

Eclassopedia

IB 7-Day Crash Revision Guides

IB Diploma Programme 2026

Your Complete Last-Week Exam Preparation Resource

Subjects Covered in This Guide:

Mathematics AA/AI	Physics	Chemistry
Biology	English Language & Lit	Economics

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How to Use This Guide

Welcome to Eclassopedia's IB 7-Day Crash Revision Guide for 2026. This resource is designed to help you make the most of your final week before IB examinations. Whether you are aiming for a 6 or pushing for that perfect 7, this structured approach will help you focus your energy where it matters most.

The 7-Day Philosophy

Research in cognitive science consistently shows that distributed, structured revision outperforms marathon cramming sessions. This guide breaks each subject into seven focused days, each with clear goals, key content review, and practice strategies.

General Guidelines

- Spend 2-3 hours per subject per day during your revision week
- Use past IB papers (available on Follet IB Store or your school) alongside this guide
- Focus on command terms: Analyse, Evaluate, Compare, Discuss, Explain - these determine mark allocation
- Do not attempt to learn new content in the final week - consolidate what you know
- Sleep 8 hours nightly - memory consolidation happens during sleep
- Use active recall (testing yourself) rather than passive re-reading

IB Assessment Reminders for 2026

- Paper 1, Paper 2, and Paper 3 (where applicable) will all be sat in the May 2026 session
- Internal Assessment (IA) grades are already submitted - focus entirely on externals
- Check your subject-specific mark boundaries from recent years to calibrate your target
- Each mark on Paper 1 multiple-choice is worth the same as an extended response mark - do not skip MCQ revision

Pro Tip

Use the Eclassopedia platform to access past paper walkthroughs, subject-specific video explanations, and AI-powered practice sets. Visit www.eclassopedia.com for all resources.

Subject 1: Mathematics AA & AI

IB Mathematics comes in two flavours for 2026: Analysis & Approaches (AA) for those pursuing abstract, proof-based mathematics, and Applications & Interpretations (AI) for those focused on real-world modelling. Both share overlapping content but differ in emphasis and examination style. This 7-day guide covers the core content applicable to both, with notes where syllabi diverge.

7-Day Revision Schedule Overview

Day 1	Algebra & Functions — Sequences, Binomial Theorem, Rational & Logarithmic Functions
Day 2	Trigonometry & Geometry — Unit Circle, Trig Identities, Vectors, 3D Geometry
Day 3	Statistics & Probability — Distributions, Hypothesis Testing, Regression
Day 4	Calculus Part 1 — Differentiation, Chain/Product/Quotient Rules, Optimization
Day 5	Calculus Part 2 — Integration, Area Under Curve, Differential Equations (HL)
Day 6	Complex Numbers, Proof & Further Algebra (AA HL) / Modelling Review (AI)
Day 7	Full Paper Simulation — Past Paper under exam conditions, mark and review

Day 1: Algebra & Functions

Arithmetic & Geometric Sequences

Arithmetic sequences follow the form $u_n = u_1 + (n-1)d$, where d is the common difference. The sum of the first n terms is $S_n = n/2 * (2u_1 + (n-1)d)$. Geometric sequences use $u_n = u_1 * r^{(n-1)}$ with sum $S_n = u_1(r^n - 1)/(r - 1)$. For $|r| < 1$, the infinite sum converges to $S_{\infty} = u_1/(1-r)$.

Binomial Theorem

$(a + b)^n$ = the sum from $k=0$ to n of $C(n,k) \cdot a^{n-k} \cdot b^k$. Pascal's Triangle gives coefficients directly. In IB exams, you are frequently asked to find a specific term — use the general term $T_{(r+1)} = C(n,r) \cdot a^{n-r} \cdot b^r$.

Functions — Core Concepts

- Domain and range: always specify, especially for radical and logarithmic functions
- Composite functions: $(f \circ g)(x) = f(g(x))$ — work inside out
- Inverse functions: swap x and y , solve for y ; graph is reflection in $y = x$
- Transformations: $f(x+a)$ shifts left, $f(x)+a$ shifts up, $af(x)$ stretches vertically
- Quadratic vertex form: $f(x) = a(x-h)^2 + k$ — vertex at (h,k)

Logarithms & Exponentials

Key rules: $\log(ab) = \log a + \log b$; $\log(a/b) = \log a - \log b$; $\log(a^n) = n \log a$. Change of base: $\log_b(a) = \frac{\ln(a)}{\ln(b)}$. Solving exponential equations: take natural log of both sides and isolate the variable.

Pro Tip

On Paper 1 (no calculator), practice simplifying exponential and log expressions by hand. Common mistakes include forgetting that $\log(a+b)$ does NOT equal $\log(a) + \log(b)$.

Day 2: Trigonometry & Vectors

Unit Circle & Radian Measure

Master the unit circle: key angles in radians are $\pi/6$, $\pi/4$, $\pi/3$, $\pi/2$, and their multiples. $\sin^2(x) + \cos^2(x) = 1$ at all times. Supplement and complement identities: $\sin(\pi - x) = \sin x$; $\cos(\pi - x) = -\cos x$.

Trigonometric Identities

- Double angle: $\sin(2x) = 2\sin(x)\cos(x)$; $\cos(2x) = \cos^2(x) - \sin^2(x)$
- Compound angle: $\sin(A+B) = \sin A \cos B + \cos A \sin B$
- Reciprocal identities: $\csc x = 1/\sin x$; $\sec x = 1/\cos x$; $\cot x = \cos x/\sin x$

Vectors

A vector $v = (a, b, c)$ has magnitude $|v| = \sqrt{a^2 + b^2 + c^2}$. Dot product: $u \cdot v = u_1v_1 + u_2v_2 + u_3v_3 = |u||v|\cos(\theta)$. Use the dot product to find angles between vectors or prove perpendicularity (dot product = 0). For the cross product (AA HL): the result is a vector perpendicular to both.

- Vector equation of a line: $r = a + t \cdot b$, where a is a position vector and b is direction
- To find if lines intersect: equate components and solve; check for consistency
- Perpendicular distance from a point to a line: use the formula or projection method

Pro Tip

In IB exams, vector questions are heavily scaffolded. Read sub-parts carefully — often part (a) gives you a result you need for part (b). Do not skip sub-parts even if stuck.

Day 3: Statistics & Probability

Descriptive Statistics

IB Statistics covers mean, median, mode, standard deviation, and inter-quartile range. Know how to read cumulative frequency graphs, box-and-whisker plots, and histograms. The IQR = $Q3 - Q1$; outliers are values more than $1.5 \times \text{IQR}$ below $Q1$ or above $Q3$.

