

Year 2 Math

IB Math AA SL Year 2	
Themes	Topics
Trigonometry	3.4 Radian measures; length of an arc; area of a sector 3.5 Unit circle; exact values of trig; sine rule ambiguous case 3.6 Pythagorean identity; Double angle identity 3.7 Circular functions; transformations 3.8 Trigonometric equations in a finite interval
Probability and Statistics	4.1 Concepts of population, discrete and continuous data; IQR 4.2 Presentation of data; box and whisker diagrams 4.3 Measures of central tendency (mean, median and mode) 4.4 Linear correlation of bivariate data; Regression line 4.5 Probability $P(A)$; complementary events $P(A')$ 4.6 Diagrams and tables; $P(A B)$; $P(A \cup B)$; Independent events 4.7 Discrete random variables and their probability distributions 4.8 Binomial distribution 4.9 The normal distribution and curve 4.10 Equation of the regression line of x on y 4.11 Conditional probabilities for independent events 4.12 Standardization of normal variables; Inverse Norm
Calculus	5.1 Concept of a limit; Gradient function; Rate of change 5.2 Increasing and decreasing functions 5.3 Derivative of functions $f(x) = ax^n + bx^{n-1} + \dots$ 5.4 Tangents and normals and their equations 5.5 Anti-differentiation of functions $f(x) = ax^n + bx^{n-1} + \dots$ 5.6 Types of derivatives ($\sin x$, \log); Quotient and Product rules 5.7 The second derivative 5.8 Local maximum and minimum points; 5.9 Kinematic problems 5.10 Indefinite integral; Chain rule; 5.11 Definite integrals; Area between curves

IB Math AA HL Year 2

Themes	Topics
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 5.10 Implicit Differentiation 5.11 Related Rates 5.12 Differential Equations 5.13 Maclaurin Series
Vectors	1.10 Systems of Linear Equations 3.8 Vector Basics 3.9 Scalar Product & Angle Between Two Vectors 3.10 Vector Equation of a Line 3.11 Intersection of 2 Vector Lines 3.12 Vector Product 3.13 Equation of a Plane 3.14 Intersection of Lines and Planes
Complex Numbers	1.9 Complex Numbers & De Moivre's Theorem + Thorough contents on Complex Planes + Insights on connections between Complex Numbers and Vectors

IB Math AI HL Year 2

Themes	Topics
Calculus	Overview of Differential Calculus
	Basics of Differentiation
	Gradients of Tangents & Normals
	Turning Points (Max, Min, Optimization)
	Further Differentiation Rules
	Related Rates
	The Second Derivative
	Overview of Integral Calculus
	Basics of Anti-Differentiation
	Finding Areas Under Curves
	Trapezoidal Rule
	Further Integration Rules
	Integration by Substitution
	Area Enclosed by a Curve and the x or y-axis
	Volumes of Revolution about the x or y-axis
	Kinematics
	Intro to Differential Equations
	Separable Differential Equations
	Slope Fields
	Euler's Method
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)
	Transition Matrices & Markov Chains
	Probability Distribution
	Binomial Distribution
	Normal Distribution
	Hypothesis Testing
	Poisson Distribution
	Estimation & Confidence Intervals
Combination of Random Variables	

Year 2 Biology

Q5 SL				
theme	level of organization			
	molecules	cells	organisms	ecosystem
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
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 compartmentalization 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
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 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	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

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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 compartmentalization 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
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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 2 Chemistry

Chemistry Q5 SL

Topic #	Topic	Subtopic #	Subtopic
Structure 1	Models of particulate nature of matter	Structure 1.4	Counting particles by mass: The mole
Structure 2	Models of bonding and structure	Structure 2.2	The covalent model
Structure 3	Classification of matter	Structure 3.1	The periodic table: Classification of elements
		Structure 3.2	Functional groups: Classification of organic compounds
Reactivity 2	How much, how fast and how far?	Reactivity 2.1	How much? The amount 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

Chemistry Q5 HL

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Structure 3	Classification of matter	Structure 3.2	Functional groups: Classification of organic compounds
Reactivity 2	How much, how fast and how far?	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

Year 2 Physics

IB physics SL Y2 Q5		
Themes	Topics	Note
B. The particulate nature of matter (다입자 체계의 이해)	B.1~3 Revision	
	B.5 Current and circuits	
C. Wave behaviour (단진동 그리고 파동)	C.1~5 Revision	
D. Fields (중력장과 전자기장)	D.1 Gravitational fields *	
	D.2 Electric and magnetic fields *	
	D.3 Motion in electromagnetic fields	

IB physics HL Y2 Q5		
Themes	Topics	Note
A. Space, time and motion (시공간, 물체의 움직임)	A.5 Galilean and special relativity **	미정
B. The particulate nature of matter (다입자 체계의 이해)	B.5 Current and circuits	
C. Wave behaviour (단진동 그리고 파동)	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 (중력장과 전자기장)	D.1 Gravitational fields *	
	D.2 Electric and magnetic fields *	
	D.3 Motion in electromagnetic fields	
	D.4 Induction **	

Year 2 Economics

2025 Q5 Economics 진도표
4.1 Benefits of international trade
4.2 Types of trade protection
4.3 Arguments for and against trade control and protection
4.4 Economic integration
4.5 Exchange rates
4.6 Balance of payments
4.7 Sustainable development
4.8 Measuring development
4.9 Barriers to economic growth and/or economic development
4.10 Barriers to economic growth and/or economic development
** 남은 시간들에는 Y1에 했던 어려운 컨셉들 (market power, macroeconomic polices 등 review 진행합니다

Year 2 Psychology

Year 2 Psychology HL		
Week	Key Unit	Daily Lesson
W1	Review of Research Methods	D1 Evaluating Research
		D2 Re-thinking Ecological validity
	Practicing Critical Thinking	D3 How to apply CT skills
		D4 How to apply CT skills 2
	Getting used to ERQ	D5 Practicing ERQ writing
W2	HL extension : Animal studies	D6 Animal studies & Methods
		D7 Animlas studies : Values & Ethics
	HL extension: Technology and Cognitive Processes	D8 Digitalization & Memory
		D9 Google effect & Transactive Memory
	HL extension ERQ writing	D10 Practice ERQ writing
W3	Option 1 : Abnormal Psych	D11 Defining Normacy
		D12 Defining Normacy 2
		D13 Validlity and Reliability in Diagnosis
		D14 Validity and Reliability in Diagnosis
		Abnormal Psych ERQ writing
W4	Option 1 : Abnormal Psych	D16 Etiology of Depression
		D17 Etiology of Depression 2
		D18 Treatment of Depression
		D19 Treatment of Depression 2
		Abnormal Psych ERQ Writing

*From W3 : Topics may vary according to the majority students' option choices.

Year 2 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 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 2 Business and Management

Business Management Year 2	
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)
Unit 4: Marketing	
4.1	Introduction to marketing
4.2	Marketing planning
4.3	Sales forecasting (HL only)
4.4	Market research
4.5	The seven Ps of the marketing mix
4.6	International marketing (HL only)
Unit 5: Operations management	
5.1	Introduction to operations management
5.2	Operations methods
5.3	Lean production and quality management (HL only)
5.4	Location
5.5	Break-even analysis
5.6	Production planning (HL only)
5.7	Crisis management and contingency planning (HL only)
5.8	Research and development (HL only)
5.9	Management information systems (HL only)