



IB Study Guide 2023:

The Final Two Months

“There are no secrets to success. It is the result of preparation, hard work, and learning from failure”.

Colin Powell

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1. General study advice
2. English A and B
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4. History
5. Global Politics
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7. Biology
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9. Physics
10. ESS
11. Maths
12. Visual Arts
13. Music

READ THIS

The difference between doing OK, and doing really, well, is how hard you work. Hard work over a few months will make the difference between 28 and 34 points, or between passing and failing the IB Diploma.

There is no shortcut. You will not achieve freak success through luck. The only way to do well is to **work hard over a significant period**.

Planning for Study

Let's assume that from Monday 13th March onwards, you work for 2 hours per evening after school. Let's further assume you work for 5 hours on a weekend. During your week off at the beginning of April, you work 8 hours per day Monday to Friday. That's a total of **151 hours of independent study**.

You study 6 subjects. No one subject is more important than the next, whether it's HL or SL, and all IB points are equal. And so, we split the time evenly, **25 hours per subject**.

How Learning Works

Exam success depends on two key things: the **ability to recall and synthesise** information, and the **skills to communicate** your understanding and analysis successfully.

This relies on learning, remembering, practicing and repeating you need to **learn everything** there is to know, you need **to be able to remember it**, and you need to be able to **put it together** in new and difficult ways in an exam.

Learning:

- You do this by actively engaging with subject material. This means using a variety of methods such as knowledge organisers, past papers, listening to podcasts, reading articles to help you build new knowledge as well as to enhance and consolidate what you already know.

Deliberate Practice:

- You do this by breaking down and **practicing the basic skills**. This means solving equations, analysing sources, and doing topic quizzes again, and again, and again.

Synthesis:

- You then need to practice slowly, carefully, and deliberately answering the questions in IB past papers and similar, which will demand that you put together your knowledge in new and more challenging ways.

And then, **you need to do it again**. The most effective tool in building knowledge you can use is forgetting and **re-learning**.

How to Approach Past Paper Practice - 8 Step Method

Practicing past exam papers helps to fine-tune key exam techniques and to refresh understanding of key phrases or terminology. It also helps in terms of time management so that vital time is not wasted on short answer questions which allocate only a few marks. To get the most you can out of a past paper, follow the steps below:

BRAIN (Black Pen):

1. Timed, exam conditions (e.g., 1 mark per minute)
2. No time restraints, exam conditions.

BOOK (Blue Pen):

1. Use your notes.
2. Use Textbooks
3. Use the internet.

BUDDY (Green Pen):

4. Ask your peers.

BOSS (Red Pen):

5. Use the Mark Scheme
6. Ask your teacher.

25 Hours of **English A Literature (HL/SL)**

Duration (hours)	Task	Assessment	Description & Links
8	Revise responding to 'unseen' texts	Paper 1	<p>Practise reading, annotating and writing a literary commentary, or analysis in response to guiding question, poems and extracts from novels, short stories, essays, biographies or journalistic writing of literary merit.</p> <p>The best way to do this is by doing past papers which you can find linked on Teams.</p>
9	Revise Paper 2 Texts: Things Fall Apart Persepolis The Handmaid's Tale Disgrace Nineteen Eighty-Four Lolita Perfume Franz Kafka's Body of Work Heart of Darkness Candide Fat Black Woman's Poems	Paper 2	Make detailed notes on: Context Form and genre Plot Setting Characters Narrative techniques Structural features KEY QUOTATIONS ○ Their literary features

8	Practice Paper 2	Paper 2	Practise creating and responding to Paper 2 style questions. Past papers are linked on Teams. Make sure you practice responding to the full range of question types (e.g. about narrative voice; dialogue; setting; conflict; characterisation; development; etc.)
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25 Hours of **English B**

- **Identities (6 hours)**

Citizens of the world.
Nationality, culture, beliefs.
Beauty and health.
Formal letter.
Blog entry.

• **Experiences (7 hours)**

Pilgrimage
Extreme sports
Migration
Future humans (cloning, gm foods and nanobots)
Technology and human interaction (internet and social media)
Redefining art
Essay
Brochure

• **Social organisation (6 hours)**

Minorities and education
Partners for life
The future of jobs
News report
Review

• **Sharing the planet (6 hours)**

Ending poverty
Climate change
Power to the people
Speech
Guidelines-Official report

All the material is available in the Year 13 Teams.

ESPAÑOL A: LITERATURA
NIVEL MEDIO Y NIVEL SUPERIOR
MISS ROCÍO RUEDA/MRS. PATRICIA TUFIÑO

CONTENIDOS TEÓRICOS

I. ANÁLISIS DEL TEXTO NARRATIVO

5 - HORAS

1. ANÁLISIS DE LOS CONTENIDOS

- Tema e Ideas
- Personajes: Tipos de Personajes y Caracterización de personajes
<https://www.youtube.com/watch?v=Px685ganq0o>
<https://comoescribirbien.com/tipos-de-personajes/>
- Ambiente: Tiempo y Espacio
<https://www.escueladeescrituracreativa.com/teoria-literaria/diferencias-ambientacion-atmosfera/> · Conflicto: Tipo de conflicto

- Clímax
 - Desenlace: Tipo de desenlace
- #### 2. ANÁLISIS DE LA FORMAS

- Elementos Estructurales
 - Tiempo
<https://www.youtube.com/watch?v=sgJfaGaXIRO>
 - Espacio
<https://www.youtube.com/watch?v=YaEVCXcqaZs>
 - Repeticiones - Focalización
<https://www.youtube.com/watch?v=YaEVCXcqaZs>
 - Trama
- Composición y organización
 - Externa
 - Interna
 - Relaciones
<https://www.slideshare.net/marinecanarcamacho/gua-de-analisis-literario-para-textos-narrativos-2-013>
<https://www.escueladeescrituracreativa.com/teoria-literaria/estructura-externa-de-un-texto/>
- Estilo
<https://www.escueladeescrituracreativa.com/estilo/estilo-literario-segun-gunter-grass/>
 - Nivel fónico
 - Nivel Morfológico
 - Nivel Sintáctico - Nivel Semántico
https://www.slideshare.net/rocioyarmando/nivel-sintctico?next_slideshow=3

<https://www.youtube.com/watch?v=Px685ganq0o>
<https://slideplayer.es/slide/3823429/>

II. ANÁLISIS DEL TEXTO POÉTICO

5 - HORAS

I. ANÁLISIS DE CONTENIDOS

- Tema
- Ideas
- Sentimientos

2. ANÁLISIS DE LAS FORMAS

- Composición u organización
 - Estructura externa
 - Estructura interna
 - Relación
- Nivel fónico
- Medida
- Organización estrófica
- Rima
- Ritmo
- Intensificadores sonoros
 - Estilo
- Nivel morfológico
- Nivel sintáctico
- Nivel semántico

