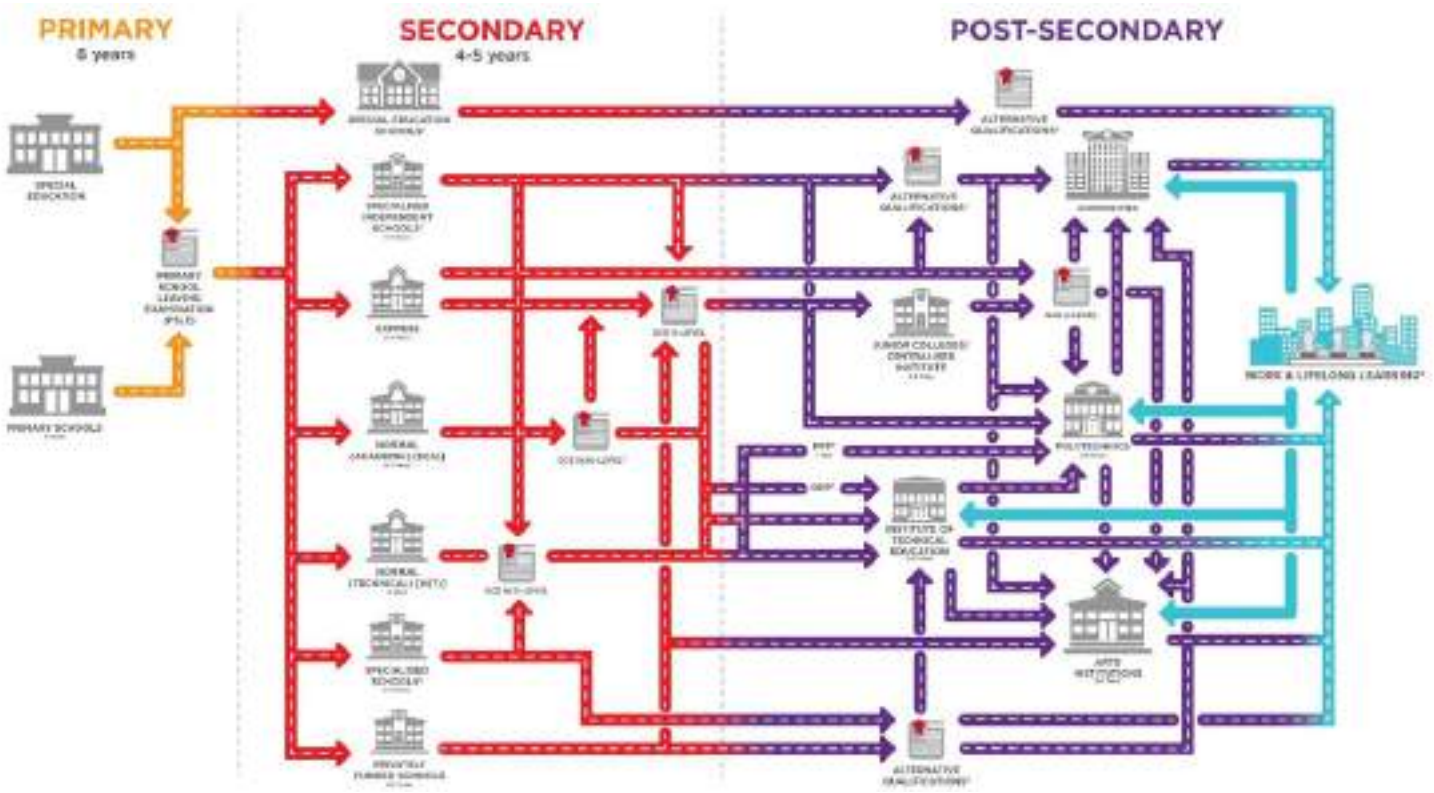


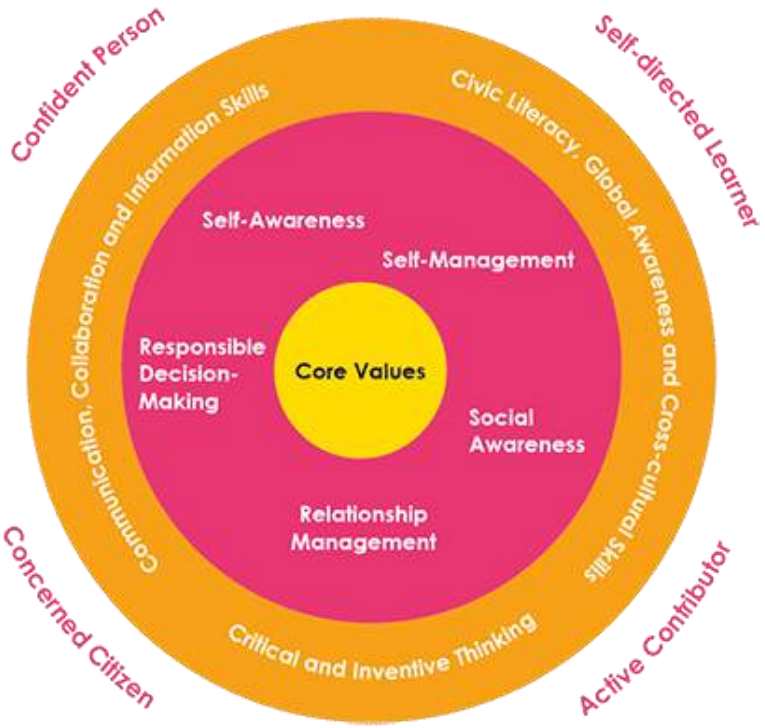
Diagram taken from the Post-Secondary Booklet/Secondary Booklet: https://www.moe.gov.sg/-/media/files/secondary/secondary-school-booklet-2021.pdf

Some Changes in the Education Landscape

Revised PSLE Scoring System	Full Subject-Based Banding	Post-Secondary Landscape	IHL Landscape
New Achievement Levels scoring system	Implementation of Full Subject-Based Banding in all Secondary Schools by 2024	Expanding CEP^ offerings by Polytechnics New ITE curriculum from 2022; shortened route to Higher Nitec Offering of ITE Work-Study Diplomas Shorter Polytechnic Diplomas for A-Level Students	Launch of NUS College of Humanities and Sciences in 2020 Establishing New University of the Arts Expanding Aptitude-Based Admissions at Autonomous Universities

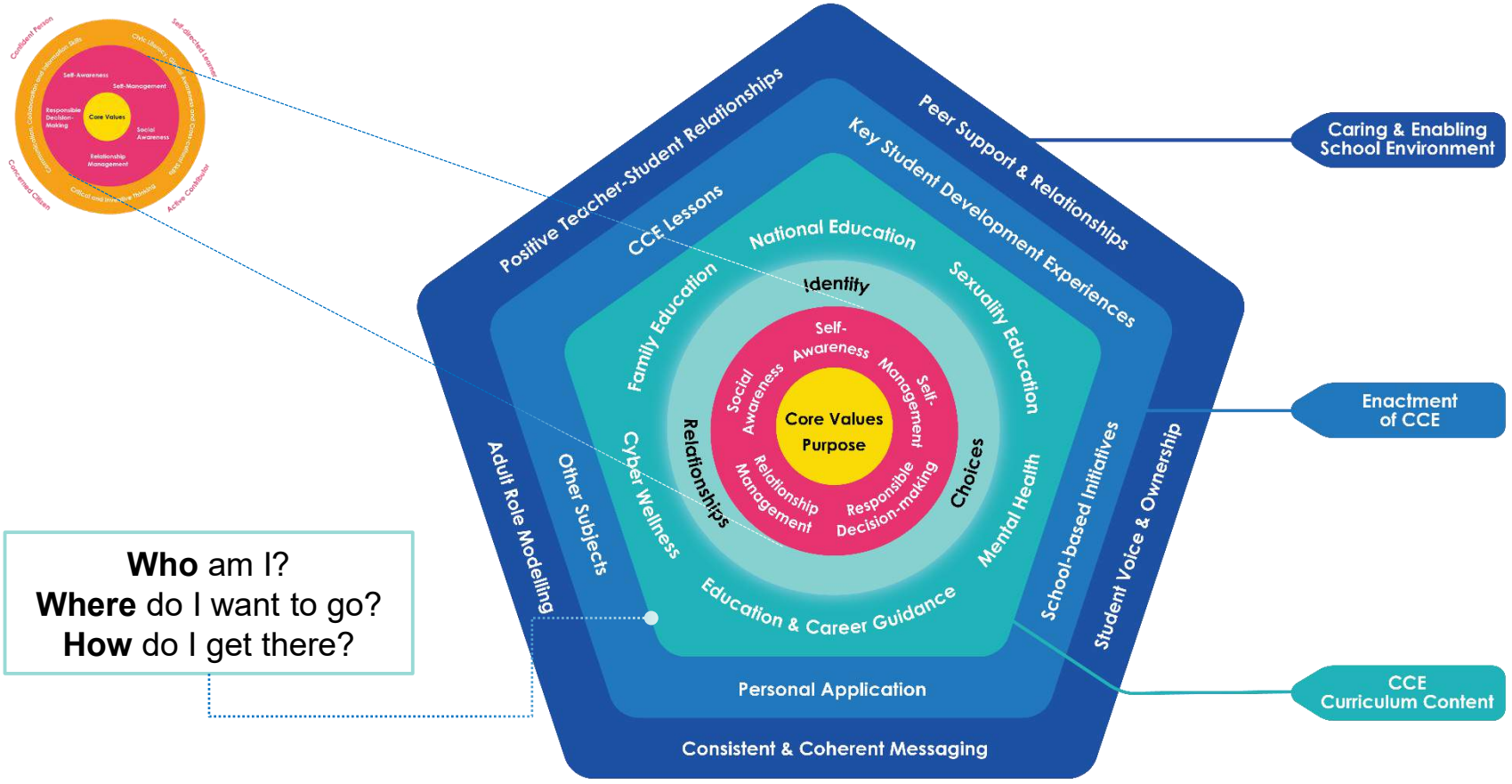
***IHL** : Institute of Higher Learning
^CEP : Common Entry Programme

How Do We Prepare Our Child For 21st Century?



