Year 1 Math

Y1 Math AASL		
Number and algebra	1.1	Scientific Notation
	1.2	Arithmetic Sequence and series
	1.3	Geometric Sequences & Series
	1.4	Financial Application of Geometric Sequences and Series
	1.5	Exponent & Logarithm
	1.6	Deductive Proof
	1.7	Laws of Exponents & Laws of Logarithms
	1.8	Infinite Geometric Series
	1.9	Binomial Theorem
	N/A	
Functions	2.1	Straight Line Equation
	2.2	Function basics & Inverse
	2.3	Function Graph
	2.4	Graph Features
	2.5	Composite & Identity Functions
	2.6	Quadratic Function
	2.7	Solving Quadratic Equations & Inequalities
	2.8	Reciprocal & Rational Functions
	2.9	Exponential & Logarithmic Functions/Graphs
	2.10	Using Technology to Solve Equations
	2.11	Transformation
	N/A	
Geometry and Trigonometry	3.1	Geometry Basics
	3.2	Trigonometric Basics & Rules
	3.3	Right/Non-right Angled Trigonometry
	3.4	Circle & Radian
Statistics and probability	4.1	Sample & Population
	4.2	Data Presentation
	4.3	Central Tendency & Quartiles
	4.4	Bivariate Statistics
	4.5	Probability Basics
	4.6	Probability Operations
	4.7	Discrete Random Variables
	4.8	Binomial Distribution
	4.9	Normal Distribution
	4.10	Regression
	4.11	Conditional Probability Operations
	4.12	z-score
	N/A	
Calculus	5.1	Limit & Derivative
	5.2	Increasing & Decreasing Functions
	5.3	Power Rule
	5.4	Tangents & Normals
	5.5	Anti-differentiation
	5.6	Derivative of Various Expressions/Functions & Differentiation Rules
	5.7	Second Derivative
	5.8	Maximum, Minimum, and Point of Inflexion
	5.9	Kinematics
	5.10	Indefinite Integral
	5.11	Definite Integral
	N/A	

Y1 Math AAHL		
Number and algebra	1.1	Scientific Notation
	1.2	Arithmetic Sequence and series
	1.3	Geometric Sequences & Series
	1.4	Financial Application of Geometric Sequences and Series
	1.5	Exponent & Logarithm
	1.6	Deductive Proof
	1.7	Laws of Exponents & Laws of Logarithms
	1.8	Infinite Geometric Series
	1.9	Binomial Theorem
	1.10	Counting principles & Binomial Theorem for Fractional and Negative Indices
	1.11	Partial Fractions
	1.12	Complex Number Basics
	1.13	Modulus-argument Form & Euler Form
	1.14	Complex Number Operations and De Moivre's Theorem
	1.15	Proof by Mathematical Induction, Contradiction, and Counterexample
	1.16	Systems of Linear Equations
Functions	2.1	Straight Line Equation
	2.2	Function basics & Inverse
	2.3	Function Graph
	2.4	Graph Features
	2.5	Composite & Identity Functions
	2.6	Quadratic Function
	2.7	Solving Quadratic Equations & Inequalities
	2.8	Reciprocal & Rational Functions
	2.9	Exponential & Logarithmic Functions/Graphs
	2.10	Using Technology to Solve Equations
	2.11	Transformation
	2.12	Polynomial Functions
	2.13	Rational Functions (Extended)
	2.14	Odd/Even Functions & Finding Inverse with Domain Restriction
	2.15	Function Inequality
	2.16	Absolute Value Function Graph & Higher Level Transformation
Geometry and Trigonometry	3.1	Geometry Basics
	3.2	Trigonometric Basics & Rules
	3.3	Right/Non-right Angled Trigonometry
	3.4	Circle & Radian
	3.5	Unit Circle
	3.6	Trigonometric Identities
	3.7	Trigonometric Graphs
	3.8	Solving Trigonometric Equations
	3.9	Reciprocal Trigonometric Ratios
	3.10	Compound Angle Identities & Tangent Double Angle Identity
	3.11	Relationships between Trigonometric Functions
	3.12	Vector Basics
	3.13	Scalar Product
	3.14	Vector: Line
	3.15	Coincident, Parallel, Intersecting, and Skew Lines
	3.16	Vector Product
	3.17	Vector: Plane
	3.18	Line and Plane
Statistics and probability	4.1	Sample & Population
	4.2	Data Presentation
	4.3	Central Tendency & Quartiles
	4.4	Bivariate Statistics
	4.5	Probability Basics
	4.6	Probability Operations
	4.7	Discrete Random Variables
	4.8	Binomial Distribution
	4.9	Normal Distribution
	4.10	Regression
	4.11	Conditional Probability Operations
	4.12	z-score
	4.13	Baye's Theorem
	4.14	Discrete Random Variables (Extended) & Continuous Random Variables
Calculus	5.1	Limit & Derivative
	5.2	Increasing & Decreasing Functions
	5.3	Power Rule
	5.4	Tangents & Normals
	5.5	Anti-differentiation
	5.6	Derivative of Various Expressions/Functions & Differentiation Rules
	5.7	Second Derivative
	5.8	Maximum, Minimum, and Point of Inflexion
	5.9	Kinematics
	5.10	Indefinite Integral
	5.11	Definite Integral
	5.12	Continuity/Differentiability, First Principles, Convergence/Divergence, and Higher Derivatives
	5.13	l'Hopital's Rule
	5.14	Implicit Differentiation
	5.15	Derivative & Integral of Various Expressions/Functions (Extended)
	5.16	Integration by Substitution/Parts
	5.17	Area of Enclosed Region
	5.18	Differential Equations & Euler's Method
	5.19	Maclaurin Series