III. ANÁLISIS DEL TEXTO DRAMÁTICO

5 - HORAS

3. ANÁLISIS DE LOS CONTENIDOS

- Tema e Ideas
- Personajes: Tipos de Personajes y Caracterización de personajes
- Ambiente: Tiempo y Espacio
- Conflicto: Tipo de conflicto
- Clímax
- Desenlace: Tipo de desenlace

4. ANÁLISIS DE LA FORMAS

- Elementos Estructurales
 - Tiempo
 - Espacio
 - Repeticiones
 - Focalización
 - Trama
- Composición y organización
 - Externa
 - Interna
 - Relaciones

- Estilo

<https://www.escueladeescrituracreativa.com/estilo/estilo-literario-segun-gunter-grass/>

- Nivel fónico
- Nivel Morfológico
- Nivel Sintáctico - Nivel Semántico

https://www.slideshare.net/rociotarmando/nivel-sintctico?next_slideshow=3

<http://vniversitas.over-blog.es/article-como-se-realiza-un-analisis-literario-de-textos-dramaticos-98577657.html>

<https://www.slideshare.net/Cholitamelania/texto-dramatico-ppt>

<https://www.slideshare.net/shiflada8/texto-dramatico-26080400>

IV. ENSAYO

5 - HORAS

<https://teams.microsoft.com/#/pdf/viewer/teamsSdk/https://~2F~2Forbitaled.sharepoint.com~2Fsites~2FBSQYear13SpanishLitRR20212023~2FShared%20Documents~2FGeneral~2FTEXTOS%20NO%20LITERARIOS%20EL%20ENSAYO.pdf?threadId=19:u1jjShGyH61qF8Oz96B8HpTXIK3ioLiiLMakb3RF13w1@thread.tacv2&subEntityId=%257B%2522viewParams%2522%253A%2522id%253D%25252Fsites%25252FBSQYear13SpanishLitRR20212023%25252FShared%252520Documents%25252FGeneral%2526viewid%253Db2c2f02b%25252Deb39%25252D4048%25252Da431%25252D41a48ed5bc8c%2522%257D&baseurl=https://~2F~2Forbitaled.sharepoint.com~2Fsites~2FBSQYear13SpanishLitRR20212023&fileid=5ff0d188-0d11-4cbf-8a2b-b3cacbb2244f&ctx=openFilePreview&viewerAction=view>

V. PRUEBA 1 PRÁCTICA

- Realizar práctica de PRUEBA 1 entregada en clase.
 - Prosa
 - Poesía / Teatro

VI. PRUEBA 2 REVISIÓN

- Realizar cuadros comparativos de las obras con referencia a
 - Temas
 - Personajes
 - ambiente
 - Recursos: símbolos
 - Técnicas: narrador, puntos de visto, trama, tiempo,
 - Lenguaje
 - Contextos

VII. OBRAS: De acuerdo a cada nivel

5 - HORAS

25 HORAS - ESPAÑOL B

GUIA DE ESTUDIO NIVEL MEDIO es necesario hay que recalcar que su estudio debe ser más centrado en reforzar **sus habilidades de comprensión lectora, auditiva y escritura** antes que conocimiento. utilice todos LOS RECURSOS NECESARIOS PARA QUE REPASE TODAS LAS ÁREAS TEMÁTICAS VISTAS:

- **Identities** • **Experiencias** • **Ingenio humano** • **Organización social** • **Cómo compartimos el planeta**

ENTRE MÁS SE EXPONGA A MATERIAL REAL ES MUCHO MEJOR.

A. TIPOS DE TEXTO: 6 horas

Revise cómo se escriben, para que, el registro y convenciones que se usan para estos tipos de texto. No se olvide de repasar, **conectores**, puntuación y ortografía. Encuentre ejemplos reales en internet para que verifique su forma y fondo.

TEXTOS PERSONALES	TEXTOS PROFESIONALES	TEXTOS DE COMUNICACIÓN Y MEDIOS
Blog Diario personal Correo electrónico Carta personal Publicación en medios sociales o salas de chat - tweet.	Blog Correo electrónico Ensayo Carta formal Propuesta Cuestionario Informe Conjunto de instrucciones Encuesta	Anuncio Artículo (diario, revista) Blog Folleto Crítica Película Entrevista Hoja informativa Crónica de noticias Columna de opinión o editorial Panfleto Podcast Póster Comentario público (editorial o carta al director) Programa de radio Reseña Discurso Guía de viaje Página web

<https://www.hoddereducation.co.uk/spanishbextras>

B. VOCABULARIO: 6 HORAS

Repasa vocabularios relacionados a estos temas, haz tarjetas, crucigramas, sopa de letras, lee artículos o busca en internet videos con este contenido. No se olvide de verificar.

Palabras en contextos específicos:

IDENTIDADES	<ul style="list-style-type: none"> • Estilos de vida • Salud y bienestar • Creencias y valores • Subculturas • Lengua e identidad 	<p>IMPORTANTE:</p> <p>MODISMOS EXPRESIONES IDIOMÁTICAS</p>
EXPERIENCIAS	<ul style="list-style-type: none"> • Actividades recreativas • Vacaciones y viajes • Historias de la vida • Ritos de paso • Costumbres y tradiciones • Migración 	<p>PATERAS MURO - EEUU BAILES COMIDAS TRADICIONALES MÚSICA - GÉNEROS</p>
INGENIO HUMANO	<ul style="list-style-type: none"> • Entretenimiento • Expresiones artísticas • Comunicación y medios • Tecnología • Innovación científicas 	<p>ARTE Y FOLKLORE</p>
ORGANIZACIÓN SOCIAL	<ul style="list-style-type: none"> • Relaciones sociales • Comunidad • Participación social • Educación • El mundo laboral • Ley y orden 	<p>LATINO PRIDE JUBILACIÓN TEMPRANA FUGA DE CEREBROS ACOSO ESCOLAR</p>
CÓMO COMPARTIMOS EL PLANETA	<ul style="list-style-type: none"> • Medio ambiente • Derechos humanos • Paz y conflictos • Igualdad • Globalización • Ética • El medio urbano y el rural 	

<http://www.rtve.es/>

https://elpais.com/elpais/portada_america.html

<https://www.elmundo.es/>

<https://lenguajeyotrasluces.wordpress.com/tag/vocabulari>

o/

<https://lenguajeyotrasluces.wordpress.com/category/todo>

-vuestro/

C. REPASO CON EXAMENES PASADOS: 6 HORAS

Utiliza estos enlaces para que accedas a pruebas pasadas. Acuérdate que la Comprensión auditiva es nueva así que no hay exámenes con ese contenido:

<https://drive.google.com/drive/folders/1JJPfY9czUZufWeXNN7mzSeP8HYBCzBrI>

<http://www.spanishfaster.org/spanishbslpastpapers.htm> <https://freeexampapers.com/exam-papers/IB/Spanish/>

- Prueba 1 (1 hora 15 minutos) Destrezas productivas: expresión escrita. Una tarea, debes elegir uno de los tipos de texto que se indican en las instrucciones del examen.
- Prueba 2 (1 hora 45 minutos) Destrezas receptivas: secciones separadas para la comprensión auditiva y la comprensión de lectura. Ejercicios de comprensión acerca de tres fragmentos de audio y tres textos escritos, basados en las cinco áreas temáticas.