Source : https://www.moe.gov.sg/education-in-sg/21st-century-competencies
Source : https://www.moe.gov.sg/-/media/files/secondary/syllabuses-nt/cce/2021-character-and-citizenship-education-syllabus-secondary.pdf

How Do We Prepare Our Child For 21st Century?



Who am I?
Where do I want to go?
How do I get there?

Source : https://www.moe.gov.sg/education-in-sg/21st-century-competencies
Source : https://www.moe.gov.sg/-/media/files/secondary/syllabuses-nt/cce/2021-character-and-citizenship-education-syllabus-secondary.pdf

Supporting
Our Child's ECG Journey
Credit : Image from Microsoft 365

The 3 ECG Questions to Guide Our Child

WHO?

Who am I?

HOW?

How do I get there?

WHERE?

Where do I want to go?

Our Child's ECG Journey

Sec 1

Transitioning to a new school environment. Introduction to different career sectors.

Sec 2

Exploration of **Values**, **Interests**, **Personality**, **Skills**(VIPS). Choosing Subject Combination.

Sec 3

Deepen career exploration. Adjustment to new subjects, class and CCA leadership roles.

Sec 4/5

GCE N or O Levels. Alignment of VIPS with post-secondary courses.

Discovering purpose, adopting a lifelong learning dispositions and mindsets.

Questions Our Child May Have …

Subject Combination

Which Subject Combination should I take?

I Don't Know

I don't know what I want to be yet, but I know I love Literature. How now?

Education Pathways

Which Education Pathway should I choose?

Career Aspiration

Do I know my career aspiration yet?

Who am I?

01 Unique Individual

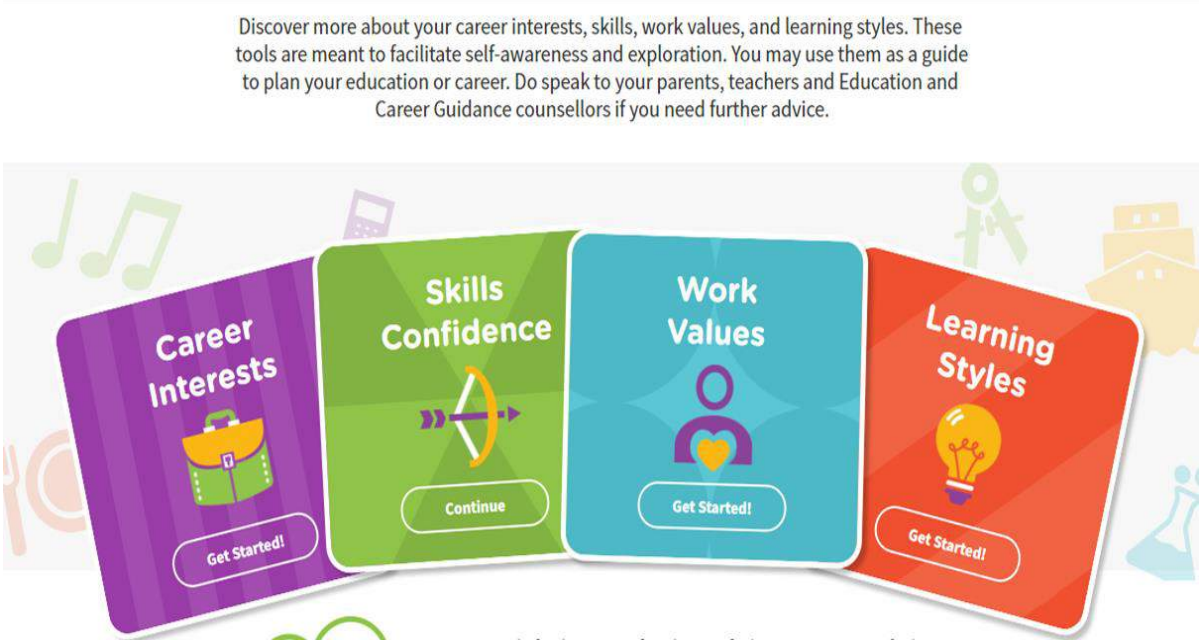
02 Values, Interests, Personality and Strength (VIPS)

03 Self Awareness

My SkillsFuture (Student Portal)
go.gov.sg/mysfsec

Credit : Image from go.gov.sg/mysfsec

My SkillsFuture (Student Portal)
Know Yourself



Credit : Image from go.gov.sg/mysfsec

Who am I?

Support them as they discover their VIPS	Encourage Reflection on Experiences	Connect Experiences
What is important to you? What motivates you? What are the issues you feel strongly about? What do you enjoy doing? How would you describe yourself? How do others describe you? What are your strengths? What have people praised you for?	What do you do in…? What do you like / dislike about…? How do you feel when…? What did you learn about…? What did you discover about yourself through…?	What have you learned in <Subject> that will be useful for <Jobs you like>? Is this an ability / skill / interest you want to develop further? Would you like to do something like that in your future job? Why?

Where Do I Want to Go?

Designer?
Physiotherapist?
Programmer?
Urban Farmer?

Which Occupation should I choose?

Creating new AI?
Improve Mental Health?
Improve Sustainability?
Distribute Wealth?

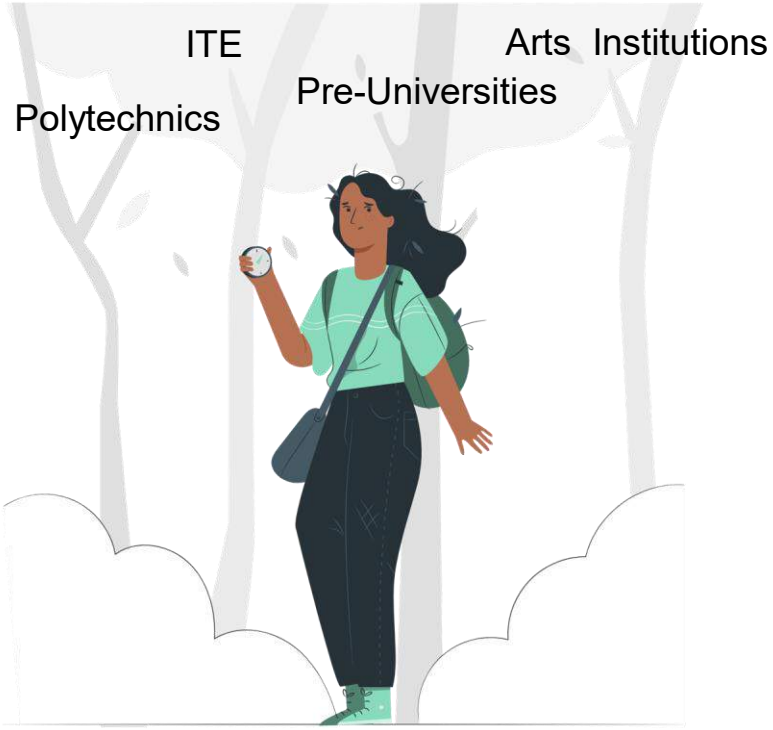
Sense of Purpose / Challenge

Engineering?
Business?
Humanities?
Science / Arts?

Which Course / Stream should I choose?

Where Do I Want to Go ?

Education Pathways



Admissions

Credit : Illustration by Storyset

Where Do I Want to Go?

Start exploring areas of Interests

Which would be your top 3 aspirations? Why did you choose these?

Are there others you have in mind?

What are the skills / knowledge you wish to develop / gain?

Would you prefer something more academic or hands-on and work-oriented?

Prompt them to think Beyond

What do you want from this career?

What are the things important to you in a job?

What would be some other jobs related to this role / industry?

How can you find more information?

