

## Year 1 Math

IB Math AASL Year 1	
Themes	Topics
Number & Algebra	Sigma Notation
	Arithmetic Sequences & Series
	Geometric Sequences & Series
	Exponent Laws & Solving Equations
	Log Laws & Solving Equations
	The Binomial Theorem
	Proof by Deduction
Functions	Domain & Range, Composite, Inverse
	Factorising Quadratic Functions & Equations
	Completing the Square (Quadratics)
	Discriminant Test (Quadratics)
	Transformations of Functions
	Rational Functions, Asymptotes & Graphs
	Sketching Functions with a Calculator
	Exponential & Logarithmic Functions
Trigonometry	Radians, Length of Arc, Area of Sector
	Unit Circle & Trigonometric Ratios
	Trig Identities
	Trig Graphs & Circular Functions
	Solving Trigonometric Functions & Equations
	Sine & Cosine Rule, Area of a Triangle
	Degrees v Radians

## IB Math AA HL Year 1

Themes	Topics
Number & Algebra	Sigma Notation
	Arithmetic Sequences & Series
	Geometric Sequences & Series
	Exponent Laws & Solving Equations
	Counting Principles, Combinations & Permutations
	The Binomial Theorem
	Binomial Theorem for Fractional & Negative Indices
	Systems of Linear Equations
	Log Laws & Solving Equations
	Proof by Deduction
	Proof by Contradiction
Proof by Mathematical Induction	
Functions	Domain & Range, Composite, Inverse
	Factorising Quadratic Functions & Equations
	Completing the Square (Quadratics)
	Discriminant Test (Quadratics)
	Polynomial Theorems: Remainder, Factor, Division
	Sum & Product of Roots (Polynomials)
	Transformations of Functions
	Rational Functions, Asymptotes & Graphs
	Sketching Functions with a Calculator
	Exponential & Logarithmic Functions
Trigonometry	Radians, Length of Arc, Area of Sector
	Unit Circle & Trigonometric Ratios
	Trig Identities
	Trig Graphs & Circular Functions
	Solving Trigonometric Functions & Equations
	Sine & Cosine Rule, Area of a Triangle
	Degrees v Radians

**IB Math AI HL Year 1**

Themes	Topics
Number & Algebra	Rounding & Significant Figures
	Scientific Notation
	Percentage Error
	Exponent Laws
	Arithmetic Sequences & Series
	Geometric Sequences & Series
	Sigma Notation
	Compound Interest & Depreciation
	Loans & Amortization
	Annuities
	GDC Tips: Finance Solver
Logarithm	
Functions	Forms of Linear Lines
	Gradients & Intercepts of Linear Lines
	Parallel & Perpendicular Gradients
	Perpendicular Bisectors
	GDC Tips: Intersection of Two Lines
	Functions: Overview & Types
	GDC Tips: Plotting Functions & Analysis Tools
GDC Tips: Using nSolve to Solve Equations	
Geometry & Trigonometry	Geometry of 3D Shapes
	Pythagoras Theorem
	Right Angled Trig
	Sine & Cosine Rule, Area of a Triangle
	Length of Arc, Area of Sector (Circles)
	Voronoi Diagrams
Statistics & Probability	Mean, Median, Mode
	Quartiles, IQR, Box & Whisker
	Outliers
	Data Sampling Methods
	Independent & Dependent Variables, Scatter Plots
	Correlation: Pearson's & Spearman's
	Line of Regression Equation (& Reliability)
	Coefficient of Determination
	Non-Linear Regression
	Tree Diagrams (Probability)
	Venn Diagrams (Probability)

## Year 1 Biology

Q1 SL				
theme	level of organization			
	molecules	cells	organisms	ecosystem
unity and diversity	<b>A 1.1 water</b> <b>A 1.2 nucleic acid</b>	<b>A 2.1 origins of cells*</b> <b>A 2.2 cell structure</b> <b>A 2.3 virus*</b>	A 3.1 diversity of organisms <b>A 3.2 classification and cladistics*</b>	A 4.1 evolution and speciation A 4.2 conservation of biodiversity
forms and functions	<b>B 1.1 carbohydrates and lipids</b> <b>B 1.2 proteins</b>	<b>B 2.1 membranes and membrane transport</b> <b>B 2.2 organelles and compartmentalization</b> <b>B 2.3 cell specialization</b>	B 3.1 gas exchange B 3.2 transport <del>B 3.3 muscle and motility*</del>	B 4.1 adaptations to environment B 4.2 ecological niches
interactions and interdependence	<b>C 1.1 enzymes and metabolism</b> <b>C 1.2 cell respiration</b> <b>C 1.3 photosynthesis</b>	<del>C 2.1 chemical signalling*</del> C 2.2 neural signalling	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
continuity and change	<b>D 1.1 DNA replication</b> <b>D 1.2 protein synthesis</b> D 1.3 mutations and gene editing	D 2.1 cell and nuclear division <del>D 2.2 gene expression*</del> 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