D. EJERCICIOS DE COMPRENSIÓN AUDITIVA. 6 HORAS

Es fundamental que repases con audios reales, con diferentes acentos y contextos. Ocupa los siguientes links donde puedes encontrar ejercicios y pruebas del nivel que estarán en tu examen.

<https://lenguajeyotrasluces.wordpress.com/2016/02/28/dele-b2-comprension-auditiva-modelos-examen-consejos/>

25 Hours of **History HL**

- 1. The move to global war content – Japan, Italy and Germany – 4 hours**
 - Causes of expansion
 - Events
 - International response to expansionX3

- 2. Paper 1 skills and past paper practice – 2 hours**

- 3. Authoritarian States (Hitler/Castro/Mao) - 4 hours**
 - How did they establish authoritarian States
 - Legal and illegal methods of gaining and maintaining control
 - Treatment of opposition
 - Domestic policies (economy, treatment of women etc)
 - Foreign policies and their impact on leaders stability
 - To what extent was an authoritarian state achieved?

- 4. The Cold War – 3 hours**
 - Breakdown of Grand Alliance, Yalta Potsdam
 - Key individuals and Leaders
 - Cold War crises
 - Cold War relations - China, USSR, USA
 - Detente
 - How did the Cold War end?

- 5. Paper 2 skills and past paper practice – 2 hours**

- 6. The Cold War and the Americas - 4 hours**
 - Truman and containment - its impact on domestic and foreign policies of the US
 - Korean War - Reason for involvement and political outcomes
 - Eisenhower and Dulles - The New Look
 - Vietnam
 - US foreign Policy during Cold War

- 7. Political development in the Americas – 4 hours**
 - The Cuban Revolution: political, social and economic causes
 - Rule of Fidel Castro: Cuban nationalism; political, economic, social and cultural policies; treatment of opposition; successes and failures; impact on the region
 - Populist leaders in two countries (Peron in Argentina and Vargas in Brazil): rise to power and legitimacy; ideology; social, economic and political policies; successes and failures; the treatment of opposition
 - Democracy in crisis: political, social and economic reasons for the failure of elected leaders

- Rise of a military dictatorship in one country (Pinochet in Chile): reasons for their rise to power; economic and social policies; repression and treatment of opposition
- Guerrilla movements in one country (El Salvador): origins, rise and consequences
- Liberation theology in Latin America: origins, growth and impact

8. Paper 3 skills and past paper practice – 2 hours

25 Hours of **History SL**

1. The move to global war content – Japan, Italy and Germany – 7 hours

- Causes of expansion
 - Events
 - International response to expansion
- X3

2. Paper 1 skills and past paper practice – 3 hours

3. Authoritarian States (Hitler/Castro/Mao) - 6 hours

- How did they establish authoritarian States
- Legal and illegal methods of gaining and maintaining control
- Treatment of opposition
- Domestic policies (economy, treatment of women etc)
- Foreign policies and their impact on leaders stability
- To what extent was an authoritarian state achieved?

4. The Cold War – 6 hours

- Breakdown of Grand Alliance, Yalta Potsdam
- Key individuals and Leaders
- Cold War crises
- Cold War relations - China, USSR, USA
- Detente
- How did the Cold War end?

5. Paper 2 skills and past paper practice – 3 hours

25 Hours of Global Politics

1. Power, Sovereignty and International relations – 5 hours

Key concepts: power, sovereignty, legitimacy, interdependence

Learning focuses (for each gather specific modern case studies):

- Nature of power
- Operation of state power in global politics
- Function and impact of international organizations and non-state actors in global politics
- Nature and extent of interactions in global politics

2. Human Rights – 5 hours

Key concepts: human rights, justice, liberty, equality

Learning focuses (for each gather specific modern case studies):

- Nature and evolution of human rights
- Codification, protection and monitoring of human rights
- Practice of human rights
- Debates surrounding human rights and their application: differing interpretations of justice, liberty and equality

3. Development – 5 hours

Key concepts: development, globalization, inequality, sustainability

Learning outcomes (for each gather specific modern case studies):

- Contested meanings of development
- Factors that may promote or inhibit development
- Pathways towards development
- Debates surrounding development: challenges of globalization, inequality and sustainability

4. Peace and Conflict – 5 hours

Key concepts: peace, conflict, violence, non-violence

Learning outcomes (for each gather specific modern case studies):

- Contested meanings of peace, conflict and violence
- Causes and parties to conflict
- Evolution of conflict
- Conflict resolution and post-conflict transformation

- 5. Revision of paper one skills and additional past paper practice – 2 hours**
- 6. Revision of paper two skills and additional past paper practice – 3 hours**

25 hours of Business Management (SL)

UNIT 1: BUSINESS ORGANISATION AND ENVIRONMENT

1.1 Introduction to business management (30 Minutes)

- The role of business
- The main business functions and their roles
- Primary, secondary, tertiary and quaternary sectors
- The nature of business activity
- Reasons for starting up a business
- Common steps in starting a business
- Problems that a new business or enterprise faces
- The role of entrepreneurship and intrapreneurship in overall business activity

1.2 Types of organisations (1.5 Hours)

- The distinction between the private sector and public sector
- The main features of the following types of for-profit (commercial) organisations: sole traders, partnerships and companies/ corporations
- The main features of the following types of for-profit social enterprises: cooperatives, microfinance providers, public–private partnerships (PPP)
- The main features of the following types of non-profit social enterprises: non-governmental organisations, charities

1.3 Organisational objectives (1 Hour)

- Ethical objectives and corporate social responsibility
- Vision statement and mission statement
- Aims, objectives, strategies and tactics and their relationships
- The need for organisations to change objectives and innovate in response to changes in internal and external environments
- The reasons why organisations set ethical objectives and the impact of implementing them
- The evolving role and nature of CSR
- SWOT analysis of a given organisation
- Ansoff's matrix for different growth strategies of a given organisation