Y1 Math AAHL 심화		
Number and algebra	1.1	Arithmetic Sequences & Series
	1.2	Geometric Sequences & Series
	1.3	Sigma Notation
	1.4	Exponent Laws & Solving Equations
	1.5	Log Laws & Solving Equations
	1.6	The Binomial Theorem
	1.7	Counting Principles, Combinations & Permutations
	1.8	Proof by Mathematical Induction
	1.9	Complex Numbers & De Moivre's Theorem
	1.1	Systems of Linear Equations
	1.11	Proof by Deduction
	1.12	Partial Fractions
	1.13	Proof by Contradiction
	1.14	Binomial Theorem for Fractional & Negative Indices
Functions	2.1	Domain & Range, Composite, Inverse
	2.2	Transformations of Functions
	2.3	Factorising Quadratic Functions & Equations
	2.4	Completing the Square (Quadratics)
	2.5	Discriminant Test (Quadratics)
	2.6	Rational Functions, Asymptotes & Graphs
	2.7	Exponential & Logarithmic Functions
	2.8	Sketching Functions with a Calculator
	2.9	Polynomial Theorems: Remainder, Factor, Division
	2.1	Sum & Product of Roots(Polynomials)
Geometry and Trigonometry	3.1	Radians, Length of Arc, Area of Sector
	3.2	Unit Circle & Trigonometric Ratios
	3.3	Trig Identities
	3.4	Trig Graphs & Circular Functions
	3.5	Solving Trigonometric Functions & Equations
	3.6	Sine & Cosine Rule, Area of a Triangle
	3.7	Degrees v Radians
	3.8	Vector Basics
	3.9	Scalar Product & Angle Between Two Vectors
	3.1	Vector Equation of a Line
	3.11	Intersection of 2 Vector Lines
	3.12	Vector Product
	3.13	Equations of a Plane (Vectors)
	3.14	Intersection of a Line & Plane
Statistics and probability	4.1	Mean, Standard Deviation & Variance
	4.2	Bivariate Statistics
	4.3	Venn Diagrams & Probability
	4.4	Conditional Probability
	4.5	Probability Distribution
	4.6	Binomial Distribution
	4.7	Normal Distribution
	4.8	Bayes Theorem
	4.9	Probability Density Functions
Calculus	5.1	Differentiation Rules
	5.2	Equations of a Tangent
	5.3	Optimization & Calculus Curves
	5.4	Integration Rules
	5.5	Integration by Substitution
	5.6	Kinematics
	5.7	Integration by Parts
	5.8	Volume of Revolution
	5.9	L'Hopital's Rule
	5.1	Implicit Differentiation
	5.11	Related Rates
	5.12	Differential Equations
	5.13	Maclaurin Series