Probability

- $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$ for any events A and B
- $P(A \text{ and } B) = P(A) * P(B)$ only when A and B are independent
- Conditional probability: $P(A|B) = P(A \text{ and } B) / P(B)$
- Bayes' Theorem (HL): $P(A|B) = P(B|A) * P(A) / P(B)$ — draw a tree diagram first

Distributions

Binomial distribution $X \sim B(n, p)$: mean = np , variance = $np(1-p)$. Normal distribution $X \sim N(\mu, \sigma^2)$: know how to standardise to $Z = (X - \mu) / \sigma$ and use the GDC tables or calculator. Poisson distribution (HL AI) $X \sim \text{Po}(\lambda)$: $P(X=k) = e^{-\lambda} * \lambda^k / k!$

Hypothesis Testing

- Always state H_0 and H_1 clearly at the start
- For chi-squared test: check expected frequencies are all above 5
- Compare p-value to significance level α (usually 0.05): reject H_0 if $p < \alpha$
- T-test for means (use when population variance is unknown)

Pro Tip

The GDC (graphic display calculator) is your best friend in Paper 2. Practice using your calculator's statistics functions for normal CDF, inverse normal, chi-squared, and linear regression before the exam.

Day 4: Differential Calculus

Differentiation Rules

Power rule: $d/dx [x^n] = n * x^{(n-1)}$. Product rule: $(uv)' = u'v + uv'$. Quotient rule: $(u/v)' = (u'v - uv') / v^2$. Chain rule: $d/dx [f(g(x))] = f'(g(x)) * g'(x)$. Common derivatives to memorise: $d/dx[\sin x] = \cos x$; $d/dx[\cos x] = -\sin x$; $d/dx[e^x] = e^x$; $d/dx[\ln x] = 1/x$.

Applications of Differentiation

- Finding maxima and minima: set $f'(x) = 0$ and solve; use second derivative test ($f'' > 0 = \text{min}$, $f'' < 0 = \text{max}$)
- Optimisation problems: define a variable, form an equation, differentiate and set to zero
- Tangent and normal lines: slope of tangent = $f'(a)$; normal slope = $-1/f'(a)$
- Rates of change: use implicit differentiation for related rates problems
- Increasing/decreasing: $f'(x) > 0$ means increasing; $f'(x) < 0$ means decreasing

Kinematics Connection

Position $s(t)$, velocity $v(t) = s'(t)$, acceleration $a(t) = v'(t) = s''(t)$. Particle at rest when $v(t) = 0$. Total distance (not displacement) requires integrating $|v(t)|$.

Day 5: Integral Calculus

Standard Integrals

Integral of $x^n = x^{(n+1)}/(n+1) + C$ (for n not equal to -1). Integral of $1/x = \ln|x| + C$. Integral of $e^x = e^x + C$. Integral of $\sin x = -\cos x + C$. Integral of $\cos x = \sin x + C$. Always add the constant of integration C for indefinite integrals.

Techniques of Integration

- Integration by substitution: let $u =$ inner function, find du , rewrite and integrate
- Integration by parts (HL AA): integral of $u dv = uv -$ integral of $v du$; use LIATE rule for u
- Definite integrals: evaluate $F(b) - F(a)$ where F is the antiderivative
- Area between curves: integrate $|f(x) - g(x)|$ over the relevant interval

Differential Equations (HL)

Separation of variables: rearrange so all y terms are on one side and all x terms on the other, then integrate both sides. Euler's method: $y_{(n+1)} = y_n + h \cdot f(x_n, y_n)$ — used for numerical solutions.

Pro Tip

For area problems, always sketch the graph first to identify where curves intersect and which function is on top. Negative areas count positively when asking for total area.

Day 6: Advanced Topics

Complex Numbers (AA HL)

A complex number $z = a + bi$ where $i = \sqrt{-1}$. The modulus $|z| = \sqrt{a^2 + b^2}$ and argument $\arg(z) = \arctan(b/a)$. Polar form: $z = r(\cos \theta + i \sin \theta) = r \cdot e^{i\theta}$. De Moivre's Theorem: $z^n = r^n \cdot (\cos(n\theta) + i \sin(n\theta))$. Use this to find n th roots of complex numbers.

Proof (AA)

- Proof by contradiction: assume the opposite is true and derive a logical contradiction
- Proof by induction: prove base case ($n=1$), assume true for $n=k$, prove for $n=k+1$
- Direct proof: use known axioms and theorems to establish the result

Mathematical Modelling (AI Focus)

AI students should focus on choosing appropriate models: linear regression for proportional relationships, exponential for growth/decay, logistic for limited growth, sinusoidal for cyclic phenomena. Always justify your model choice with reference to the context and r^2 value.

Day 7: Full Simulation & Review

On Day 7, sit a full past IB Mathematics paper under timed, exam conditions. For SL: Paper 1 (90 min, no GDC) + Paper 2 (90 min, GDC). For HL: Paper 1 (120 min) + Paper 2 (120 min) + Paper 3 (60 min, HL only).

Post-Paper Review Protocol

1. Mark your paper using the official mark scheme — be strict with yourself
2. Categorise your errors: calculation slip, concept misunderstanding, or time pressure
3. For each wrong answer, write out the correct solution in full
4. Review the mark scheme comments for 'examiners note' sections
5. Identify your weakest two topics and do 30 minutes of targeted practice on each

Pro Tip

In the exam, show all working clearly. Even if your final answer is wrong, you can earn method marks. Write 'no solution' or 'undefined' rather than leaving blanks — examiners reward engagement.

Subject 2: Physics

IB Physics in 2026 continues to assess both conceptual understanding and quantitative problem-solving. Paper 1 features multiple-choice, Paper 2 covers the core and some options, and Paper 3 assesses the options in depth. Data analysis and experimental skills appear throughout all papers. This guide covers the high-yield topics across the IB Physics syllabus.

7-Day Revision Schedule Overview

Day 1	Measurements & Mechanics — Kinematics, Newton's Laws, Momentum, Work & Energy
Day 2	Thermal Physics & Waves — Thermodynamics, Wave Properties, Sound & Light
Day 3	Electricity & Magnetism — Circuits, Electromagnetic Induction, Fields
Day 4	Circular Motion & Gravitation — Orbital mechanics, SHM
Day 5	Atomic, Nuclear & Particle Physics — Radioactivity, $E = mc^2$, Standard Model
Day 6	Options Revision — Choose your option (Relativity, Engineering, Astrophysics, Medical)
Day 7	Full Paper Simulation with timing, then targeted error analysis

Day 1: Measurements & Mechanics

Measurements & Uncertainties

Absolute uncertainty is expressed as Δx ; percentage uncertainty = $(\Delta x / x) * 100\%$. When adding or subtracting quantities, add absolute uncertainties. When multiplying or dividing, add percentage uncertainties. Graph error bars represent uncertainties on plotted points.