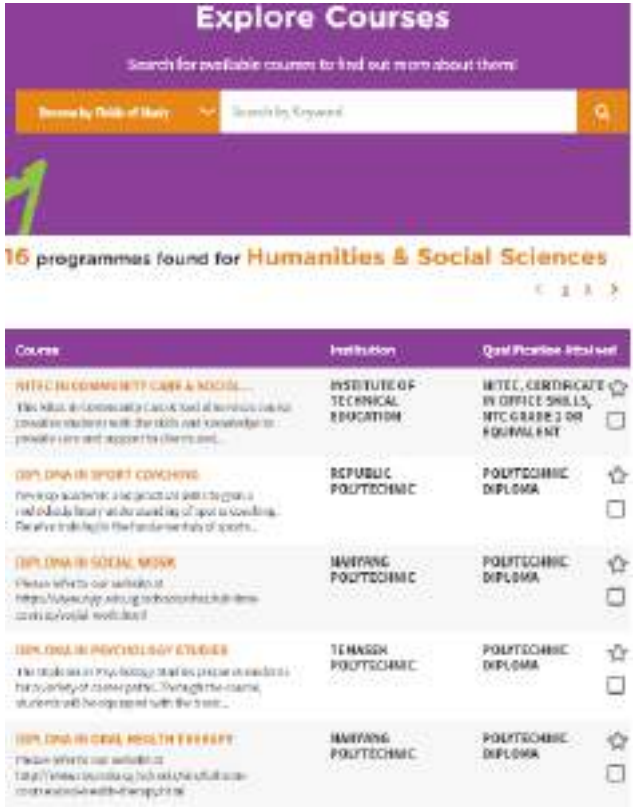
Let your Child be the Expert

That's a job I don't know much about, could you tell me more what it does?

How's the job prospect like? Could we find out and discuss more next time?

What does this course offer? What will you be learning / experiencing?

My SkillsFuture (Student Portal) Education Guide

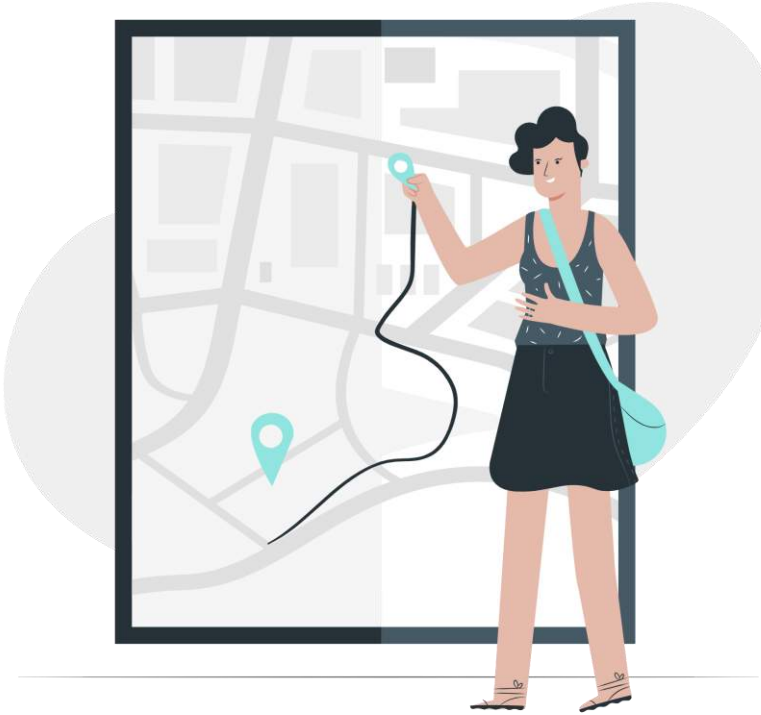


Credit : Image from go.gov.sg/mysfsec

My SkillsFuture (Student Portal)
World of Work

Credit : Image from go.gov.sg/mysfsec

How Do I Get There?



Information to Gather

Points to Consider

Actions to Take

Credit : Illustration by Storyset

How do I Get There?

Get your child to be responsible for their own plan

Which courses / qualifications
do you think will lead you to this job?

Are there any prerequisites / minimum entry requirements to apply to these courses?

What steps can you take to work towards your goal?

How can you better prepare yourself
for this course / job?

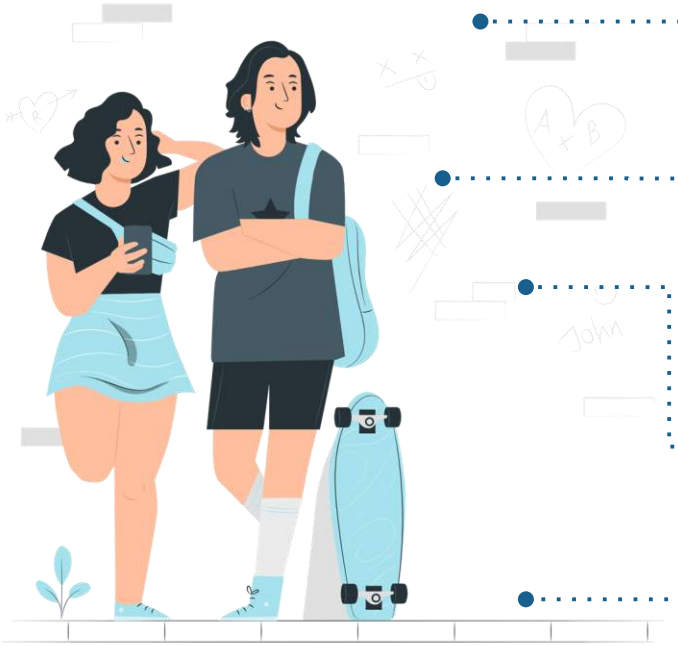
What are the possible ways/admissions
to get to your course?

Discuss with your child like they are adults

What ‘game plan’/plan do you have in mind to work towards this course/career?

Are there ways you can experience what the job is like?

Are there practical constraints you may face?
Eg. colour appreciation deficiency?



- Have regular and genuine conversation with your child
- Familiarize yourself with your child's personality and learning style
- Provide opportunities for your child to grow
- Show love and support which helps your child grow in confidence

Supporting our Child's Aspirations

Source : 2021 CEG's Parents Seminar

“As parents, we all want what is best for our children…

Within our own families,
we can all spend a bit more time listening to our children’s thoughts and feelings.

Let us walk alongside them as they grow and handle their new challenges.”

- Mr Chan Chun Sing, Minister for Education

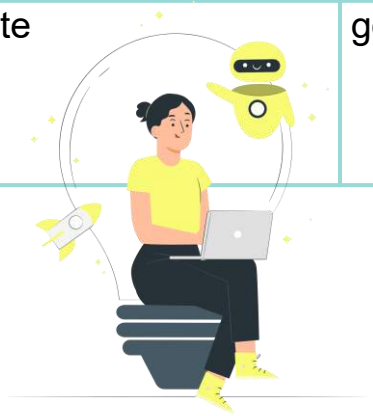
Source : https://www.moe.gov.sg/news/speeches/20210727-ministerial-statement-by-mr-chan-chun-sing-minister-for-education-for-the-parliament-sitting

Useful Resources

Website	URL	
Journeying with our Children. Supporting their Aspirations	go.gov.sg/ecg-parent-guide	
Overview of Post-Secondary Education Institutions (PSEIs)	go.gov.sg/overview-pseis	
The Next Step Forward (e-book)	go.gov.sg/next-step-forward	
MySkillsFuture for Secondary School	go.gov.sg/mysfsec	

Useful Resources

Website	URL	
MOE Course Finder	go.gov.sg/coursefinder	
What's Next (After 'N' / 'O' / 'A' Level)	go.gov.sg/whats-next	
Schoolbag Website	go.gov.sg/schoolbag	



Useful Resources

Website	URL	
Early Admissions Exercise - ITE	go.gov.sg/applyeae	
Early Admissions Exercise – Polytechnics	go.gov.sg/polyeae	
Direct School Admission – Junior Colleges	go.gov.sg/applyjcdsa	

Useful Resources

Website	URL	
Direct Entry to Polytechnic Programme (DPP)	go.gov.sg/dpp	
Polytechnic Foundation Programme	go.gov.sg/pfp	
NAFA Foundation Programme (NFP)	go.gov.sg/applynafafp	

Need someone to talk to about your Child's Education and Career journey?

Jerlyn Poh
Education & Career Counsellor

Mondays and Wednesdays from 8am to 4.30pm

Email: Jerlyn_poh_yoke_hui@schools.gov.sg

Appt Link: https://go.gov.sg/opssmsjerlyn

Credit : Image from pexels.com

Elective Sharing on Pure Geography

Full Geography

- Focuses on:
  - Physical Geography
    - Coasts (GI topic)
    - Living with Tectonic Hazards
    - Variable weather & changing climate
  - Human Geography
    - Global Tourism (GI topic)
    - Food Resources
    - Health & Diseases
- Students are assessed via:
  - Structured questions based on Geographical Investigations & examinable topics

Details are based on current syllabuses. There will be a change of syllabus in 2023.