Y1 Math AI HL		
Number and Algebra	1.1	Scientific Notation
	1.2	Arithmetic Sequence and Series
	1.3	Geometric Sequence and Series
	1.4	Financial Application of Geometric Sequences and Series
	1.5	Exponent & Logarithm
	1.6	Approximation & Estimation
	1.7	Amortization & Annuities
	1.8	System of Linear Equations & Polynomial Equations
	1.9	Laws of Logarithms
	1.10	Simplifying Expressions
	1.11	Infinite Geometric Series
	1.12	Complex Number Basics
	1.13	Modulus-argument Form & Euler Form
	1.14	Matrix Basics
	1.15	Eigenvalues & Eigenvectors + Matrix Operations
Functions	2.1	Straight Line Equation
	2.2	Function basics & Inverse
	2.3	Function Graph
	2.4	Graph Features
	2.5	Modelling with Different Functions
	2.6	Mathematical Modelling Skills
	2.7	Composite Functions & Inverse (Extended)
	2.8	Transformation
	2.9	Mathematical Modelling Skills (Extended)
	2.10	Scaling & Linearization
Geometry and Trignometry	3.1	Geometry Basics
	3.2	Trigonmetry Basics + Cosine & Sine Rules + Area of Triangle
	3.3	Pythagoras' Theorem + Angles of Elevation & Depression
	3.4	Circle, Arc, & Sector
	3.5	Equations of Perpendicular Bisectors
	3.6	Voronoi Diagrams
	3.7	Radians
	3.8	Unit Circle & Trigonometric Operations
	3.9	2D Geometric Transformation Using Matrices & Geometric Interpretation of The Determinant of A Transformation Matrix
	3.10	Vector basics
	3.11	Vector: Line
	3.12	Vector Applications to Kinematics
	3.13	Vector Operations
	3.14	Graph Theory
	3.15	Graph and Matrices
	3.16	Applications of Graph Theory
Statistics and Probability	4.1	Sample & Population
	4.2	Data Presentation
	4.3	Central Tendency & Quartiles
	4.4	Bivariate Statistics
	4.5	Probability Basics
	4.6	Probability Operations
	4.7	Discrete Random Variables
	4.8	Binomial Distribution
	4.9	Normal Distribution
	4.10	Regression
	4.11	Hypothese, p-values, and Various Tests
	4.12	Data Collection, Data Organization, Reliability, and Validity
	4.13	Regression (Extended)
	4.14	Unbiased Estimation & Transformation of A Variable
	4.15	Linear Combination of Normal Random Variables & Central Limit Theorem
	4.16	Confidence Intervals
	4.17	Poisson Distribution
	4.18	Critical Values & Regions + Type I & II Errors + More Statistical Tests
	4.19	Transition Matrices & Markov Chains
Calculus	5.1	Limit & Derivative
	5.2	Increasing & Decreasing Functions
	5.3	Power Rule
	5.4	Tangents & Normals
	5.5	Anti-differentiation
	5.6	Maximum & Minimum
	5.7	Optimisation
	5.8	Trapezoidal Rule
	5.9	Derivatives of Different Functions, Chain Rule, Quotient Rule, and Related Rates
	5.10	Second Derivative
	5.11	Definite & Indefinite Integration
	5.12	Area of Enclosed Region & Volumes of Revolution
	5.13	Kinematic Calculus
	5.14	Differential Equation
	5.15	Slope Fields
	5.16	Euler's Method & Numerical Solution of Coupled System
	5.17	Phase Portrait + Distinct/Real/Complex/Imaginary Eigenvalues + Equilibrium Points & Stable Populations & Saddle Points
	5.18	Euler's method (Extended)

Year 1 Biology

Y1 Biology SL & HL (* HL only)				
Theme	Level of organization			
	Molecules	Cells	Organisms	Ecosystem
A Unity and diversity	**A 1.1 Water** **A 1.2 Nucleic acid**	**A 2.1 Origins of cells*** **A 2.2 Cell structure** **A 2.3 Virus***	A 3.1 Diversity of organisms A 3.2 Classification and cladistics*	A 4.1 Evolution and speciation A 4.2 Conservation of biodiversity
B Forms and functions	**B 1.1 Carbohydrates and lipids** **B 1.2 Proteins**	**B 2.1 Membranes and membrane transport** **B 2.2 Organelles and compartmentalizatio n** **B 2.3 Cell specialization**	B 3.1 Gas exchange B 3.2 Transport B 3.3 Muscle and motility*	B 4.1 Adaptations to environment B 4.2 Ecological niches
C Interactions and interdependence	**C 1.1 Enzymes and metabolism** **C 1.2 Cell respiration** **C 1.3 Photosynthesis**	C 2.1 Chemical signalling* C 2.2 Neural signallining	C 3.1 Integration of body systems C 3.2 Defence against disease	C 4.1 Populations and communities C 4.2 Transfers of energy and matter
D Continuity and change	**D 1.1 DNA replication** **D 1.2 Protein synthesis** D 1.3 Mutations and gene editing	D 2.1 Cell and nuclear division D 2.2 Gene expression* D 2.3 Water potential	D 3.1 Reproduction D 3.2 Inheritance D 3.3 Homeostasis	D 4.1 Natural selection D 4.2 Stability and change D 4.3 Climate change