Kinematics

- $v = u + at$; $s = ut + 0.5at^2$; $v^2 = u^2 + 2as$; $s = 0.5(u + v)t$

- Projectile motion: horizontal component (constant velocity) and vertical component (free fall) are independent
- At maximum height: vertical velocity = 0; horizontal velocity unchanged throughout

Newton's Laws & Forces

First Law: an object remains at rest or in uniform motion unless acted on by a resultant force. Second Law: $F = ma$ (net force = mass x acceleration). Third Law: for every action there is an equal and opposite reaction — forces act on different objects.

Work, Energy & Power

- Work done $W = Fs \cos(\theta)$ where θ is the angle between force and displacement
- Kinetic energy: $E_k = 0.5mv^2$; Gravitational PE: $E_p = mgh$; Elastic PE: $E = 0.5kx^2$
- Power: $P = W/t = Fv$. Efficiency = useful output / total input
- Conservation of energy: total energy is constant in a closed system

Pro Tip

IB Physics examiners award marks for clearly stated formulae, correct substitution, and units. Always show your working with units at every step. A dimensionally incorrect answer scores zero.

Day 2: Thermal Physics & Waves

Thermal Concepts

Internal energy is the total kinetic and potential energy of particles. Temperature is a measure of average kinetic energy. Heat is energy transferred due to a temperature difference. Specific heat capacity: $Q = mc(\Delta T)$. Latent heat: $Q = mL$ (no temperature change during phase transition).

Thermodynamics

- First law: $\Delta U = Q + W$ (internal energy = heat added + work done on system)
- Ideal gas law: $PV = nRT$; also $PV = NkT$ where k is Boltzmann constant
- Isothermal: temperature constant (T constant, $PV = \text{constant}$)
- Adiabatic: no heat exchange ($Q = 0$)

Waves

Wave equation: $v = f \cdot \lambda$. Intensity $I = P/A$ (power per unit area); I is proportional to A^2 (amplitude squared). Superposition: waves can interfere constructively (in phase) or destructively (out of phase). Standing waves: nodes (no displacement) and antinodes (maximum displacement) are fixed.

Light & Optics

- Reflection: angle of incidence = angle of reflection (measured from normal)
- Snell's law: $n_1 \sin(\theta_1) = n_2 \sin(\theta_2)$; total internal reflection when $\theta \geq \text{critical angle}$
- Double slit interference: path difference = $m \cdot \lambda$ for bright fringes
- Single slit diffraction: minimum at $\sin(\theta) = m \cdot \lambda / d$

Pro Tip

Waves and optics questions often include diagrams. Practice sketching wavefronts, path differences, and interference patterns. Examiners often award marks specifically for correctly labelled diagrams.

Day 3: Electricity & Magnetism

Electric Fields & Circuits

Coulomb's law: $F = kQ_1Q_2/r^2$. Electric field $E = F/q = kQ/r^2$ for a point charge. Ohm's law: $V = IR$. Resistors in series: $R_{\text{total}} = R_1 + R_2 + \dots$. Resistors in parallel: $1/R_{\text{total}} = 1/R_1 + 1/R_2 + \dots$. Power dissipated: $P = IV = I^2R = V^2/R$.

Magnetic Fields

- Force on a current-carrying wire: $F = BIL \sin(\theta)$
- Force on a moving charge: $F = qvB \sin(\theta)$ — use the right-hand rule
- Magnetic field of a long straight wire: $B = \mu_0 I / (2\pi r)$

Electromagnetic Induction

Faraday's law: induced EMF = $-d(\Phi)/dt$ where $\Phi = BA \cos(\theta)$ is the magnetic flux. Lenz's law: the induced current opposes the change in flux that caused it. In a transformer: $V_1/V_2 = N_1/N_2 = I_2/I_1$ (for ideal transformer with 100% efficiency).

Day 4: Circular Motion, Gravity & SHM

Circular Motion

Centripetal acceleration: $a = v^2/r = \omega^2 r$ directed toward centre. Centripetal force: $F = mv^2/r$. Period: $T = 2\pi r/v = 2\pi/\omega$. Angular velocity $\omega = 2\pi/T = 2\pi f$.

Gravitation

- Newton's law of gravitation: $F = GMm/r^2$
- Gravitational field strength: $g = GM/r^2$
- Orbital speed: $v = \sqrt{GM/r}$; Orbital period: $T^2 = (4\pi^2/GM) r^3$ (Kepler's 3rd law)
- Gravitational potential: $V = -GM/r$ (negative because gravity is attractive)

Simple Harmonic Motion

SHM condition: acceleration $a = -(\omega^2)x$ (proportional to displacement, directed toward equilibrium). Displacement: $x = A \cos(\omega t + \phi)$. Velocity: $v = -A\omega \sin(\omega t)$. Maximum velocity = $A\omega$. For a mass-spring system: $\omega = \sqrt{k/m}$. For a pendulum: $\omega = \sqrt{g/L}$ (for small angles).

Pro Tip

SHM is a favourite IB topic for multi-part questions. Know how energy converts between kinetic and potential in SHM, and be able to sketch x-t, v-t, and a-t graphs on the same time axis.

Day 5: Atomic, Nuclear & Particle Physics

Atomic Structure

The photoelectric effect: photons must have minimum frequency f_0 such that $hf_0 = \text{work function } \phi$. Einstein's equation: $hf = \phi + E_k(\text{max})$. De Broglie wavelength: $\lambda = h/p = h/(mv)$. Energy levels in atoms: electrons emit photons when dropping from higher to lower energy levels; $E(\text{photon}) = E_2 - E_1$.

Nuclear Physics

- Alpha decay: mass number decreases by 4, atomic number by 2
- Beta-minus decay: neutron converts to proton, emitting electron and antineutrino
- Gamma decay: high-energy photon emitted, no change in mass or atomic number
- Half-life: $T(1/2) = \ln 2 / \lambda$; $N = N_0 * e^{(-\lambda t)}$
- Mass-energy equivalence: $E = mc^2$; binding energy = mass defect * c^2

Particle Physics

The Standard Model consists of quarks (up, down, charm, strange, top, bottom) and leptons (electron, muon, tau and their neutrinos). Quarks combine in triplets (baryons) or pairs (mesons). The four fundamental forces are: gravitational, electromagnetic, weak nuclear, and strong nuclear. Antiparticles have the same mass but opposite charge.