Geography

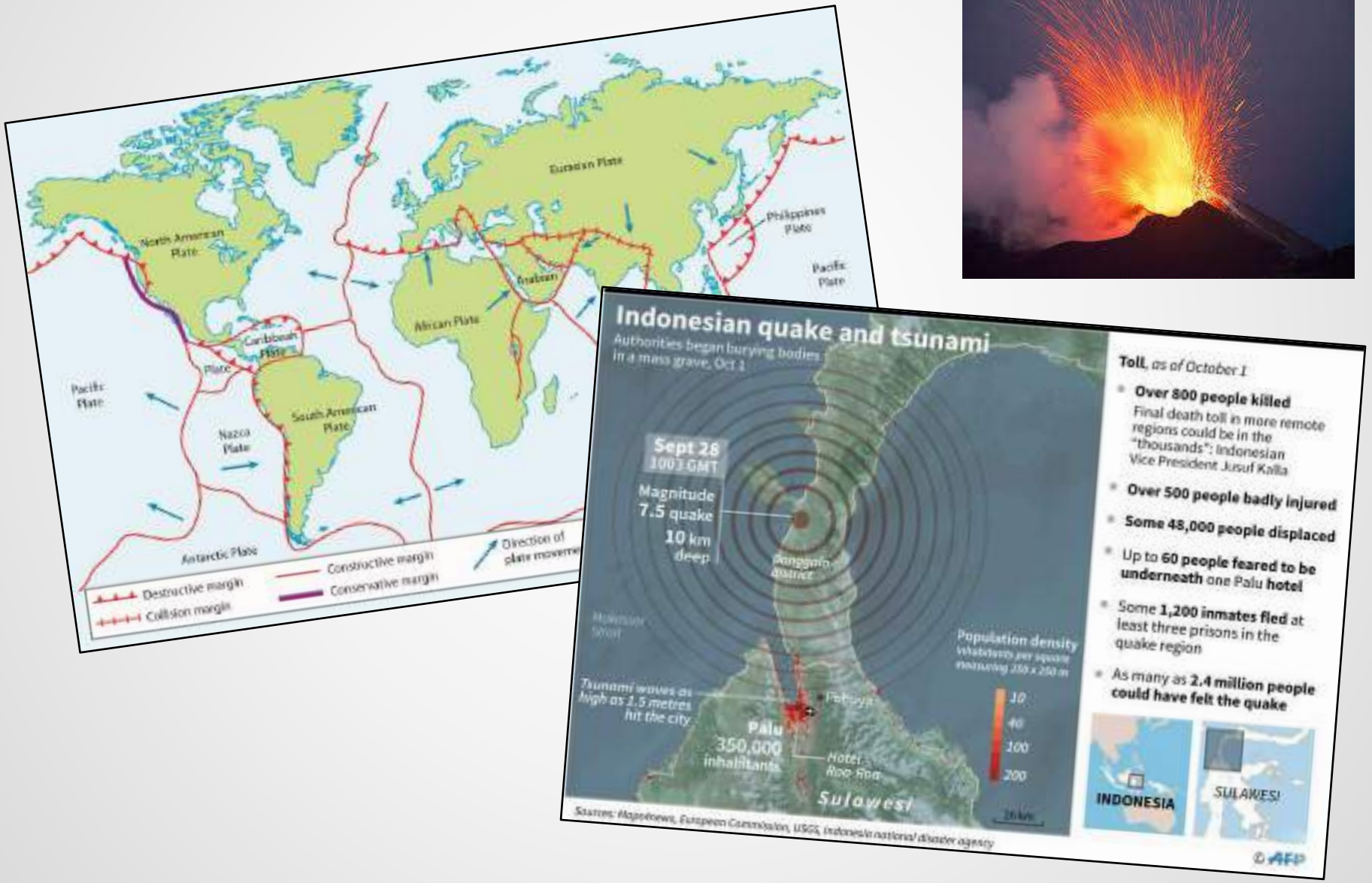
	Secondary 3 Topics
1.	Coasts – Should Coastal Environments Matter?
2.	Living with Tectonic Hazards – Risk or Opportunity?
3.	Variable Weather and Changing Climate – A Continuing Challenge?

SCHEME OF ASSESSMENT

Paper 1 **1h 40min** **50 marks**	**Section A (25 marks)**	• Geographical Investigations
	Section B (25 marks)	• Coasts • Global Tourism
Paper 2 **1h 30min** **50 marks**	**Section A (25 marks)**	• Living with Tectonic Hazards • Variable Weather and Changing Climate
	Section B (25 marks)	• Food Resources • Health and Diseases

Coasts

Living with Tectonic Hazards



Variable Weather & Changing Climate

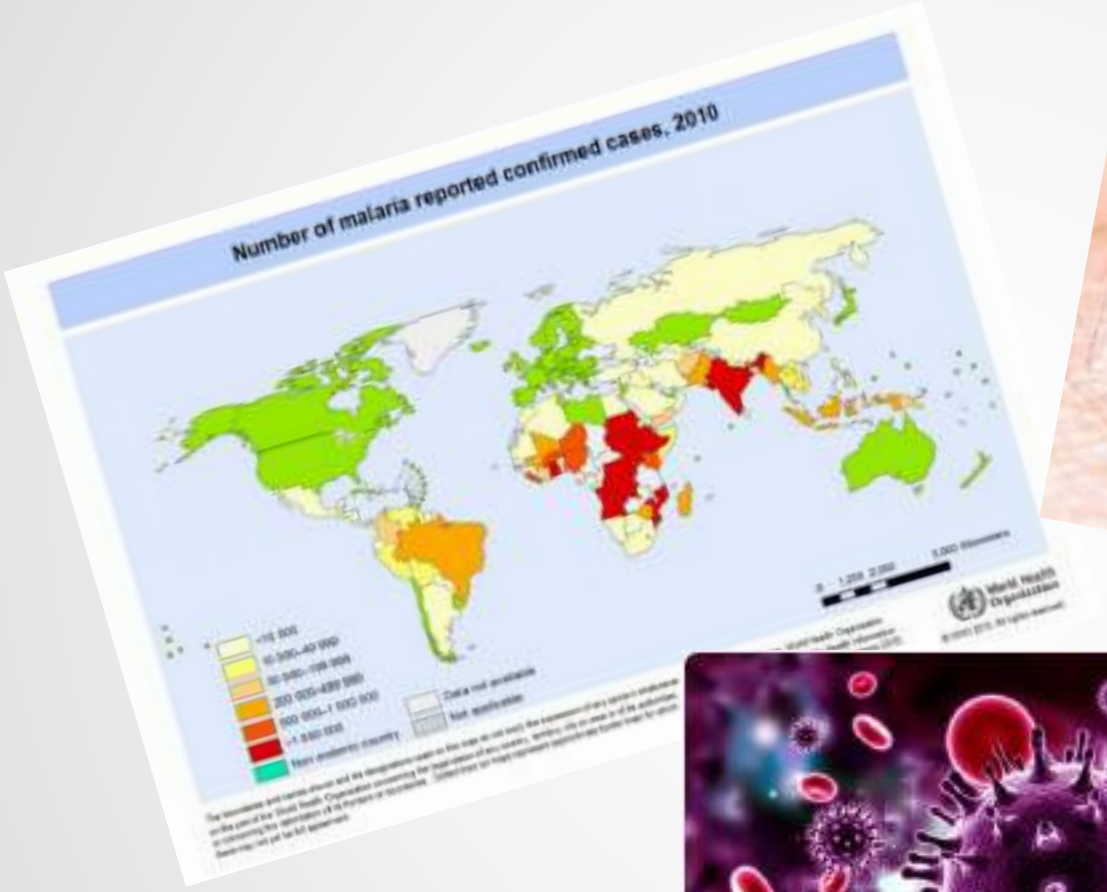
Geography

	Secondary 4 Topics
1.	Global Tourism – Is Tourism the Way to Go?
2.	Food Resources – Is Technology a Panacea for Food Shortage?
3.	Health & Diseases – Are We More Vulnerable than Before?

Global Tourism

Food Resources

Health & Diseases



ONWARD & PERSEVERE

Geographical Investigations @ Upper Secondary

Date collection at the coast

Interviewing tourists

What is the difference between Elective and Full Geography?

- For Full Geography, it is offered as a **full subject** to enable the learning of **a broader range of topics**.
- Students who offer Full Geography should also Humanities (SS, History) or Humanities (SS, Literature in English) .
- Please note that Full Geography cannot be taken together with (SS, Geography).

How do I know if my child should take Geography at Upper Secondary?

- Understanding your child's **interest is key**. When your child is interested in the subject, he or she will be motivated to delve deeper.

HOW DOES OFFERING FULL GEOGRAPHY/ HUMANITIES AFFECT MY CHILD'S POST-SECONDARY OPTIONS?

JC Admission (L1R5)

1. Have a gross L1R5 aggregate score of 20 and below. The L1R5 aggregate score is made up of the following subjects:

L1R5	Subjects
First Language (L1)	English/Higher Mother Tongue
Relevant Subject 1 (R1)	Humanities/Higher Art/Higher Music/Malay (Special Programme)/Chinese (Special Programme)/Bahasa Indonesia
Relevant Subject 2 (R2)	Mathematics/Science
Relevant Subject 3 (R3)	Humanities/Higher Art/Higher Music/Mathematics/Science/Malay (Special Programme)/Chinese (Special Programme)/Bahasa Indonesia
Relevant Subject 4 (R4)	Any GCE O-Level subjects (except Religious Knowledge)
Relevant Subject 5 (R5)	Any GCE O-Level subjects (except Religious Knowledge)

Humanities is a compulsory subject for admission to JC!

Polytechnic admission

- Polytechnic admission (ELR2B2)
- **Humanities** is considered as a **relevant** subject for business-related courses and humanities – related courses.

e.g.