Q1 HL				
theme	level of organization			
	molecules	cells	organisms	ecosystem
unity and diversity	<b>A 1.1 water</b> <b>A 1.2 nucleic acid</b>	<b>A 2.1 origins of cells*</b> <b>A 2.2 cell structure</b> <b>A 2.3 virus*</b>	A 3.1 diversity of organisms A 3.2 classification and cladistics*	A 4.1 evolution and speciation A 4.2 conservation of biodiversity
forms and functions	<b>B 1.1 carbohydrates and lipids</b> <b>B 1.2 proteins</b>	<b>B 2.1 membranes and membrane transport</b> <b>B 2.2 organelles and compartmentalization</b> <b>B 2.3 cell specialization</b>	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
interactions and interdependence	<b>C 1.1 enzymes and metabolism</b> <b>C 1.2 cell respiration</b> <b>C 1.3 photosynthesis</b>	C 2.1 chemical signalling* C 2.2 neural signalling	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
continuity and change	<b>D 1.1 DNA replication</b> <b>D 1.2 protein synthesis</b> 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

### Chemistry Q1 SL

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 configuration
		Structure 1.4	Counting particles by mass: The mole
		Structure 1.5	Ideal gas
Structure 2	The 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

# Chemistry Q1 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 configuration
		Structure 1.4	Counting particles by mass: The mole
		Structure 1.5	Ideal gas
Structure 2	The 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

# Year 1 Physics

IB physics SL Y1 Q1		
Themes	Topics	Note
A. Space, time and motion (시공간, 물체의 움직임)	A.1 Kinematics	
	A.2 Forces and momentum	
	A.3 Work, energy and power	
B. The particulate nature of matter (다입자 체계의 이해)	B.1 Thermal energy transfers	
	B.3 Gas laws	
T. Tools for physics (기초 수학 및 실험 - IA, DBQ)	T.1 Mathematical tools (Vectors & Scalars)	
	T.2 Experimental tools (Units, Measurements & Uncertainties)	

IB physics HL Y1 Q1		
Themes	Topics	Note
A. Space, time and motion (시공간, 물체의 움직임)	A.1 Kinematics	
	A.2 Forces and momentum	
	A.3 Work, energy and power	
	A.4 Rigid body mechanics **	
B. The particulate nature of matter (다입자 체계의 이해)	B.1 Thermal energy transfers	
	B.3 Gas laws	
T. Tools for physics (기초 수학 및 실험 - IA, DBQ)	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
		D2 Scientific Research Methods : Types
	Research Methods	D3 Evaluating Research
		D4 Research Design
		D5 Sampling Methods
W2	Ethics of Research	D6 Samplig Methods + Ethics
		D7 Introduction to BLOA
	BLOA :Introduction & Localization	D8 Localization
		D9 Localization & Cast studies
	BLOA : Neuroplasticity	D10 Neuroplasticity & Animal studies
W3	BLOA : Neuroplasticity	D11 Neuroplasticity & Experiments
		D12 Neurotransmission
	BLOA : Neurotranmission & Hormones	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 quizzes will take place to check students' progresses.		



# Year 1 Geography

Year 1 Geo Core		
Week	Key Unit	Daily lesson
<b>W1</b>	<b>1.1 Changing Population : Population and Economic development Patterns</b>	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
<b>W2</b>	<b>1.2 Changing Populaiton : Changing Populations and places</b>	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)
<b>W3</b>	<b>1.3 Changing Population : Population Challenges and Opportunities</b>	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)
<b>W4</b>	<b>2.1 Causes of Global Climate Change</b>	D16 Changes in the global energy balance
		D17 Albedo & Feedback loops
		D18 Enhanced Greenhouse 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	
<b>Unit 1: Introduction to business management</b>	
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)
<b>Unit 2: Human resource management</b>	
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 ( <b>HL only</b> )
2.6	Communication
2.7	Industrial/employee relations ( <b>HL only</b> )
<b>Unit 3: Finance and accounts</b>	
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 ( <b>HL only</b> )
3.7	Cash flow
3.8	Investment appraisal
3.9	Budgets ( <b>HL only</b> )