Day 6: Options

Option A: Relativity (most common choice)

- Special Relativity postulates: laws of physics are the same in all inertial frames; speed of light is constant
- Time dilation: $t = \gamma * t_0$ where $\gamma = 1/\sqrt{1 - v^2/c^2}$
- Length contraction: $L = L_0/\gamma$ — objects shorten in the direction of motion
- Relativistic momentum: $p = \gamma * mv$; Total energy: $E = \gamma * mc^2$; Rest energy: $E_0 = mc^2$

Option D: Astrophysics (second most common)

- Luminosity $L = 4 * \pi * r^2 * \sigma * T^4$ (Stefan-Boltzmann law for blackbody radiation)
- Apparent brightness $b = L/(4 * \pi * d^2)$ where d is the distance to the star
- Hubble's law: $v = H_0 * d$ (recession velocity proportional to distance)
- The Big Bang model predicts CMB radiation, expansion of universe, and light element abundances

Pro Tip

Option questions are worth significant marks. Make sure you have revised all sub-topics in your chosen option — do not just focus on your favourite parts.

Day 7: Exam Simulation

Complete a full timed IB Physics past paper. After marking, classify errors and revisit the relevant section of this guide. Pay particular attention to Paper 1 MCQ — these test conceptual understanding without calculation and are often underestimated.

Subject 3: Chemistry

IB Chemistry requires both conceptual understanding and strong quantitative skills. The subject is assessed across three papers in 2026, with Paper 3 covering the chosen option. The Data Booklet is available in all papers except Paper 1 — know how to use it efficiently. This guide covers all major topics systematically.

7-Day Revision Schedule Overview

Day 1	Stoichiometry, Atomic Structure & Bonding
Day 2	Energetics, Kinetics & Equilibrium
Day 3	Acids & Bases, Redox & Electrochemistry
Day 4	Organic Chemistry — Nomenclature, Reactions, Mechanisms
Day 5	Measurement, Data Processing & IA Skills Review
Day 6	Option Revision (Medicinal, Materials, Human Biochemistry, or Environmental)
Day 7	Full Paper Simulation and Targeted Weak-Area Review

Day 1: Stoichiometry & Structure

Mole Calculations

$n = m/M$ (moles = mass/molar mass). $n = cV$ (moles = concentration x volume). $n = PV/RT$ (ideal gas equation). At STP (273 K, 100 kPa): 1 mole of gas occupies 22.7 L. Percentage yield = (actual yield / theoretical yield) * 100%.

Atomic Structure

- Subatomic particles: proton (positive, in nucleus), neutron (neutral, in nucleus), electron (negative, shells)
- Electron configuration: fill orbitals in order 1s, 2s, 2p, 3s, 3p, 4s, 3d... using Aufbau, Pauli, and Hund's rules
- Isotopes: same atomic number, different mass number (different number of neutrons)

- Ionisation energy trends: increases across a period (more protons, same shielding); decreases down a group (more shielding)

Chemical Bonding

Ionic bonding: transfer of electrons between metals and non-metals. Covalent bonding: sharing of electrons between non-metals. Metallic bonding: delocalised sea of electrons surrounding positive ions. VSEPR theory predicts molecular geometry based on electron pairs around central atom.

- Linear (2 bonding pairs): CO₂, 180 degrees
- Trigonal planar (3 bp): BF₃, 120 degrees
- Tetrahedral (4 bp): CH₄, 109.5 degrees
- Pyramidal (3 bp, 1 lp): NH₃, approximately 107 degrees
- Bent (2 bp, 2 lp): H₂O, approximately 104.5 degrees

Pro Tip

The IB Data Booklet contains electronegativity values, standard enthalpies, and bond enthalpies. Practice locating information quickly — in an exam, time spent searching is time lost on answers.

Day 2: Energetics, Kinetics & Equilibrium

Thermochemistry

Enthalpy change $\Delta H = q$ at constant pressure. Standard enthalpy of combustion, formation, and neutralisation are all in kJ/mol. Hess's law: ΔH for a reaction is the same regardless of the route taken. Using bond enthalpies: $\Delta H = \text{sum of bonds broken} - \text{sum of bonds formed}$ (all positive values from Data Booklet).

Entropy & Gibbs Free Energy (HL)

- Entropy S measures disorder; reactions that increase the number of gas molecules have positive ΔS
- Gibbs free energy: $\Delta G = \Delta H - T \cdot \Delta S$
- Spontaneous reaction: $\Delta G < 0$. At equilibrium: $\Delta G = 0$

Kinetics

Rate of reaction depends on concentration, temperature, surface area, catalyst, and pressure (for gases). Collision theory: particles must collide with sufficient energy (activation energy E_a) and correct orientation. Arrhenius equation: $k = A \cdot e^{(-E_a/RT)}$. A catalyst provides an alternative pathway with lower E_a .

Equilibrium

- Le Chatelier's Principle: a system at equilibrium responds to a change by counteracting it
- Increasing temperature shifts equilibrium in the endothermic direction
- Increasing pressure shifts equilibrium toward fewer moles of gas
- $K_c = \frac{[\text{products}]^x}{[\text{reactants}]^y}$ at equilibrium (pure solids and liquids excluded)

Pro Tip

For equilibrium calculations, ICE tables (Initial, Change, Equilibrium) are invaluable. Practice setting up ICE tables for both K_c and K_p calculations. This technique appears in almost every IB Chemistry Paper 2.

Day 3: Acids, Bases, Redox & Electrochemistry

Acids & Bases

Bronsted-Lowry: acids are proton donors; bases are proton acceptors. Lewis: acids are electron pair acceptors; bases are electron pair donors. Strong acids fully dissociate (HCl, HNO₃, H₂SO₄). Weak acids partially dissociate — use K_a expression. $\text{pH} = -\log[\text{H}^+]$. $\text{pK}_a = -\log(K_a)$. Buffer solutions resist pH change when small amounts of acid or base are added.

Redox Reactions

- Oxidation: loss of electrons (OIL — Oxidation Is Loss)
- Reduction: gain of electrons (RIG — Reduction Is Gain)
- Oxidising agent: is reduced (gains electrons); Reducing agent: is oxidised (loses electrons)
- Assigning oxidation states: O is usually -2, H is usually +1, metals follow group rules

Electrochemistry

In electrolytic cells, electrical energy drives a non-spontaneous reaction. In galvanic/voltaic cells, a spontaneous redox reaction generates electrical energy. Standard electrode potential E° is measured vs the standard hydrogen electrode. For a cell: $E^\circ(\text{cell}) = E^\circ(\text{cathode}) - E^\circ(\text{anode})$. More positive $E^\circ(\text{cell})$ means the reaction is more spontaneous.

Day 4: Organic Chemistry

Nomenclature & Functional Groups

IUPAC naming: identify the longest carbon chain, number from the end nearest the first substituent. Key functional groups: hydroxyl (-OH) = alcohol; carboxyl (-COOH) = carboxylic acid; amino (-NH₂) = amine; carbonyl (C=O) in chain = ketone, at end = aldehyde; ester (-COO-); amide (-CONH-).