Early Childhood Education	**Hotel & Hospitality Management**
Psychology Studies	**Social Sciences (Social Work)**
Mass Communication	**Food & Beverage Business**
Communications & Media Management	**Hospitality & Tourism Management**
Business Management	**Banking & Finance**

https://www.tp.edu.sg/admissions/gce-o-level-aggregate-scores-computation

		ELR2B2 : For Polytechnic Courses			
Aggregate Type		ELR2B2 -A	ELR2B2-B	ELR2B2-C	ELR2B2-D
EL		English			
R2	1st Group of Relevant Subjects	Art/Art & Design Business Studies Combined Humanities Commerce Commercial Studies Economics Geography Higher Art Higher Music History Humanities (Social Studies, Literature in English) Humanities (Social Studies, Literature in Chinese) Humanities (Social Studies, Literature in Malay) Humanities (Social Studies, Literature in Tamil) Humanities (Social Studies, History) Humanities (Social Studies, Geography) Intro to Enterprise Development Literature in English Literature in Chinese Literature in Malay Literature in Tamil Media Studies (English) Media Studies (Chinese) Music	Elementary Mathematics Additional Mathematics		

	2nd Group of Relevant Subjects	Additional Mathematics Art/Art & Design Business Studies Chinese Combined Humanities Commerce Commercial Studies Creative 3D Animation Design & Technology Design Studies Economics Elementary Mathematics Food & Nutrition Geography Higher Art Higher Chinese Higher Malay Higher Music Higher Tamil History Humanities (Social Studies, Literature in English) Humanities (Social Studies, Literature in Chinese) Humanities (Social Studies, Literature in Malay) Humanities (Social Studies, Literature in Tamil) Humanities (Social Studies, History) Humanities (Social Studies, Geography) Intro to Enterprise Development Literature in English Literature in Chinese Literature in Malay Literature in Tamil Malay Media Studies (English) Media Studies (Chinese) Music Principles of Accounts Tamil	Art/Art & Design Business Studies Combined Humanities Commerce Commercial Studies Economics Geography Higher Art Higher Music History Humanities (Social Studies, Literature in English) Humanities (Social Studies, Literature in Chinese) Humanities (Social Studies, Literature in Malay) Humanities (Social Studies, Literature in Tamil) Humanities (Social Studies, History) Humanities (Social Studies, Geography) Intro to Enterprise Development Literature in English Literature in Chinese Literature in Malay Literature in Tamil Media Studies (English) Media Studies (Chinese) Music Principles of Accounts	Add^{n} Combined Science Additional Science Biology Biotechnology Chemistry Combined Science Computing/Computer Studies Creative 3D Animation Design & Technology Food & Nutrition Electronics/Fundamentals of Electronics General Science Human & Social Biology Integrated Science Physics/Engineering Science Science (Chem, Bio) Science (Phy, Bio) Science (Phy,Chem)/ Physical Science Science (Phy, Chem, Bio)	Add^{n} Combined Science Additional Science Art/Art & Design Biology Biotechnology Chemistry Combined Science Computing/Computer Studies Creative 3D Animation Design & Technology Design Studies Food & Nutrition Electronics/Fundamentals of Electronics General Science Higher Art Human & Social Biology Integrated Science Media Studies (English) Media Studies (Chinese) Physics/Engineering Science Science (Chem, Bio) Science (Phy, Bio) Science (Phy, Chem)/Physical Science Science (Phy, Chem, Bio)
B2	Best 2 other subjects				

What can my child do with Geography after secondary school?

- Geography is offered as an ‘A’ level subject and at tertiary institutions, such as the National University of Singapore’s (NUS) Department of Geography.

- Polytechnic courses related to environmental science, hotel and leisure management, as well as hospitality and tourism management.

What can my child do with Geography after secondary school?

- **Possible careers:**
  - Urban planning
  - Environmental consultancy
  - Tourism
  - Education
  - Finance and banking sectors.

How can I support my child?

- Bring your child's attention to news on developments in the natural environment or countries.
  - Encourage your child to bring up what he or she is learning in Geography.
  - Discuss how he or she feels about the news.
  - Talk about ways that we can help improve the situation for people, the natural environment or the affected place.
- Visit nature parks or nature reserves as part of your family outings.

Elective Sharing on Art

Upper Secondary Art

Art as "O" Level Subject

Overview of O Upper Sec Art

- What do you learn?
- What is being measured (assessed)?
- How much is expected?
- Pathways from “O” Level Art

What do you get to learn?

- Dry medium (Pencil/colour pencil/charcoal)
- Painting (Watercolour / oil / acrylic / digital)
- Batik Painting
- Intermediate to Advanced illustration skills, to be applied in:
  - Fashion / Costume illustration
  - Narrative illustration

What do you get to learn?

- Dry Medium (Pencil / Colour pencil / Charcoal)
- Painting (Watercolour / Oil / Acrylic / Digital)
- Batik Painting
- Intermediate to Advanced illustration skills, to be applied in:
  - Fashion / Costume illustration
  - Narrative illustration

O level illustrations

What will be provided to help you learn?

- Equipment
  - DSLR Cameras, computer, illustration sensor tablets, Ipad pro (procreate app)

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

How Much Is Expected?

5 periods per week + remedial

- Coursework (60%)
  - Done over 7 months
  - CONSISTENT effort (no last minute)
- Paper 2 Drawing & painting (40%)
  - Question / theme given 21 days before exam
  - 3-hour paper
- **OR** *Paper 3: SOVA (40%)*
  - Syllabus – 24 artists(2 artworks each)
  - 2-hour paper (Written paper)

Consistency and Commitment

Sample of a SOVA exam question:

Artist and Model by Liu Kang 1954, Oil on canvas, 84 x 124 cm

Workers in a Canteen by Chia Mia Tee 1974, Oil on canvas, 89 x 126 cm

a) ***Describe the people, activities and environment depicted in these two paintings***

b) ***Compare the use of colour and light***

c) ***How differently are the people portrayed?***

Pathways from "O" level Art

- Before O level – DPA, DSA (JC)
  - May – July in Sec 4 Year
- Poly/ JC / SOTA Year 11 & 12
  - Design-based courses
- Fine Art Institutions
  - Fine Arts, Design-based courses
- NTU (School of Art, Design & Media)

Elective Sharing on Design & Technology and Food & Nutrition

Aims:

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

Subject Content:

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

6097 'O' Level Assessment:

Paper	Assessment	Duration	Weighting
1	Written Paper	2 hours	40%
2	Coursework	6-7 months	60%

What do we do in class?

Theory Lessons

What do we do in class?

Practical Lessons

What do we do in class? Food Science Experiments

Demands of Nutrition & Food Science:

Regular & consistent work

Time Management skills.

- ICT skills is a bonus

Possible Progression:

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

What is Design & Technology?

- A video containing a brief introduction on the subject ‘Design & Technology’ can be viewed at: https://youtu.be/DBvJUaWPAlE

Aims:

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

Subject Content:

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

‘O’ Level Assessment:

Paper	Assessment Mode	Duration	Weighting
1	Written Paper	2 hrs	40%
2	Design Project	22 wks	60%

Design Project:

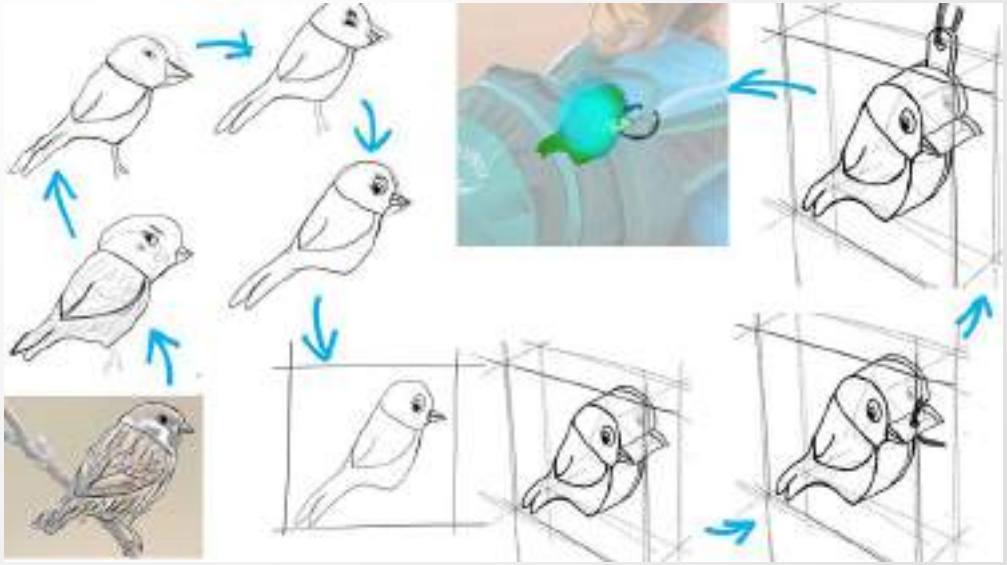
1) Design Journal
   - Design process
   - Research, ideation, mock-ups
2) Presentation Boards
   - Communicate proposed design solution
3) Prototype

2019 D&T Awards
Creative Innovation Award

Examples:

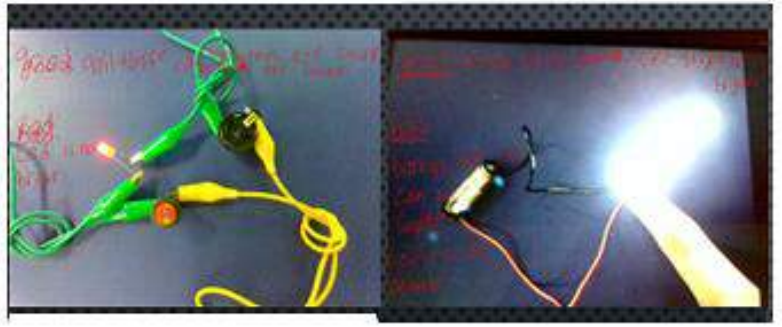
Research

Ideation



Examples: Mock-ups & Testing

Testing, tinkering

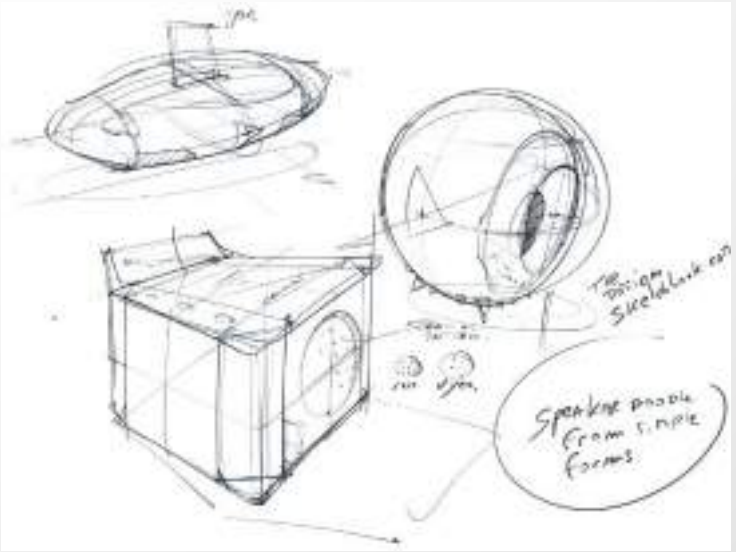


Demands of D&T:

Time Management skills.

Regular & consistent work

Sketching skills



Possible Progression:

- JC – L1R5
  - ✓ One of the R5 subject
- Polytechnics – EL R2 B2
  - ✓ Engineering related courses (Aerospace, electrical, electronics, Civil, Marine, mechanical, etc.)
  - ✓ Technology related courses,
  - ✓ Aerospace,
  - ✓ Build Environment (Hotel & Leisure Facility Mangt, etc)
  - ✓ Maritime Studies,
  - ✓ Applied Sciences (Biomedical sciences, etc)

Elective Sharing on Principles of Accounts (POA)

Principles of Accounts (Syllabus 7087)

- Students will be taught age-appropriate and relevant accounting knowledge and skills.
  - Applying the **double entry system** of recording business transactions
  - Synthesis and presentation skills in the **preparation of accounting information** in a suitable form
  - **Analytical skill** in interpreting, analyzing financial statements
  - **Evaluative skill** in evaluating businesses' financial performance using financial information and ratios

Principles of Accounts (Syllabus 7087)

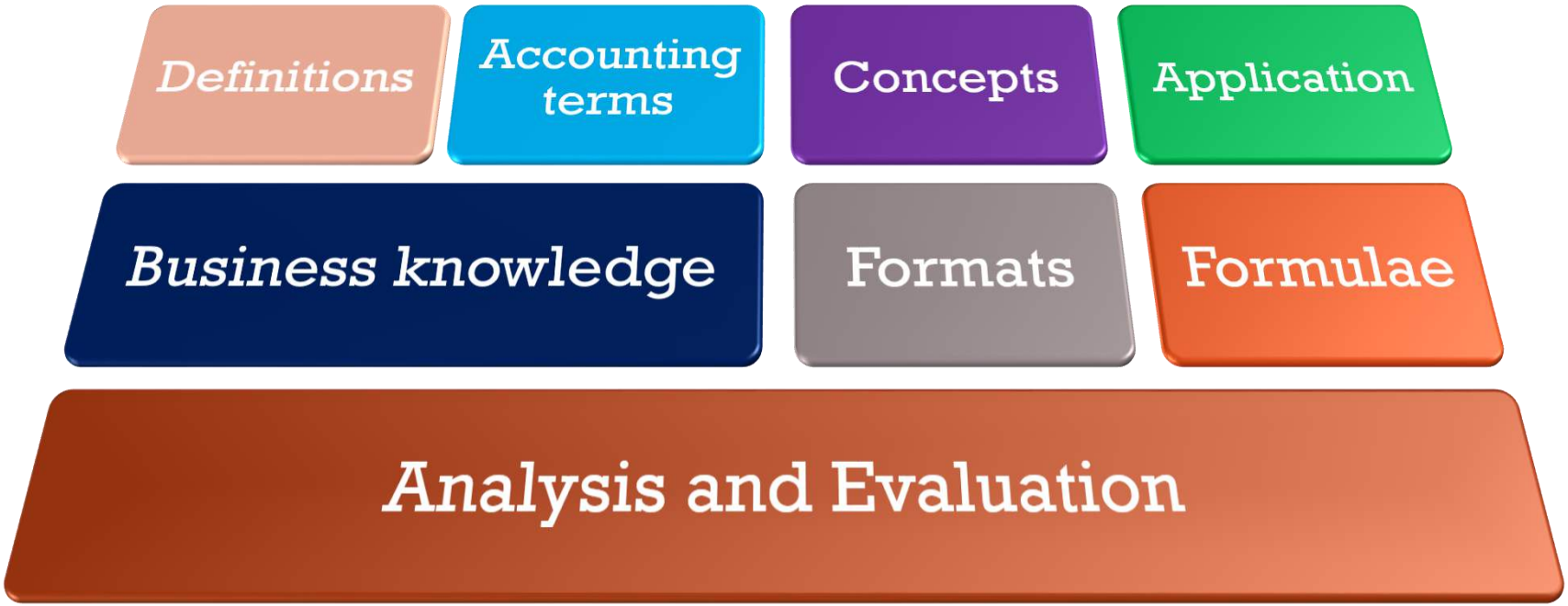
- Students will learn and understand how businesses use accounting and non-accounting information to make decisions.
  - **decision-making skill** in evaluating choices using both accounting and non-accounting information.

Principles of Accounts (Syllabus 7087)

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

PRINCIPLES OF ACCOUNTS

It involves more than just numbers and calculations!



LEARNING A NEW LANGUAGE

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

ACCOUNTING TERMS (EXAMPLES)

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

FORMATS

Journal entries

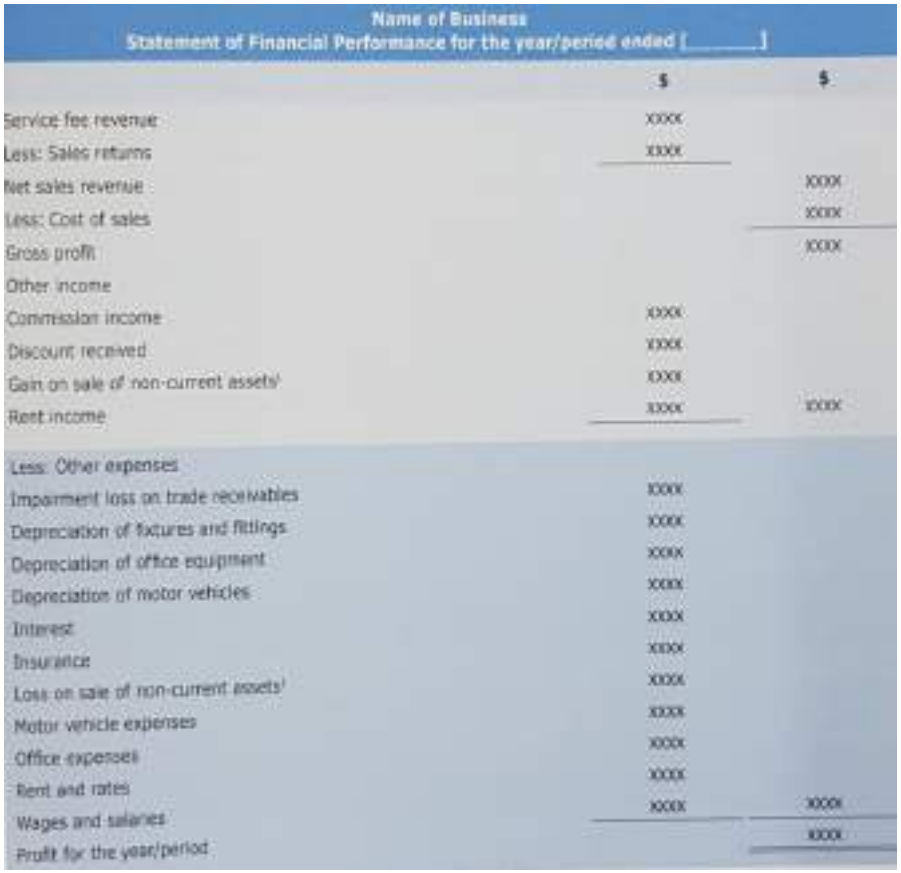
Journal			
Date	**Particulars**	**Debit**	**Credit**
20X1		$	$
Feb 5	Drawings	120	
	Cash in hand		120
	Withdrawal by owner of $120 for personal use		
Feb 12	Inventory	1,000	
	Trade payable — TeeShirts		1,000
	Purchased goods of $1,000 from TeeShirts on credit		
Feb 22	Trade payable — TeeShirts	400	
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