1.4 Stakeholders (1.25 Hours)

The interests of internal stakeholders

- The interests of external stakeholders
- Possible areas of mutual benefit and conflict between stakeholders' interests

1.5 External environment (1 Hour)

- STEEPLE analysis of a given organisation
- Consequences of a change in any of the STEEPLE factors for a business's objectives and strategy

1.6 Growth and evolution (1.25 Hours)

The main types of economies and diseconomies of scale

- The difference between internal and external growth
- The relative merits of small versus large organisations
- External growth methods: mergers and acquisitions and takeovers
- The role and impact of globalisation on the growth and evolution of businesses
- Reasons for the growth of multinational businesses (MNCs)
- The impact of MNCs on host countries

UNIT 2: HUMAN RESOURCE MANAGEMENT

2.1 Functions and evolution of human resource management (1 Hour)

- Human resource planning
- Common steps in the processes of dismissal and redundancy
- Labour turnover
- Common steps in the process of recruitment
- Types of training: on-the-job; off-the-job; cognitive; behavioural
- Types of appraisal: formative; summative; 360-degree feedback; self-appraisal
- How work patterns, practices and preferences change
- Internal and external factors that influence human resource planning
- Outsourcing, offshoring and re-shoring as human resource strategies
- How innovation, ethical considerations and cultural differences may influence human resource practices and strategies

2.2 Organisational structure (1.25 Hours)

- Important terminology to facilitate understanding of different types of organisational structures
- Different types of organisational charts
- Changes in organisational structures
- How cultural differences and innovation in communication technologies may impact on communication in an organisation
- Different types of organisational charts

2.3 Leadership and management (1.25 Hours)

- The key functions of management
- Differentiate between management and leadership
- Different leadership styles
- How ethical considerations and cultural differences may influence leadership styles

2.4 Motivation (1.25 Hours)

- Different types of financial rewards
- Different types of non-financial rewards
- How financial and non-financial rewards may affect job satisfaction, motivation and productivity in different cultures
- The motivation theories of Taylor, Maslow, Herzberg, Adams and Pink

UNIT 3: FINANCE AND ACCOUNTS

3.1 Sources of finance (1 Hour)

- Short-, medium- and long-term finance
- Role of finance for businesses: capital expenditure; revenue expenditure
- Internal sources of finance
- External sources of finance
- The appropriateness of sources of finance for a given situation

3.2 Costs and revenues (1 Hour)

- Different types of costs
- Total revenue and revenue streams

3.3 Break-even analysis (1.5 Hours)

- Total contribution and contribution per unit
- Break-even charts and break-even analysis
- The effects of changes in prices and costs on break-even
- The benefits and limitations of break-even analysis
- Break-even charts, break-even point, profit, margin of safety, target: profit, output, price
- The effects of changes in prices and costs on break-even

3.5 Profitability and liquidity ratio analysis (1.5 Hours)

- Gross profit margin
- Net profit margin
- Return on capital employed (ROCE)
- Current ratio
- Acid test ratio
- Strategies to improve these ratios

3.7 Cash flow (1 Hour)

- The difference between profit and cash flow
- The working capital cycle
- Cash flow forecasts and make calculations to amend them
- The relationship between investment, profit and cash flow
- Strategies for dealing with cash flow problems
- Reducing cash outflows
- Improving cash inflows
- Additional finance

UNIT 4: MARKETING

4.1 The role of marketing (45 Minutes)

- Marketing and its relationship with other business functions
- Characteristics of the market in which an organisation operates
- The difference between marketing of goods and marketing of services
- Market orientation against product orientation

- The difference between commercial marketing and social marketing
- The importance of market share and market leadership
- Marketing objectives of for-profit and not-for-profit organisations
- How marketing strategies evolve in response to changes in consumer preferences
- How innovation, ethical considerations and cultural differences may influence marketing practices and strategies
- Market share

4.2 Marketing planning (1 Hour)

- The elements of a marketing plan
- The role of marketing planning
- The four Ps of the marketing mix
- An appropriate marketing mix for a particular product or business
- The difference between target markets and market segments
- The difference between niche market and mass market
- How organisations target and segment their market and create consumer profiles
- A product position map
- The importance of having a unique selling point (USP)
- The effectiveness of a marketing mix in achieving marketing objectives
- How organisations can differentiate themselves and their products from competitors
- An appropriate marketing mix for a particular product or business
- Possible target markets and market segments

4.4 Market research (1 Hour)

- The reasons why organisations carry out market research
- Methods and techniques of primary market research
- Methods of secondary market research
- The differences between qualitative and quantitative market research
- Different methods of sampling
- The results from data collection
- The ethical considerations of market research

4.5 The four Ps – product, price, promotion and place (2 Hours)

- Product: The relationship between the product life cycle and the marketing mix
- Product: The relationship between the product life cycle, investment, profit and cash flow
- Product: Aspects of branding: awareness, development, loyalty and value
- Promotion: Aspects of promotion: above and below the line; promotional mix
- Place: The importance of place in the marketing mix
- Product: Extension strategies to the product life cycle
- Product: Boston Consulting Group matrix (BCG matrix)
- Product: The importance of branding
- Product: The importance of packaging
- Price: The appropriateness of pricing strategies: cost-plus (mark-up); penetration; skimming; psychological, loss leader; price discrimination; price leadership; predatory
- Promotion: The impact of changing technology on promotional strategies
- Promotion: Guerrilla marketing and its effectiveness
- Place: The effectiveness of different types of distribution channels
- Product: Product life cycle
- Product: Boston Consulting Group matrix

4.8 E-commerce (30 Minutes)

- The features of e-commerce
- The effects of changing technology and e-commerce on the marketing mix
- The difference between different types of e-commerce: B2B; B2C; C2C
- The costs and benefits of e-commerce to firms and consumers

UNIT 5: OPERATIONS MANAGEMENT

5.1 The role of operations management (45 Minutes)

- Operations management and its relationship with other business functions
- Operations management in organisations producing goods and services
- Operations management strategies and practices for ecological, social and economic sustainability

5.2 Production methods (1 Hour)

- Job/customised production

- Batch production
- Mass/flow/process production
- Cellular manufacturing
- The most appropriate methods of production for a given situation

5.4 Location (45 Minutes)

- The reasons for a specific location of production
- Ways of reorganising production, nationally and internationally: – Outsourcing/subcontracting – Offshoring – Insourcing

25 hours of Business Management (HL)