Reaction Types

- Substitution: halogenoalkanes react with nucleophiles (OH⁻, CN⁻, NH₃) via SN₂ mechanism
- Addition: alkenes undergo electrophilic addition — HX adds across the double bond (Markovnikov's rule for asymmetric alkenes)
- Elimination: halogenoalkanes can form alkenes with a strong base and heat
- Condensation: two molecules join with loss of a small molecule (e.g. water in ester formation)
- Hydrolysis: esters break down with water (acid or base catalysed) to give alcohol + acid

Spectroscopic Identification

Mass spectrometry: molecular ion peak M^+ gives the molecular mass; fragmentation patterns help identify groups. Infrared spectroscopy: O-H broad absorption around 2500-3300 cm^{-1} (carboxylic

acid); C=O at 1700 cm^{-1} ; N-H at 3300 cm^{-1} . NMR (HL): chemical shift, spin-spin splitting, and integration help determine the number and environment of H atoms.

Pro Tip

Draw full structural formulas (showing all bonds) in organic mechanism questions. Examiners award marks for curly arrows showing electron movement — each arrow must start from a bond or lone pair and end where the electrons go.

Day 5: Measurement & Data Analysis

Systematic errors affect accuracy (all measurements shifted in one direction); random errors affect precision (spread of measurements). Repeat measurements reduce random error. A calibration curve eliminates systematic error from equipment. Report measurements to the correct number of significant figures and always state uncertainty.

Day 6: Option Revision

Option A: Medicinal Chemistry (High Popularity in 2026)

- Pharmaceutical chemistry: solubility, bioavailability, and methods of drug delivery
- Antacids neutralise excess stomach acid; aspirin and analgesics act on pain receptors
- Chiral drugs: two enantiomers can have different biological activity (thalidomide case study)
- Antibiotics: penicillin mechanism involves inhibition of bacterial cell wall synthesis

Option B: Biochemistry

- Amino acids have both an amino and carboxyl group; they are linked by peptide bonds
- Enzymes are biological catalysts — they are protein-based and specific to their substrate
- DNA double helix: adenine pairs with thymine (A-T), guanine pairs with cytosine (G-C)

Pro Tip

In Option questions, use the exact scientific terminology from the IB syllabus. Vague answers rarely receive full marks. Practice with past Paper 3 questions for your specific option.

Day 7: Exam Simulation

Complete a full IB Chemistry paper under timed conditions. Use the Data Booklet exactly as you would in the exam. After marking, review all lost marks and identify whether errors were conceptual, mathematical, or caused by misreading the question.

Subject 4: Biology

IB Biology in 2026 places strong emphasis on understanding biological concepts in context, experimental design, and the nature of science. The command terms Explain, Outline, and Evaluate appear frequently. This guide covers all core topics and common HL extensions with revision strategies.

7-Day Revision Schedule Overview

Day 1	Cell Biology — Cell Structure, Membranes, Transport, and Cell Division
Day 2	Molecular Biology — DNA, Protein Synthesis, Enzymes, Metabolism
Day 3	Genetics — Mendelian Genetics, Inheritance Patterns, Biotechnology
Day 4	Ecology & Evolution — Ecosystems, Natural Selection, Classification
Day 5	Human Physiology — Digestion, Circulation, Immunity, Hormones
Day 6	HL Topics — Nucleic Acids, Metabolism, Plant Biology, Animal Behaviour
Day 7	Full Paper Practice and Diagram Revision

Day 1: Cell Biology

Cell Structure

Prokaryotic cells (bacteria) lack a membrane-bound nucleus and membrane-bound organelles. They have a cell wall (peptidoglycan), ribosomes (70S), and may have plasmids. Eukaryotic cells (animals, plants, fungi) have a membrane-bound nucleus, 80S ribosomes, and extensive internal membrane systems.

- Mitochondria: site of aerobic respiration; has inner and outer membrane; contains own DNA
- Chloroplasts (plants only): site of photosynthesis; has thylakoids arranged in grana
- Ribosomes: site of protein synthesis; found free in cytoplasm and on rough ER
- Endoplasmic reticulum: rough ER has ribosomes (protein synthesis); smooth ER makes lipids

Cell Membranes

The fluid mosaic model describes the membrane as a phospholipid bilayer with embedded proteins. Phospholipids have a hydrophilic head and hydrophobic tails. Integral proteins span the bilayer; peripheral proteins are on the surface. Cholesterol stabilises the membrane, reducing fluidity at high temperatures and maintaining it at low temperatures.

Transport Across Membranes

- Simple diffusion: movement of small, non-polar molecules down a concentration gradient (no energy)
- Facilitated diffusion: movement via channel or carrier proteins, still down concentration gradient
- Osmosis: movement of water from high to low water potential through a semi-permeable membrane
- Active transport: movement against the concentration gradient, requires ATP and a carrier protein
- Endocytosis/exocytosis: bulk transport of large molecules by vesicle formation

Cell Division

Mitosis produces two identical diploid daughter cells (for growth and repair). Meiosis produces four genetically diverse haploid cells (for sexual reproduction). Interphase (G1, S, G2) prepares the cell: DNA is replicated during S phase. In meiosis, crossing over during prophase I and independent assortment at metaphase I generate genetic diversity.

Pro Tip

IB Biology examiners frequently ask you to draw and label diagrams. Practice drawing mitosis stages (prophase, metaphase, anaphase, telophase) and cell organelles — a well-labelled diagram can earn 3-4 marks.

Day 2: Molecular Biology

DNA Structure & Replication

DNA is a double helix composed of nucleotides. Each nucleotide contains deoxyribose sugar, a phosphate group, and a nitrogenous base. The bases pair specifically: adenine with thymine (2 hydrogen bonds) and guanine with cytosine (3 hydrogen bonds). DNA replication is semi-conservative: each strand acts as a template. Helicase unwinds the double helix; DNA polymerase adds complementary nucleotides in the 5' to 3' direction.

Protein Synthesis

- Transcription: RNA polymerase creates an mRNA strand complementary to the template DNA strand in the nucleus
- Translation: mRNA moves to ribosomes; tRNA molecules bring amino acids matching each codon
- Each codon (triplet of bases on mRNA) codes for one amino acid or a start/stop signal
- The genetic code is degenerate (multiple codons for one amino acid) and nearly universal

Enzymes

Enzymes are globular proteins that act as biological catalysts. The active site has a complementary shape to the substrate (induced fit model). Factors affecting enzyme activity: temperature (denatures at

high temperatures), pH (changes ionisation of active site), substrate concentration, and inhibitor type. Competitive inhibitors bind to the active site; non-competitive inhibitors bind elsewhere and change the active site shape.

Day 3: Genetics

Mendelian Genetics

Genotype refers to the alleles an organism has; phenotype is the observable characteristic. Dominant alleles mask recessive ones. Homozygous = two identical alleles; heterozygous = two different alleles. Punnett squares predict offspring ratios. Monohybrid cross ratio: 3 dominant : 1 recessive (F₂ generation). Dihybrid cross ratio: 9:3:3:1 (assuming independent assortment).