Ledger account

Service fee revenue account				
Date	**Particulars**	**Debit**	**Credit**	**Balance**
20X1		$	$	$
Jan 1	Service fee revenue received in advance a		1,000	1,000 Cr
Mar 8	Cash at bank		20,000	21,000 Cr
Apr 12	Cash in hand		5,000	26,000 Cr
Sep 18	Trade receivables		18,000	44,000 Cr
Dec 31	Service fee revenue received in advance d	3,000		41,000 Cr

FORMATS

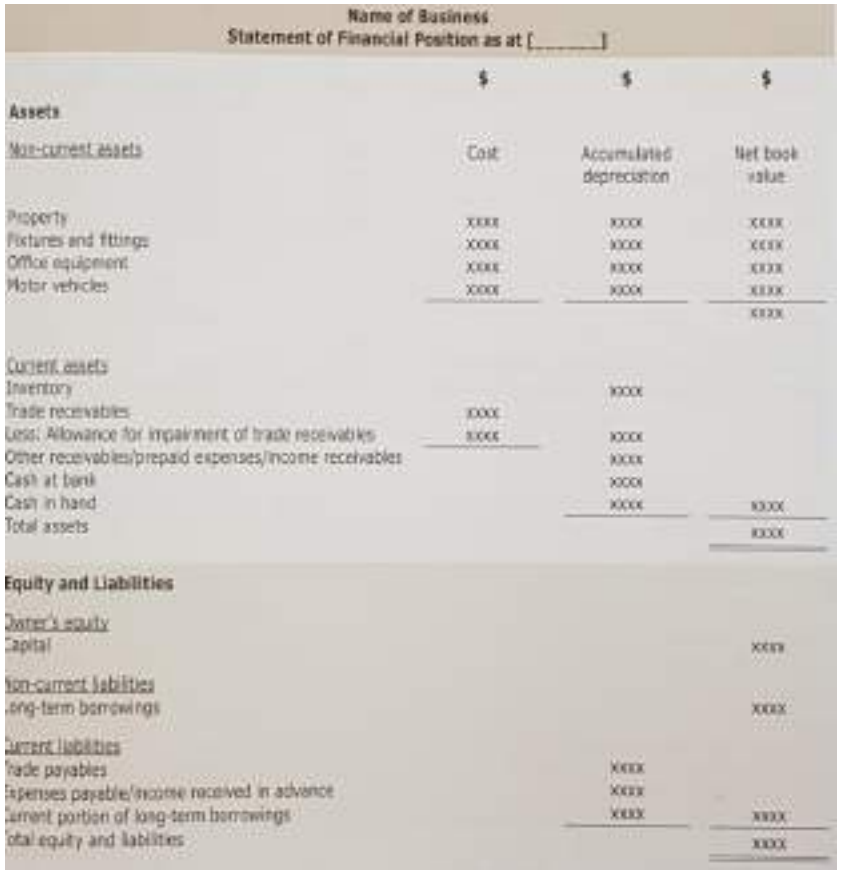
Statement of Financial Performance



Name of Business
Statement of Financial Performance for the year/period ended [_____]

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

Statement of Financial position



Name of Business
Statement of Financial Position as at [_____]

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

New

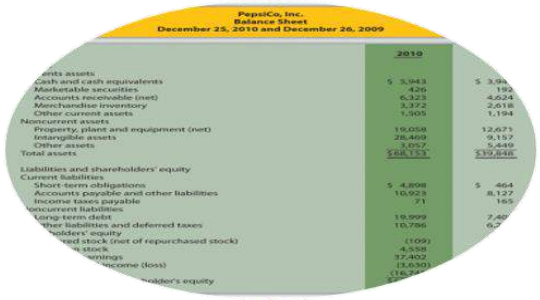
SCENARIO-BASED QUESTION

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

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

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

ANALYSIS AND EVALUATION (O LEVEL)


PepsiCo, Inc.
Balance Sheet
December 25, 2010 and December 26, 2009

	2010	
...nts assets		
...ash and cash equivalents	$ 5,943	$ 3,9
Marketable securities	426	1
Accounts receivable (net)	6,323	4,624
Merchandise inventory	3,372	2,618
Other current assets	1,505	1,194
Noncurrent assets		
Property, plant and equipment (net)	19,058	12,671
Intangible assets	28,469	9,157
Other assets	3,057	5,449
Total assets	$68,153	$39,848
Liabilities and shareholders' equity		
Current liabilities		
Short-term obligations	$ 4,898	$ 464
Accounts payable and other liabilities	10,923	8,127
Income taxes payable	71	165
...ncurrent liabilities		
Long-term debt	19,999	7,4
...her liabilities and deferred taxes	10,786	6,2
...holders' equity		
...red stock (net of repurchased stock)	(109)	
...n stock	4,558	
...arnings	37,402	
...income (loss)	(3,630)	
...older's equity	(16,3	

Financial statement analysis

Profitability

Liquidity

Efficiency

Through the use of financial ratios
Example:

- Mark–up on cost
- Profit margin
- Current ratio
- Rate of inventory turnover
- Rate of trade receivables turnover

Inventory

Trade receivables

COMMON TRAITS OF STUDENTS WHO HAVE DONE WELL IN POA

BUILD YOUR OWN BUSINESS (BYOB) GAME BOARD CHALLENGE 2018

- Board game in learning more about the applications of accounting

- Organised by Republic Polytechnic

POA LEARNING TRAIL 2018

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

BEYOND O LEVEL: AT POLYTECHNICS

- Accounting related courses:

Course title	Polytechnic	Range of ELR2B2 for 2021 JAE	2021 Planned Intake
Accountancy	Ngee Ann Polytechnic	4 to 11	135
Accountancy	Singapore Polytechnic	5 to 12	105
Accountancy & Finance	Nanyang Polytechnic	7 to 12	69
Accountancy & Finance	Temasek Polytechnic	6 - 12	115

- To be eligible for consideration, candidates must have the following GCE O-Level examination results.

	O level Grade
English Language	1 - 6
Mathematics	1 - 6
Any three other subjects (*)	1 - 6

MORE EXAMPLES OF RELEVANT COURSES IN POLYTECHNICS

Singapore Polytechnic - Business School

Diploma in

- Banking & Finance
- Business Administration
- Human Resource Management with Psychology
- Common Business Programme

Ngee Ann Polytechnic - School of Business & Accountancy

Diploma in

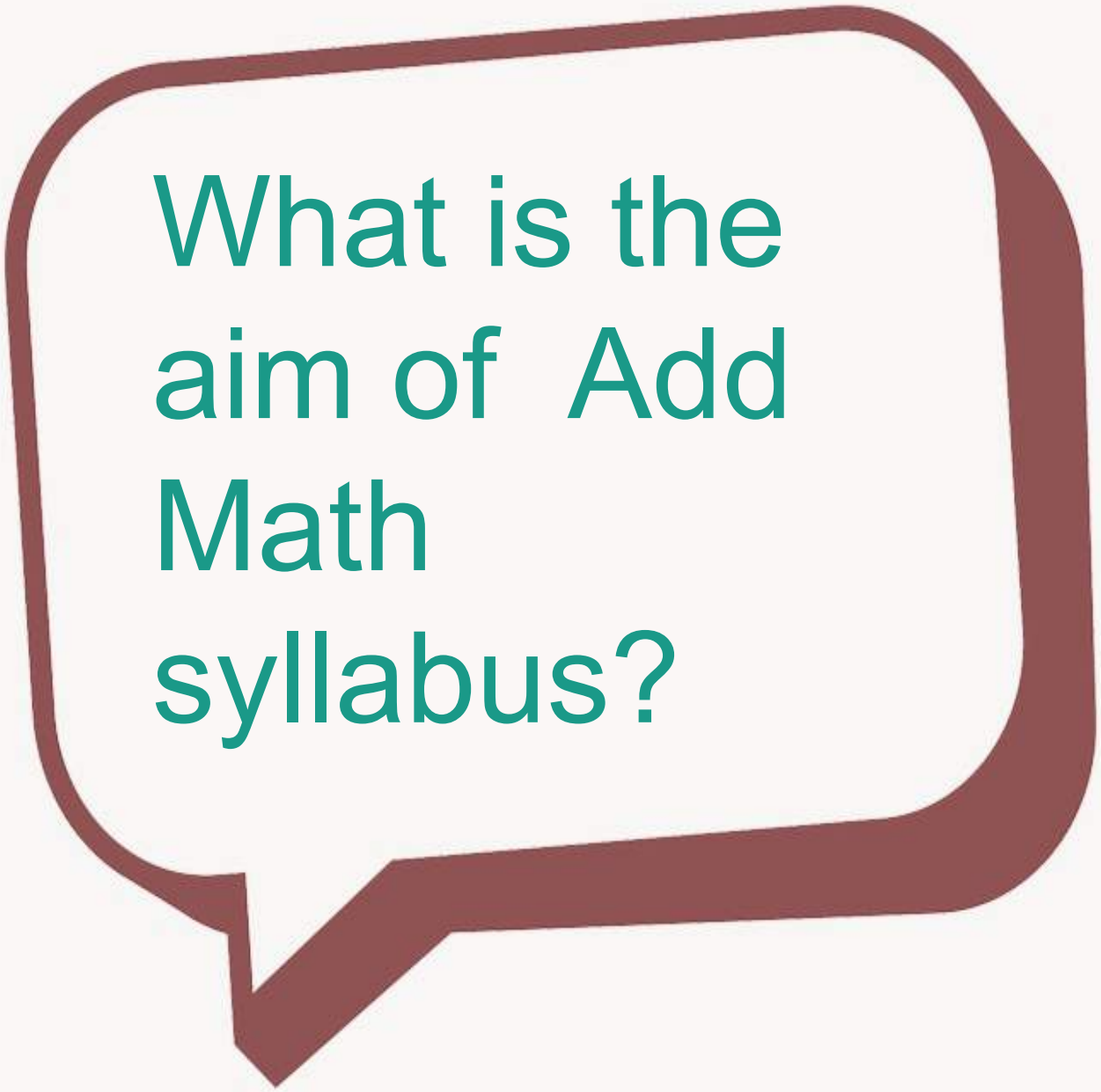
- Banking & Finance
- Arts Business Management
- International Trade and Business
- Tourism & Resort Management
- Common Business Programme