Year 1 Chemistry

Y1 Chemistry SL&HL			
Topic #	**Topic**	**Subtopic #**	**Subtopic**
Structure 1	Models of the particulate nature of matter	Structure 1.1	Introduction to the particulate nature of matter
		Structure 1.2	The nuclear atom
		Structure 1.3	Electron configurations
		Structure 1.4	Counting particles by mass: The mole
		Structure 1.5	Ideal gases
Structure 2	Models of bonding and structure	Structure 2.1	The ionic model
		Structure 2.2	The covalent model
		Structure 2.3	The metallic model
		Structure 2.4	From models to materials
Structure 3	Classification of matter	Structure 3.1	The periodic table: Classification of elements
		Structure 3.2	Functional groups: Classification of organic compounds
Reactivity 1	What drives chemical reactions?	Reactivity 1.1	Measuring enthalpy change
		Reactivity 1.2	Energy cycles in reactions
		Reactivity 1.3	Energy from fuels
Reactivity 2	How much, how fast and how far?	Reactivity 2.1	How much? The amount of chemical change
		Reactivity 2.2	How fast? The rate of chemical change
		Reactivity 2.3	How far? The extent of chemical change
Reactivity 3	What are the mechanisms of chemical change?	Reactivity 3.1	Proton transfer reactions
		Reactivity 3.2	Electron transfer reactions
		Reactivity 3.3	Electron sharing reactions
		Reactivity 3.4	Electron-pair sharing reactions
			*HL은 각 subtopic마다 추가진도가 있음

Year 1 Physics

Y1 Physics SL & HL					
Topic	**Sub-topic**				
A. Space, time and motion	**A.1 Kinematics**	**A.2 Forces and momentum**	**A.3 Work, energy and power**	**A.4 Rigid body mechanics**	A.5 Galilean and special relativity (HL only)
B. The particulate nature of matter	**B.1 Thermal energy transfers**	B.2 Greenhouse effect	**B.3 Gas laws**	B.4 Thermdynamics (HL only)	B.5 Current and circuits
C. Wave behaviour	C.1 Simple harmonic motion	C.2 Wave model	C.3 Wave phenomena	C.4 Standing waves and resonance	C.5 Doppler effect
D. Fields	D.1 Gravitational fields	D.2 Electric and magnetic fields	D.3 Motion in electromagnetic fields	D.4 Induction (HL only)	
E. Nuclear and quantum physics	E.1 Structure of the atom	E.2 Quantum physics (HL only)	E.3 Radioactive decay	E.4 Fission	E.5 Fusion and stars
T. Tools for physics	**T.1 Mathematical tools (Vectors & Scalars)**	**T.2 Experimental tools (Units, Measurements & Uncertainties)**			

Year 1 Economics

2025 Q1 Economics 진도표
1.1 What is economcis?
2.1 Demand
2.2 Supply
2.3 Competitive market equilibrium
2.5 Elasticites of demand
2.6 Elasticity of supply
2.7 Role of governments in microeconomies (indirect tax & subsidy)
2.7 Role of governments in microeconomies (price ceiling & price floor)
2.8 Market failure externalities and common pool or common access resources (externalities)
2.8 Market failure externalities and common pool or common access resources (responses to externalities)
2.11 Market failure - market power (HL only)
** P1 답안 작성법, Economics Guide 사용법, IA Intro 수업도 포함하고 있습니다

Year 1 Psychology

Year 1 Psychology HL		
Week	**Key Unit**	**Daily Lessson**
W1	**Intro to Psychology**	D1 Introduction to Psychology
	Research Methods	D2 Scientific Research Methods : Types
		D3 Evaluating Research
	Research Design & Sampling Methods	D4 Research Design
		D5 Sampling Methods
W2	**Ethics of Research**	D6 Samplig Methods + Ethics
	BLOA :Introduction & Localization	D7 Introduction to BLOA
		D8 Localization
		D9 Localization & Cast studies
	BLOA : Neuroplasticity	D10 Neuroplasticity & Animal studies
W3	**BLOA : Neuroplasticity**	D11 Neuroplasticity & Experiments
	BLOA : Neurotranmission & Hormones	D12 Neurotransmission
		D13 Neurotransmission & Studies / Hormones
		D14 Hormones & Studies
	BLOA : Pheromones	D15 Pheromones & Studies
W4	**BLOA : Genetics**	D16 Genetics & Genetics Research
		D17 Genetics & Studies
	BLOA : Evolution	D18 Evolutionary Theory
		D19 Evolutionary theory & studies
	MOCK Review + BLOA wrap up	D20 SAQ Outline / Wrap up
** occassionally : Daily quizes will take place to check students' progresses.		