Inheritance Patterns

- Codominance: both alleles are expressed (e.g. ABO blood groups, IA and IB are codominant)
- Sex linkage: genes on the X chromosome; males (XY) are more likely to show X-linked recessive traits
- Polygenic inheritance: multiple genes contribute to one characteristic (e.g. skin colour, height)
- Epistasis (HL): one gene masks the expression of another

Biotechnology

Polymerase Chain Reaction (PCR): amplifies specific DNA sequences. Steps: denaturation (94°C), annealing of primers (50-65°C), extension by DNA polymerase (72°C). Gel electrophoresis separates DNA fragments by size. Genetic engineering uses restriction enzymes to cut DNA at specific sites and ligase to join fragments.

Pro Tip

For genetics problems, always start by defining the symbols you will use. State the genotype clearly before drawing the Punnett square. Examiners award marks for method even if you make an arithmetic error.

Day 4: Ecology & Evolution

Ecology Concepts

An ecosystem includes all living organisms (biotic factors) and non-living environment (abiotic factors) in an area. A food web shows feeding relationships. Energy flows through trophic levels; approximately 10% is transferred to the next level. Bioaccumulation: toxic substances increase in concentration at higher trophic levels.

Nutrient Cycles

- Nitrogen cycle: fixation (N₂ to NH₃ by bacteria), nitrification (NH₄⁺ to NO₃⁻), assimilation by plants, denitrification back to N₂
- Carbon cycle: photosynthesis (CO₂ to organic carbon), respiration, decomposition, combustion

Evolution & Natural Selection

Darwin's theory of natural selection: variation exists within a population (some heritable); organisms produce more offspring than can survive; those with favourable variations survive and reproduce; allele frequencies change over generations. Speciation occurs when populations become reproductively isolated. Evidence for evolution includes fossil record, comparative anatomy (homologous structures), and DNA sequence similarities.

Day 5: Human Physiology

Digestion & Absorption

Digestion begins in the mouth (salivary amylase digests starch). The stomach produces pepsin (protein digestion) at low pH. The small intestine receives bile (emulsifies fats) and pancreatic enzymes. Villi and microvilli in the small intestine increase surface area for absorption. Products of digestion enter the blood or lacteals (fats via lymphatic system).

Circulation

- The heart is a double pump: right side pumps deoxygenated blood to lungs; left side pumps oxygenated blood to body
- Heart cycle: atrial systole, ventricular systole, diastole (filling)
- Arteries carry blood away from heart (thick muscular walls); veins carry blood to heart (have valves)
- Capillaries are the site of exchange between blood and tissues

Immunity

Innate immunity is non-specific: physical barriers (skin), phagocytes, inflammation response. Adaptive immunity is specific: B lymphocytes produce antibodies; T lymphocytes coordinate the response and kill infected cells. Memory cells provide long-lasting immunity after vaccination or infection.

Hormones & Regulation

Homeostasis maintains a stable internal environment. Blood glucose is regulated by insulin (lowers glucose: stimulates glycogen synthesis) and glucagon (raises glucose: stimulates glycogen breakdown), both produced in the pancreas. Thermoregulation uses negative feedback loops involving the hypothalamus.

Pro Tip

Questions about human physiology often require specific structural descriptions. For example, describe the adaptations of villi for absorption — you need to mention large surface area, thin wall (one cell thick), rich blood supply, and lacteal for fat absorption.

Day 6: HL Extensions & Day 7: Simulation

HL Biology students should focus the sixth day on: nucleic acid structure and function in detail, metabolic pathways (glycolysis, Krebs cycle, oxidative phosphorylation), plant science (auxins, photoperiodism, transpiration), and animal behaviour (innate vs learned, foraging, mating). Day 7 should involve a full past paper under timed conditions, followed by analysis of diagram questions and extended response answers.

Subject 5: English Language & Literature

IB English A: Language & Literature is one of the most nuanced IB subjects to revise because it tests analytical skill, not factual recall. The 2026 exams assess your ability to write about language, literature, context, and purpose with sophistication and textual evidence. This guide focuses on the skills, frameworks, and essay structures that earn top marks.

7-Day Revision Schedule Overview

Day 1	Paper 1 Skills — Unseen Text Analysis: Structure, Style, Language, Purpose
Day 2	Paper 1 Practice — Guided Literary Analysis + Non-Literary Text Types
Day 3	Paper 2 Essay Skills — Comparative Structure, Thesis Writing, Argument Building
Day 4	Works in Translation / Body of Works Revision — Characters, Themes, Context
Day 5	Language in Cultural Context — Media, Advertising, Political Discourse
Day 6	Individual Oral Preparation Review + Global Issues Practice
Day 7	Timed Essay Practice + Mark Scheme Self-Assessment

Day 1: Paper 1 Analysis Skills

The SLAP Framework for Unseen Texts

When analysing an unseen text, use the SLAP framework as an entry point: Structure, Language, Audience & Purpose. No single framework is sufficient on its own — the best answers weave together multiple elements. Always begin by identifying the text type (poem, speech, editorial, advertisement, blog, etc.) as this shapes all subsequent analysis.

Analysing Structure

- How is the text organised? (Chronological, problem-solution, anecdote-then-argument, etc.)
- Where does the author place the most significant moment? (Beginning, turning point, final line?)

- How do paragraphs and sentence lengths vary? (Short for impact, long for complexity)
- In poetry: how do stanza breaks, enjambment, and caesura create meaning?

Analysing Language

Go beyond naming techniques — always explain their effect. The word 'personification' earns no marks alone; 'the personification of the sea as a devouring monster creates a sense of nature's indifferent cruelty' earns full marks. Techniques to analyse: metaphor, simile, alliteration, anaphora, irony, hyperbole, understatement, passive voice, modal verbs, direct address, rhetorical questions, rule of three.

Purpose & Audience

- Purpose: to inform, persuade, entertain, critique, provoke, commemorate, satirise
- Always ask: who is the intended audience, and how does the text position them?
- Consider tone: formal/informal, earnest/ironic, confident/tentative

Pro Tip

In Paper 1, the examiner's mark scheme rewards specific textual evidence (short quotes integrated into your sentences) and clear explanation of how language creates meaning. Avoid summary — every sentence should offer analysis.

Day 2: Text Types & Guided Analysis

Common Non-Literary Text Types in IB

Advertisements use visual positioning, colour, celebrity endorsement, and slogan repetition. Political speeches rely on anaphora, inclusive pronouns ('we', 'our'), and emotional appeals. Newspaper editorials balance evidence with opinion, using hedged language to appear objective. Blog posts are conversational in register, often using second person and rhetorical questions to engage readers.