Temasek Polytechnic - School of Business

Diploma in

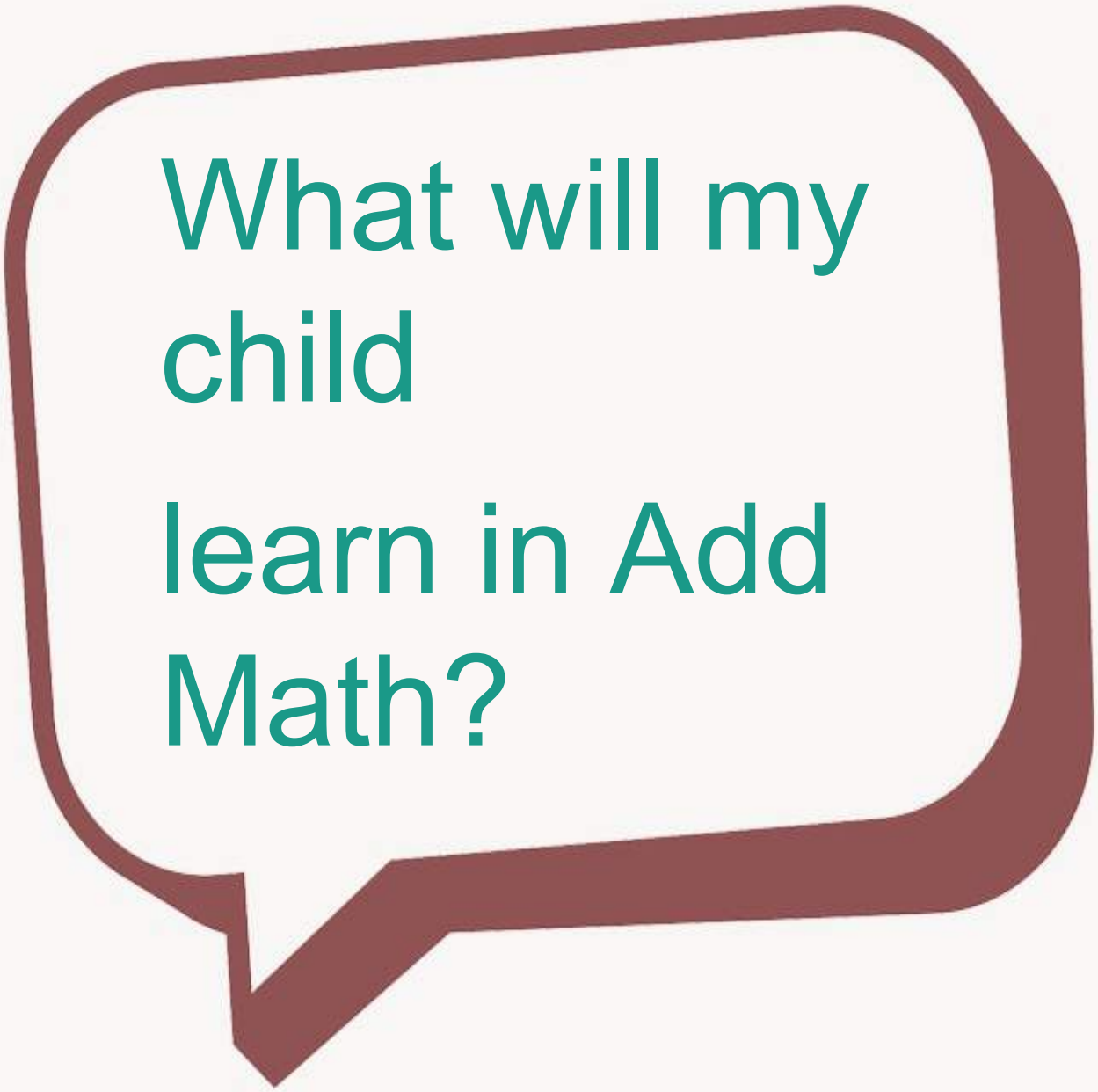
- Business
- Law & Management
- Hospitality & Tourism Management
- Communications & Media Management
- Culinary & Catering Management
- Common Business Programme

Elective Sharing on Additional Mathematics


What is the aim of Add Math syllabus?

Aims:

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


What will my child
learn in Add Math?

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

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

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

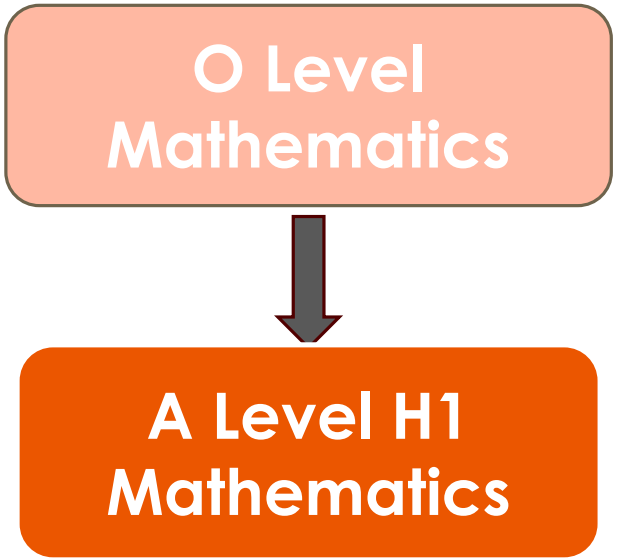
4049 'O' Level

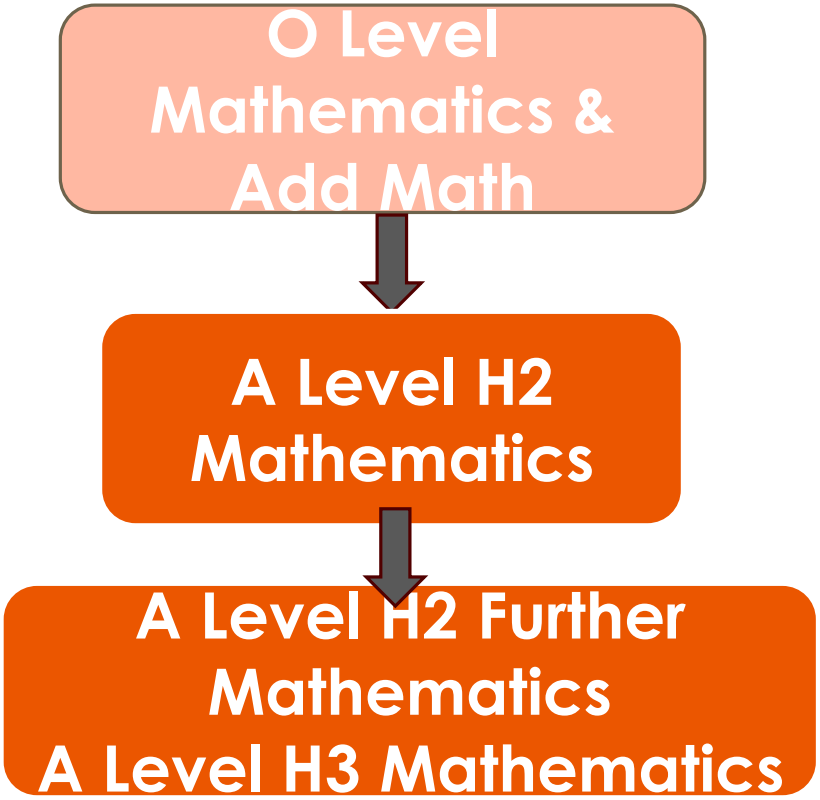
Paper	Assessment	Duration	Weighting
1	Written Paper 90 marks	2 hour 15 mins	50%
2	Written Paper 90 marks	2 hour 15 mins	50%

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

Requirements for Admission to Junior College

Add Math can be considered as one of the L1R5 subjects





Requirements for Admission to Polytechnics

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

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

Jobs/Courses in the Future That Requires A.Math

Business

Game Designer

Pilot

Architect

Engineer

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

Diligent

Attentive

Self Discipline

Never Give Up!

Should my child take up Add Math in Upper Secondary?

Interest

Thank you for joining us today.

Before you take your leave from this sharing, please spare some time to complete the feedback form. Your feedback is truly appreciated.

SCAN ME