UNIT 1: BUSINESS ORGANISATION AND ENVIRONMENT

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- Consequences of a change in any of the STEEPLE factors for a business's objectives and strategy

1.6 Growth and evolution (45 Minutes)

The main types of economies and diseconomies of scale

- The difference between internal and external growth
- The relative merits of small versus large organisations
- External growth methods: mergers and acquisitions and takeovers
- The role and impact of globalisation on the growth and evolution of businesses
- Reasons for the growth of multinational businesses (MNCs)
- The impact of MNCs on host countries

1.7 Organisational planning tools (HL only) (30 Minutes)

- Fishbone diagram
- Decision tree
- Force-field analysis
- Gantt chart
- The value to an organisation of these planning tools

UNIT 2: HUMAN RESOURCE MANAGEMENT

2.1 Functions and evolution of human resource management (30 Minutes)

- Human resource planning
- Common steps in the processes of dismissal and redundancy
- Labour turnover
- Common steps in the process of recruitment
- Types of training: on-the-job; off-the-job; cognitive; behavioural
- Types of appraisal: formative; summative; 360-degree feedback; self-appraisal
- How work patterns, practices and preferences change

- Internal and external factors that influence human resource planning
- Outsourcing, offshoring and re-shoring as human resource strategies
- How innovation, ethical considerations and cultural differences may influence human resource practices and strategies

2.2 Organisational structure (45 Minutes)

- Important terminology to facilitate understanding of different types of organisational structures
- Different types of organisational charts
- Changes in organisational structures
- How cultural differences and innovation in communication technologies may impact on communication in an organisation
- Different types of organisational charts

2.3 Leadership and management (45 Minutes)

- The key functions of management
- Differentiate between management and leadership
- Different leadership styles
- How ethical considerations and cultural differences may influence leadership styles

2.4 Motivation (45 Minutes)

- Different types of financial rewards
- Different types of non-financial rewards
- How financial and non-financial rewards may affect job satisfaction, motivation and productivity in different cultures
- The motivation theories of Taylor, Maslow, Herzberg, Adams and Pink

2.5 Organisational (corporate) culture (HL only) (30 Minutes)

- The meaning of organisational culture
- Elements of organisational culture
- Types of organisational culture
- The reasons for and consequences of cultural clashes
- How individuals influence organisational culture and how organisational culture influences individuals

2.6 Industrial/employee relations (HL only) (30 Minutes)

- The role and responsibility of employee and employer representatives
- Sources of conflict in the workplace
- Reasons for employee resistance to change
- Different industrial/employee relations methods
- Different approaches to conflict resolution
- Human resource strategies for reducing the impact of and resistance to change
- How innovation, ethical considerations and cultural differences may influence employer–employee relations

UNIT 3: FINANCE AND ACCOUNTS

3.1 Sources of finance (30 Minutes)

- Short-, medium- and long-term finance
- Role of finance for businesses: capital expenditure; revenue expenditure
- Internal sources of finance
- External sources of finance
- The appropriateness of sources of finance for a given situation

3.2 Costs and revenues (30 Minutes)

- Different types of costs
- Total revenue and revenue streams

3.3 Break-even analysis (45 Minutes)

- Total contribution and contribution per unit
- Break-even charts and break-even analysis
- The effects of changes in prices and costs on break-even
- The benefits and limitations of break-even analysis
- Break-even charts, break-even point, profit, margin of safety, target: profit, output, price
- The effects of changes in prices and costs on break-even

3.4 Final accounts (some HL only) (1 Hour)

- Final accounts: profit and loss account and balance sheet
- Depreciation methods: straight line and reducing balance (HL only)
- Strengths and weaknesses of each depreciation method (HL only)

- The purpose of accounts to different stakeholders
- The principles and ethics of accounting practice
- Final accounts: profit and loss account and balance sheet
- Depreciation methods

3.5 Profitability and liquidity ratio analysis (45 Minutes)

- Gross profit margin
- Net profit margin
- Return on capital employed (ROCE)
- Current ratio
- Acid test ratio
- Strategies to improve these ratios

3.6 Efficiency ratio analysis (HL only) (45 Minutes)

- Efficiency ratios: – Inventory/stock turnover – Debtor days – Creditor days – Gearing ratio
- Possible strategies to improve these ratios

3.7 Cash flow (45 Minutes)

- The difference between profit and cash flow
- The working capital cycle
- Cash flow forecasts and make calculations to amend them
- The relationship between investment, profit and cash flow
- Strategies for dealing with cash flow problems
- Reducing cash outflows
- Improving cash inflows
- Additional finance

3.8 Investment appraisal (some HL only) (45 Minutes)

- Investment opportunities using payback and average rate of return (ARR)
- Investment opportunities using net present value

3.9 Budgeting (HL only) (45 Minutes)

- The difference between cost centres and profit centres
- The importance of budgets for organisations

- The roles of cost centres and profit centres
- Variances
- The role of budgets and variances in strategic planning
- Variances from budgets

UNIT 4: MARKETING

4.1 The role of marketing (45 Minutes)

- Marketing and its relationship with other business functions
- Characteristics of the market in which an organisation operates
- The difference between marketing of goods and marketing of services
- Market orientation against product orientation
- The difference between commercial marketing and social marketing
- The importance of market share and market leadership
- Marketing objectives of for-profit and not-for-profit organisations
- How marketing strategies evolve in response to changes in consumer preferences
- How innovation, ethical considerations and cultural differences may influence marketing practices and strategies
- Market share

4.2 Marketing planning (45 Minutes)

- The elements of a marketing plan
- The role of marketing planning
- The four Ps of the marketing mix
- An appropriate marketing mix for a particular product or business
- The difference between target markets and market segments
- The difference between niche market and mass market
- How organisations target and segment their market and create consumer profiles
- A product position map
- The importance of having a unique selling point (USP)
- The effectiveness of a marketing mix in achieving marketing objectives
- How organisations can differentiate themselves and their products from competitors

- An appropriate marketing mix for a particular product or business
- Possible target markets and market segments

4.3 Sales forecasting (HL only) (30 Minutes)

- Calculation and completion of moving averages using given data as an important technique of sales forecasting
- Benefits and limitations of sales forecasting

4.4 Market research (45 Minutes)

- The reasons why organisations carry out market research
- Methods and techniques of primary market research
- Methods of secondary market research
- The differences between qualitative and quantitative market research
- Different methods of sampling
- The results from data collection
- The ethical considerations of market research