Writing About Literature

For literary texts in Paper 1, structure your analysis around the author's craft choices. Avoid plot summary. Instead of 'The narrator describes her childhood home,' write 'The narrator's use of sensory detail — particularly olfactory and tactile imagery — constructs her childhood home as a site of ambivalent comfort, evoking nostalgia while suggesting entrapment.'

Day 3: Paper 2 — Comparative Essay

Essay Structure for Paper 2

Paper 2 requires a comparative essay on two literary works. The strongest essays do not treat the texts separately but integrate them throughout. A 7-level essay will have a clear, arguable thesis, sustained comparison, and insight into how form and context shape meaning.

Thesis Writing

A weak thesis: 'Both Kafka's *Metamorphosis* and Camus' *The Stranger* explore alienation.' A strong thesis: 'While both Gregor Samsa and Meursault embody social alienation, Kafka externalises

estrangement through bodily transformation, whereas Camus locates it in Meursault's emotional detachment — a distinction that reflects the existentialist versus expressionist concerns of each text.'

Comparison Techniques

- Both / Similarly / In the same way — for finding convergence between texts
- However / In contrast / While X does Y, Z instead — for divergence
- Interestingly — for unexpected connections or ironies that deepen the argument
- Each paragraph should contribute a new angle on the central argument, not just a new text

Pro Tip

Mentioning context (historical, cultural, biographical) earns marks in Paper 2 — but only when it directly illuminates the literary choices you are analysing. Do not include context as separate 'background information' paragraphs.

Day 4: Works Revision

Use Day 4 to consolidate your knowledge of the literary works you have studied. For each text, you should be able to: articulate the central themes with precision; identify key narrative or poetic techniques and quote specific passages; explain the historical and cultural context; and describe the author's purpose or the text's significance in its literary tradition.

Revision Framework for Each Work

- Three central themes with one specific textual example per theme
- Three significant stylistic/structural choices and their effect
- The author's context and how it shapes the text
- How your text connects to the global issue you identified for your IO

Day 5: Language in Cultural Context

This part of the course examines how language reflects and shapes cultural identity, power structures, and social norms. Key areas include: how language is used in advertising and media; political rhetoric and propaganda; how gender, race, and class are represented in language; the evolution of language over time and across communities.

Analytical Lenses

- Discourse analysis: how language constructs social realities and power relationships
- Semiotics: how signs, symbols, and images carry cultural meaning
- Genre conventions: how reader expectations shape how texts are produced and read

Days 6 & 7: IO Review and Timed Practice

While the Individual Oral has already been completed by May 2026, understanding the global issue and extract you discussed will help you connect literature to broader themes in Paper 2. On Day 7, write a

timed Paper 1 response in 60 minutes and a Paper 2 essay in 90 minutes, then use the IB markbands to self-assess rigorously.

Subject 6: Economics

IB Economics in 2026 assesses understanding of economic theory, real-world application, and the ability to evaluate policies critically. The subject is examined across three papers: Paper 1 (extended responses on micro and macro), Paper 2 (data response), and Paper 3 (HL quantitative reasoning). Diagrams are essential — no diagram means lost marks.

7-Day Revision Schedule Overview

Day 1	Microeconomics — Supply, Demand, Elasticity, Market Equilibrium
Day 2	Market Failures — Externalities, Public Goods, Market Power
Day 3	Macroeconomics — GDP, Aggregate Demand & Supply, Unemployment, Inflation
Day 4	Government Policies — Fiscal, Monetary, Supply-Side; Policy Evaluation
Day 5	International Economics — Trade, Exchange Rates, Balance of Payments
Day 6	Development Economics + HL Quantitative Practice
Day 7	Full Paper Simulation — Diagrams, Data Response, and Extended Response

Day 1: Microeconomics Foundations

Demand & Supply

The law of demand states that as price increases, quantity demanded decreases (*ceteris paribus*) — a downward-sloping demand curve. Non-price factors shifting demand: income, prices of related goods, tastes, expectations, and population. Supply shifts with changes in: input costs, technology, taxes/subsidies, number of producers, and expectations.

Elasticity

- Price elasticity of demand (PED) = % change in Qd / % change in P; elastic (PED > 1) = revenue falls with price rise
- Income elasticity of demand (YED): positive for normal goods; negative for inferior goods

- Cross elasticity of demand (XED): positive for substitutes; negative for complements
- Price elasticity of supply (PES): higher when producers can adjust output quickly

Consumer & Producer Surplus

Consumer surplus = the difference between what consumers are willing to pay and what they actually pay (area above price, below demand curve). Producer surplus = the difference between price received and the minimum price producers would accept (area below price, above supply curve). Welfare = consumer surplus + producer surplus.

Pro Tip

Every IB Economics diagram should include: labelled axes (P and Q), correctly labelled curves, clear indication of price and quantity at equilibrium, and shaded areas when showing surplus or welfare loss. A correctly drawn and labelled diagram can be worth 4 marks.

Day 2: Market Failure

Externalities

A negative externality occurs when a third party bears a cost not reflected in the market price (e.g. pollution from a factory). The social cost is greater than the private cost, so the market overproduces. A positive externality benefits third parties (e.g. education, vaccination). The social benefit exceeds the private benefit, so the market underproduces. The IB requires you to draw correctly labelled MSC/MSB and MPC/MPB diagrams.

Government Responses to Externalities

- Negative externality: pigouvian tax equal to the marginal external cost; regulation; tradeable permits
- Positive externality: subsidy to shift MPC down to MSC; direct government provision; advertising
- Always evaluate: are the costs of intervention less than the benefits? Is the intervention effective?

Public Goods & Information Failures

Public goods are non-excludable (cannot prevent use) and non-rival (one person's consumption does not reduce availability). This leads to the free rider problem and market failure — the government must provide these goods. Information failure occurs when buyers or sellers have incomplete information, leading to over- or under-consumption of goods.

Market Power (Monopoly)

A monopolist maximises profit where $MR = MC$, producing less and charging more than a perfectly competitive firm. This creates a deadweight welfare loss (triangle between demand curve and MC curve). Arguments for monopoly: economies of scale, natural monopoly, R&D incentives. Arguments against: higher prices, lower output, reduced consumer surplus, X-inefficiency.

Day 3: Macroeconomics

GDP & Economic Measurement

GDP (Gross Domestic Product) measures the total value of goods and services produced in an economy in a year. Nominal GDP uses current prices; real GDP adjusts for inflation. GDP can be measured by expenditure ($C + I + G + X - M$), income, or output approaches. GDP per capita is a better measure of living standards but still ignores distribution, non-market activities, and the informal economy.