Year 1 Geography

Year 1 Geo Core		
Week	**Key Unit**	**Daily lesson**
W1	**1.1 Changing Population : Population and Economic development Patterns**	D1 Population distribution
		D2 Classification of Economic development & their global patterns
		D3 Changes in Population - Different Migration models
		D4 Changes in Population - Uneven distribution case study / Megacity growth
		D5 Changes in Population- Megacity growth
W2	**1.2 Changing Populaiton : Changing Populations and places**	D6 Population Change: Demographic indicators, changes in Population structure
		D7 Population Change: changes in population strucutres & DTM
		D8 Contrasting Case studies of Population changes
		D9 Megacity : Consequences & Challenges (+Case study)
		D10 Migration : Forced & Refugees (+Case study)
W3	**1.3 Changing Population : Population Challenges and Opportunities**	D11 Global and Regional Population trends : Ageing population &Sex Ratio
		D12 Population Management Policies : Ageing, Pronatalist, Antinatalist (+Case studies)
		D13 Population Management Policies : Problems/ Demographic Dividend
		D14 : Population as a resource : Demographic dividend (+Case studies)
		D15 Unit Test (Past paper Exam)
W4	**2.1 Causes of Global Climate Change**	D16 Changes in the global energy balance
		D17 Albedo & Feedback loops
		D18 Enhanced Greenhous Effect
		D19 Global Pattern of Carbon Emission
		D20 Lesson Quiz: Past paper exam

** from time to time, pop quiz (questions from the past papers) may given to the students.

Year 1 Business and Management

Business Management Year 1
Unit 1: Introduction to business management
1.1 What is a business?
1.2 Types of business entities
1.3 Business objectives
1.4 Stakeholders
1.5 Growth and evolution
1.6 Multinational companies (MNCs)
Unit 2: Human resource management
2.1 Introduction to human resource management
2.2 Organizational structure
2.3 Leadership and management
2.4 Motivation and demotivation
2.5 Organizational (corporate) culture (**HL only)**
2.6 Communication
2.7 Industrial/employee relations (**HL only)**
Unit 3: Finance and accounts
3.1 Introduction to finance
3.2 Sources of finance
3.3 Costs and revenues
3.4 Final accounts
3.5 Profitability and liquidity ratio analysis
3.6 Efficiency ratio analysis (**HL only)**
3.7 Cash flow
3.8 Investment appraisal
3.9 Budgets (**HL only)**

Year 1 Eng A Lang & Lit

SATUS 여름방학 English Lang & Lit 강의 진도표

Y1 Objective
Establishing a Strong Foundation: Developing Necessary Skills and Techniques Required for IB Eng LL

Week	Day	Curriculum	Notes
1	1	Intro to IB English & Guide to 'Literary Analysis'	Paper 1
	2	Review of Literary Devices	
	3	Intro to Paper 1: How to Write an Introduction	
	4	Applying Feedback and Editing / Re-writing Introduction	
	5	Literary Devices Quiz	
2	6	Intro to Paper 1: How to Structure a Paper 1 Response	
	7	Practicing Structuring and Writing an Outline	
	8	Intro to Paper 1: How to Write a Body Paragraph	
	9	Practicing Writing Body Paragraphs	
	10	Intro to Paper 1: How to Write a Conclusion	
3	11	Literary Analysis: Product Advertisement	
	12	Literary Analysis: PSA / Charity Appeal	
	13	Literary Analysis: Comic Strip	
	14	Literary Analysis: Satirical / Political Cartoon	
	15	Literary Analysis: Infographic	
	16	Literary Analysis: Online Articles	
4	17	Overview of Paper 2 + Literary Analysis: Graphic Novel	Paper 2
	18	Literary Analysis: Graphic Novel	
	19	Literary Analysis: Play	
	20	Literary Analysis: Play	