4.5 The four Ps – product, price, promotion and place (1 Hour)

- Product: The relationship between the product life cycle and the marketing mix
- Product: The relationship between the product life cycle, investment, profit and cash flow
- Product: Aspects of branding: awareness, development, loyalty and value
- Promotion: Aspects of promotion: above and below the line; promotional mix
- Place: The importance of place in the marketing mix
- Product: Extension strategies to the product life cycle
- Product: Boston Consulting Group matrix (BCG matrix)
- Product: The importance of branding
- Product: The importance of packaging
- Price: The appropriateness of pricing strategies: cost-plus (mark-up); penetration; skimming; psychological, loss leader; price discrimination; price leadership; predatory
- Promotion: The impact of changing technology on promotional strategies
- Promotion: Guerrilla marketing and its effectiveness
- Place: The effectiveness of different types of distribution channels
- Product: Product life cycle

- Product: Boston Consulting Group matrix

4.6 The extended marketing mix of seven Ps (HL only) (45 Minutes)

- The seven Ps model in a service-based market
- The importance of people and employee– customer relationships in marketing
- The importance of delivery processes in marketing
- The importance of tangible physical evidence in marketing

4.7 International marketing (HL only) (30 Minutes)

- Methods of entry into international markets
- Opportunities and threats posed by entry into international markets
- Strategic and operational implications of international marketing
- Role of cultural differences in international marketing
- Implications of globalisation on international marketing

4.8 E-commerce (30 Minutes)

- The features of e-commerce
- The effects of changing technology and e-commerce on the marketing mix
- The difference between different types of e-commerce: B2B; B2C; C2C
- The costs and benefits of e-commerce to firms and consumers

UNIT 5: OPERATIONS MANAGEMENT

5.1 The role of operations management (30 Minutes)

- Operations management and its relationship with other business functions
- Operations management in organisations producing goods and services
- Operations management strategies and practices for ecological, social and economic sustainability

5.2 Production methods (45 Minutes)

- Job/customised production
- Batch production
- Mass/flow/process production
- Cellular manufacturing
- The most appropriate methods of production for a given situation

5.3 Lean production and quality management (HL only) (45 Minutes)

- Features of lean production: less waste, greater efficiency
- Features of quality control and quality assurance
- Features of cradle-to-cradle design and manufacturing
- The importance of national and international quality standards
- Methods of lean production: – continuous improvement (kaizen) – just-in-time (JIT) – kanban – andon
- Methods of managing quality: – quality circle – benchmarking – total quality management (TQM)
- The impact of lean production and TQM on an organisation

5.4 Location (30 Minutes)

- The reasons for a specific location of production
- Ways of reorganising production, nationally and internationally: – Outsourcing/subcontracting – Offshoring – Insourcing

5.5 Production planning (HL only) (45 Minutes)

- The supply chain process
- The difference between JIT and just-in-case (JIC)
- Stock control charts based on the following: – lead time – buffer stock – re-order level – re-order quantity
- Capacity utilisation rate
- Productivity rate
- Cost to buy (CTB)
- Cost to make (CTM)

5.6 Research and development (HL only) (45 Minutes)

- The importance of developing goods and services that address customers' unmet needs
- Distinctions between product, process, positioning and paradigm innovations
- The difference between adaptive creativity and innovative creativity
- The importance of research and development for a business
- How different factors influence the research and development strategies in an organisation

5.7 Crisis management and contingency planning (HL only) (30 Minutes)

- The difference between crisis management and contingency planning

- Factors that affect effective crisis management
- Advantages and disadvantages of contingency planning

25 Hours of **Biology (HL)**

Please note that you can choose to do these in any order and the timings are guidelines based on the recommended teaching hours. Adjust this based on your strengths and weaknesses.

Cell biology- 2 Hours

- Keyword definitions
- Make notecards comparing animal, plant and bacterial cells
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (drawing cells and the stages of mitosis/meiosis, identifying cells and their organelles from microscope images, calculating magnification, analysing the Davson-Danielli model, estimating osmolarity, identifying the stages of mitosis from microscope images and calculating mitotic index)
- Answer past paper questions

Molecular biology and Metabolism- 3 Hours

- Keyword definitions
- Make notecards comparing the different organic molecules (fats, carbohydrates, proteins and DNA) and the different key metabolic processes: cellular respiration and photosynthesis
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (drawing ribose, amino acids, glycerol, fatty acids and glucose, then joining these monomers together in a condensation reaction, determine BMI, use molecular visualisation software to compare cellulose, starch and glycogen, design an experiment to investigate one variable on the rate of reaction of an enzyme controlled reaction, deduce the genetic code from codons, analyse the Meselson Stahl experiment, deduce the mRNA code, draw an absorption and action spectrum, design an experiment to investigate a limiting factor for photosynthesis, chromatography to separate chlorophyll pigments and analyse results from a respirometer experiment)
- Answer past paper questions

Genetics - 2 Hours

- Keyword definitions
- Make notecards to show nucleic acids, transcription and translation, a dihybrid test cross and information on the different genetic diseases
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (drawing genetic crosses, meiosis and a nucleotide, database analysis of differences in base sequences between species and identifying gene locuses, analysis of pedigree charts)
- Answer past paper questions

Ecology- 1.5 Hours

- Keyword definitions

- Make notecards to show the transfer of energy in an ecosystem and the carbon cycle
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (calculating chi-squared, interpreting statistical significance, drawing the carbon cycle, analysing data)
- Answer past paper questions

Evolution and Biodiversity- 1.5 Hours

- Keyword definitions
- Make notecards about the different evidences supporting the theory of evolution and the different characteristics of animal and plant phyla as well as the different aspects of plant biology
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (drawing dichotomous keys and analysing cladograms)
- Answer past paper questions

Human Physiology- 3 Hours

- Keyword definitions
- Make notecards showing the organs in each system covered (digestive, blood, nervous, immune, gas exchange, reproduction, hormones and homeostasis) in the syllabus
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (drawing and labelling the digestive system, reproductive systems and the heart, monitoring ventilation in humans, analysing action potential graphs and
- Answer past paper questions

Nucleic Acids HL – 1.5 Hours

- Keyword definitions
- Make notecards explaining the process of transcription and translation, including all of the enzymes involved
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (analysing the Hershey Cashe experiment, using molecular visualisation technology, analysing methylation patterns and identifying polysomes)
- Answer past paper questions

Metabolism, Cell Respiration and Photosynthesis HL - 2 Hours

- Keyword definitions
- Make notecards about factors affecting enzyme activity, stages of respiration and stages of photosynthesis.
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (Calculating rate of reaction, identifying types of enzyme inhibition from graphs, annotate a mitochondria and chloroplast and, analyse respiration pathways)
- Answer past paper questions