Aggregate Demand & Supply

- $AD = C + I + G + (X - M)$; rightward shift means economic growth; leftward means recession
- Short-run AS (SRAS) is upward sloping; Long-run AS (LRAS) is vertical at full employment
- Demand-side shocks: shifts in AD; Supply-side shocks: shifts in SRAS (e.g. oil price change)

Unemployment

Types: cyclical (due to low AD), structural (mismatch of skills), frictional (between jobs), seasonal. The natural rate of unemployment (NRU) is the level consistent with stable inflation. IB examines causes, consequences (for individuals and the economy), and policies for each type.

Inflation

Demand-pull inflation: excess AD pulls up prices. Cost-push inflation: rising input costs push up the price level. Core inflation excludes volatile food and energy prices. The Phillips Curve shows a short-run trade-off between inflation and unemployment, though this relationship breaks down in the long run.

Pro Tip

For macroeconomic questions, always distinguish between short-run and long-run effects. A policy that reduces unemployment in the short run may cause inflation. IB examiners reward analysis that considers both timeframes.

Day 4: Government Policy

Fiscal Policy

Expansionary fiscal policy: increase government spending (G) or reduce taxes to boost AD. Contractionary fiscal policy: reduce G or increase taxes to reduce AD and inflation. Multiplier effect: an initial injection of spending is multiplied through the economy; multiplier $k = 1/(1-MPC)$. Government budget balance: surplus (revenue > spending), deficit (spending > revenue), balanced.

Monetary Policy

Central banks use interest rates to manage inflation and growth. Lower interest rates: stimulate borrowing and investment, boost AD, risk higher inflation. Higher interest rates: reduce borrowing, slow AD, risk higher unemployment. Quantitative easing (QE) is used when interest rates are near zero — the central bank buys assets to increase money supply.

Supply-Side Policy

- Education and training: increases human capital and shifts LRAS right
- Deregulation and privatisation: increase competition and efficiency
- Labour market reforms: reduce minimum wage, reduce union power to increase labour flexibility
- Investment in infrastructure: reduces production costs and boosts potential output

Policy Evaluation

Every policy has trade-offs. Fiscal stimulus may cause inflation and a budget deficit. Monetary tightening to fight inflation may cause unemployment. Supply-side policies are slow to take effect. The IB rewards evaluative conclusions that weigh up the effectiveness, equity implications, and opportunity costs of policies.

Day 5: International Economics

Comparative Advantage & Trade

Comparative advantage exists when a country can produce a good at a lower opportunity cost than another country. Free trade based on comparative advantage is theoretically beneficial for all parties. However, real-world trade is complicated by: factor immobility, infant industry arguments, strategic trade policy, and distributional effects within countries.

Trade Protection

- Tariff: tax on imports — raises domestic price, increases government revenue, creates deadweight loss
- Import quota: limits the quantity of imports — similar effect to tariff but no revenue for government
- Subsidies for domestic producers: lower domestic costs, allow firms to compete with cheaper imports
- Evaluate: protection may save jobs in the short run but raises prices for consumers and may invite retaliation

Exchange Rates

A depreciation of the exchange rate makes exports cheaper and imports more expensive — can improve the current account deficit (J-curve effect shows initial worsening before improvement). Factors determining the exchange rate: interest rate differentials, inflation rates, speculation, and current account position.

Day 6: Development Economics & HL Quantitative Skills

Measuring Development

GDP per capita is inadequate alone. The Human Development Index (HDI) combines income, education (mean years of schooling), and health (life expectancy). The Multidimensional Poverty Index captures deprivation across multiple dimensions. Development goals include the UN Sustainable Development Goals (SDGs) adopted in 2015 with 17 targets to be met by 2030.

Barriers to Development

- Poverty trap: low income leads to low savings, low investment, and continued low income
- Dependence on primary commodities: subject to volatile prices and declining terms of trade
- Insufficient human capital: inadequate education and health reduce productivity
- Corruption and poor governance: reduces foreign investment and diverts public resources

HL Quantitative Practice

HL Paper 3 requires calculation of PED, PED revenue implications, income multiplier, trade terms, and current account balances. Practice these calculations under timed conditions. Always show all working — method marks are available even if the final answer is incorrect.

Pro Tip

For Paper 2 data response questions, read the data carefully before reading the questions. Identify trends, make note of unusual values, and consider what the data does NOT show. Strong answers engage critically with the limitations of the data presented.

Day 7: Full Simulation & Review

Sit a full IB Economics paper under exam conditions. For Paper 1, practise both the micro and macro extended response questions. For Paper 2, work through all parts of the data response. Review your answers against the mark scheme, paying close attention to the number of marks per part — a 2-mark question needs 2 distinct points, and a 15-mark essay needs a conclusion with a supported judgment.

Final Week Strategies & Exam Day Advice

Effective Revision Techniques

Active Recall

Passive re-reading has minimal effect on long-term retention. Instead, test yourself constantly. Cover your notes and try to write out everything you know from memory. Use flashcards (physical or digital with Anki) for definitions, formulas, and key concepts. After each study session, write a 'brain dump' of everything you can remember from that topic.

Spaced Repetition

Review material at increasing intervals: once the day after learning, then three days later, then a week later. This counteracts the 'forgetting curve' and encodes information into long-term memory. Eclassopedia's spaced repetition module on the platform automatically schedules your review sessions — use it for vocabulary, formulas, and quotations.

Interleaving

Rather than studying one subject for hours at a time, mix subjects within a study session. Research shows that interleaving different topics, even when it feels harder, produces better long-term retention and transfer of skills.

Exam Day — Subject-Specific Checklist

Subject	Key Exam Day Actions
Mathematics	Bring GDC with fresh batteries; check formula booklet is allowed; show all working on all questions
Physics	Use Data Booklet formulas; always include units; draw diagrams for mechanics and optics questions
Chemistry	Use Data Booklet for standard values; balance all equations; show mole calculations in full
Biology	Draw and label all diagrams; use precise scientific vocabulary; state units on all numerical answers
English	Annotate texts before writing; integrate short quotes; never summarise — always analyse
Economics	Draw and label all diagrams; use real-world examples; include evaluative conclusions in all essays

Wellbeing During the Exam Period

Academic performance is not independent of physical and mental wellbeing. Research consistently shows that students who maintain good sleep, nutrition, and exercise habits during exam periods outperform those who sacrifice these for extra study time.

- Sleep: aim for 8 hours per night — memory consolidation happens during sleep, particularly REM
- Exercise: even 20-30 minutes of daily walking or light exercise improves focus and reduces cortisol
- Nutrition: avoid high-sugar foods before exams (blood sugar crash affects concentration); prefer protein and complex carbohydrates
- Mindfulness: short breathing exercises (4-7-8 breathing) before entering the exam hall reduce acute anxiety
- Peer study: discussing content with classmates reinforces learning — teach topics to each other

Good luck from the Eclassopedia Team!

You have worked hard. Trust your preparation, stay calm, and show the examiner what you know.

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