Plant Biology HL – 1 Hours

- Keyword definitions
- Make notecards about the structure of a plant, the processes of transpiration and translocation, and growth and reproduction in plants.
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (Draw the xylem and phloem from microscope images, design an experiment to investigate transpiration, analyse data from experiments, draw the structure of a seed and pollinating flowers, design an experiment to investigate germination)
- Answer past paper questions

Genetics and Evolution HL – 1.5 Hours

- Keyword definitions
- Make notecards about the process of meiosis, sex linkage and gene pools and speciation.
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (Draw chiasmata and crossing over, calculate genotypes and phenotypes, identify recombinants, calculate chi-squared and calculate allele frequencies)
- Answer past paper questions

Animal Physiology HL - 2 Hours

- Keyword definitions
- Make notecards about how the immune system responds to infection and vaccinations, muscle structure and the sliding filament model, structure of the kidney and osmoregulation, and sexual reproduction in humans.
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (Analyse epidemiological data, draw and label a sarcomere, draw and label a human elbow, draw and label a kidney and the nephron, draw and label a seminiferous tubule, ovary, mature egg and sperm)
- Answer past paper questions

Option D HL- 3 Hours

- Keyword definitions
- Make notecards about essential nutrients and deficiency diseases, structure and role of the digestive system, structure and role of the liver, structure and control of the heart beat, role of hormones and how they control metabolism in humans and the transport of respiratory gases and the Bohr effect.
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (determine the energy content of food, identify endocrine and exocrine glands, interpretation of an ECG and calculate heart rate from a graph, evaluate epidemiological data, analyse an oxygen dissociation curve and identify pneumocytes, capillary endothelium cells and blood cells from a light microscope)
- Answer past paper questions

Key practical skills - 1 Hours

- Keyword definitions
- Practise skills, such as calculating magnification and drawing from a microscope, and familiarise yourself with the [seven prescribed practicals](#)
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (drawing)
- Answer past paper 3 questions

Notes:

- All key definitions are in the files section in TEAMS, as well as a link to the website in the sites along the top where you can test yourself using Quizlet.
- Past paper questions and mark schemes will be uploaded into the folder on TEAMS. Attempt the questions independently first then refer to the mark schemes to fill in any gaps.
- The prompt questions will be emailed to you. Feel free to print them out.
- The list of all the IB Biology skills will also be added to TEAMS. Pick out the ones you are less confident with to practise.

Useful links:

<http://ib.bioninja.com.au/>

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<https://www.thinkib.net/biology>

[Bioknowledgy](#)

[Khan Academy](#)

Kognity

For prescribed practicals: <https://www.thinkib.net/biology/page/17179/practical-scheme-of-work>

25 Hours of **Biology (SL)**

Please note that you can choose to do these in any order and the timings are guidelines based on the recommended teaching hours. Adjust this based on your strengths and weaknesses

Cell biology- 4 Hours

- Keyword definitions: make notecards comparing animal, plant and bacterial cells
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (drawing cells and the stages of mitosis/meiosis, identifying cells and their organelles from microscope images, calculating magnification, analysing the Davson-Danielli model, estimating osmolarity, identifying the stages of mitosis from microscope images and calculating mitotic index)
- Answer past paper questions

• **Molecular biology and Metabolism- 4 Hours**

- Keyword definitions
- Make notecards comparing the different organic molecules (fats, carbohydrates, proteins and DNA) and the different key metabolic processes: cellular respiration and photosynthesis
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (drawing ribose, amino acids, glycerol, fatty acids and glucose, then joining these monomers together in a condensation reaction, determine BMI, use molecular visualisation software to compare cellulose, starch and glycogen, design an experiment to investigate one variable on the rate of reaction of an enzyme controlled reaction, deduce the genetic code from codons, analyse the Meselson Stahl experiment, deduce the mRNA code, draw an absorption and action spectrum, design an experiment to investigate a limiting factor for photosynthesis, chromatography to separate chlorophyll pigments and analyse results from a respirometer experiment)
- Answer past paper questions

• **Genetics - 3 Hours**

- Keyword definitions
- Make notecards to show nucleic acids, transcription and translation, a dihybrid test cross and information on the different genetic diseases
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (drawing genetic crosses, meiosis and a nucleotide, database analysis of differences in base sequences between species and identifying gene locuses, analysis of pedigree charts)
- Answer past paper questions

• **Ecology- 2.5 Hours**

- Keyword definitions
- Make notecards to show the transfer of energy in an ecosystem and the carbon cycle
- Use prompt questions to revise all understandings, applications and skills

- Practise key skills (calculating chi-squared, interpreting statistical significance, drawing the carbon cycle, analysing data)
- Answer past paper questions
- **Evolution and Biodiversity**- 2.5 Hours
- Keyword definitions
- Make notecards about the different evidences supporting the theory of evolution and the different characteristics of animal and plant phyla as well as the different aspects of plant biology
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (drawing dichotomous keys and analysing cladograms)
- Answer past paper questions

- **Human Physiology**- 4 Hours
- Keyword definitions
- Make notecards showing the organs in each system covered (digestive, blood, nervous, immune, gas exchange, reproduction, hormones and homeostasis) in the syllabus
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (drawing and labelling the digestive system, reproductive systems and the heart, monitoring ventilation in humans, analysing action potential graphs and
- Answer past paper questions

- **Option D** - 4 Hours
- Keyword definitions
- Make notecards about essential nutrients and deficiency diseases, structure and role of the digestive system, structure and role of the liver and structure and control of the heart beat.
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (determine the energy content of food, identify endocrine and exocrine glands, interpretation of an ECG and calculate heart rate from a graph, evaluate epidemiological data, analyse an oxygen dissociation curve and identify pneumocytes, capillary endothelium cells and blood cells from a light microscope)
- Answer past paper questions

- **Key practical skills** - 2 Hours
- Keyword definitions
- Practise skills, such as calculating magnification and drawing from a microscope, and familiarise yourself with the [seven prescribed practicals](#)
- Use prompt questions to revise all understandings, applications and skills
- Practise key skills (drawing)
- Answer past paper 3 questions

- **Notes:**
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Kognity

For prescribed practicals: <https://www.thinkib.net/biology/page/17179/practical-scheme-of-work>

25 Hours of **Chemistry (HL)**

Without wanting to sound like a broken record you need to learn from your mistakes - that means that simply making notes upon notes upon notes about each topic is simply not going to cut it. Therefore, I would suggest the following approach to your revision of the chemistry syllabus:

- Look over your past assessments from end of topic, quimestres and mocks (you may well have these), your exam analysis documents may help you here.
- **Identify mistakes that you have made previously.**
- Look at similarities between questions on the past papers you look at, does anything come up on multiple papers?
- What are the **key phrases** and structures of the exam answers that you see in the mark schemes?
- Watch other people solving practice problems since that will be useful to understand how to approach some problems.
- **Find your own approach!** Sometimes we tend to copy the solution without understanding it, so make sure you find your own path to solve the problems.
- **Reinforce your math background!** It is important for you to be proficient using the following math concepts: basic math operations, basic algebra (simplification), **rule of 3**, laws of exponents laws of logarithms, scientific notation, and significant figures.
- **Quiz yourself!** Try to replicate the exam environment in your house, since that will help you to practice your time management and work under pressure.

45 Minute Revision Session

- 5 minutes - write down as much as you can remember about the topic you have chosen (NO NOTES OR INTERNET) OR try some exam questions on your chosen topic.
 - 5 minutes - Check over what you have written down, have you made any mistakes? What have you forgotten?
 - 20 minutes - Use internet resources and textbooks (you can find links here and on the chemistry suggestion sheet on Managebac) to teach yourself the bits you got wrong or forgot. *Here are some useful resources:*
 - <https://www.smashingscience.org/ib-chemistry-hl-sl> - **Past papers by topic**
 - Richard Thornley – **YouTube channel**
 - The Organic Chemistry Tutor – **YouTube channel**
 - Khan Academy – **Videos per topic**
 - 10 minutes - Try some past paper questions (or the same ones as you started with - but from scratch)
 - 5 minutes - mark your questions using the mark scheme.
1. **Stoichiometric Relationships** (Topic 1) **2 hrs**
- a Introduction to chemical change

- b The mole concept
- c Reacting masses and volumes
- 2. **Atomic Structure** (Topics 2 and 12) 1.5 hrs
 - a The nuclear atom
 - b Electron configuration
 - c Electrons in atoms
- 3. **Periodicity** (Topic 3 and 13) 1.5 hrs
 - a Periodic table
 - b Periodic trends
 - c First-row d-block elements
 - d Coloured complexes
- 4. **Chemical bonding and structure** (Topics 4 and 14) 3 hrs
 - a Ionic bonding and structure
 - b Covalent bonding
 - c Covalent structures
 - d Intermolecular forces
 - e Metallic bonding
 - f Further aspects of covalent bonding and structure
 - g Hybridization
- 5. **Energetics/thermochemistry** (Topics 5 and 15) 1.5 hrs
 - a Measuring energy changes
 - b Hess's Law
 - c Bond enthalpies
 - d Energy cycles
 - e Entropy and spontaneity
- 6. **Chemical kinetics** (Topics 6 and 16) 2 hrs
 - a Collision theory and rates of reaction
 - b Rate expression and reaction mechanism
 - c Activation energy
- 7. **Equilibrium** (Topics 7 and 17) 1 hrs
 - a Factors influencing equilibrium.
 - b The equilibrium law
 - c Equilibrium and Gibbs free energy
- 8. **Acids and Bases** (Topics 8 and 18) 2 hrs
 - a Theories of acids and bases
 - b Properties of acids and bases
 - c The pH scale
 - d Strong and weak acids and bases
 - e Acid deposition
 - f Lewis acids and bases
 - g Calculations involving acids and bases
 - h pH curves
- 9. **Redox processes** (Topics 9 and 19) 2 hrs
 - a Oxidation and reduction

- b Ion-electron for balancing equations
- c Electrochemical cells
- d Further concepts on electrochemistry

10. Organic chemistry (Topics 10 and 20) **3.5 hrs**

- a Basic nomenclature
- b Functional groups chemistry
- c Further aspects and mechanisms of organic reactions
- d Synthetic routes
- e Stereoisomerism

11. Measurement and data processing (Topics 11 and 21) **2 hrs**

- a Uncertainties and errors in measurement and results
- b Graphical techniques
- c Fundamentals of spectroscopic techniques to identify organic compounds.
- d NMR further concepts

12. Option Topic (Just one of the options) **3 hrs**

25 Hours of **Chemistry (SL)**

Without wanting to sound like a broken record you need to learn from your mistakes - that means that simply making notes upon notes upon notes about each topic is simply not going to cut it. Therefore, I would suggest the following approach to your revision of the chemistry syllabus:

- Look over your past assessments from end of topic, quimestres and mocks (you may well have these), your exam analysis documents may help you here.
- **Identify mistakes that you have made previously.**
- Look at similarities between questions on the past papers you look at, does anything come up on multiple papers?
- What are the **key phrases** and structures of the exam answers that you see in the mark schemes?
- Watch other people solving practice problems since that will be useful to understand how to approach some problems.
- **Find your own approach!** Sometimes we tend to copy the solution without understanding it, so make sure you find your own path to solve the problems.
- **Reinforce your math background!** It is important for you to be proficient using the following math concepts: basic math operations, basic algebra (simplification), **rule of 3**, laws of exponents laws of logarithms, scientific notation, and significant figures.
- **Quiz yourself!** Try to replicate the exam environment in your house, since that will help you to practice your time management and work under pressure.

45 Minute Revision Session

- 5 minutes - write down as much as you can remember about the topic you have chosen (NO NOTES OR INTERNET) OR try some exam questions on your chosen topic.

- 5 minutes - Check over what you have written down, have you made any mistakes? What have you forgotten?
- 20 minutes - Use internet resources and textbooks (you can find links here and on the chemistry suggestion sheet on Managebac) to teach yourself the bits you got wrong or forgot. *Here are some useful resources:*
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- 10 minutes - Try some past paper questions (or the same ones as you started with - but from scratch)
- 5 minutes - mark your questions using the mark scheme.

- 1. Stoichiometric Relationships** (Topic 1) **3 hrs**
 - Introduction to chemical change
 - The mole concept
 - Reacting masses and volumes
- 2. Atomic Structure** (Topics 2 and 12) **2 hrs**
 - The nuclear atom
 - Electron configuration
- 3. Periodicity** (Topic 3 and 13) **1 hrs**
 - Periodic table
 - Periodic trends
- 4. Chemical bonding and structure** (Topics 4 and 14) **2 hrs**
 - Ionic bonding and structure
 - Covalent bonding
 - Covalent structures
 - Intermolecular forces
 - Metallic bonding
- 5. Energetics/thermochemistry** (Topics 5 and 15) **2 hrs**
 - Measuring energy changes
 - Hess's Law
 - Bond enthalpies
- 6. Chemical kinetics** (Topics 6 and 16) **2 hrs**
 - Collision theory and rates of reaction
- 7. Equilibrium** (Topics 7 and 17) **1 hrs**
 - Equilibrium main concepts
 - Factors influencing equilibrium
- 8. Acids and Bases** (Topics 8 and 18) **2 hrs**
 - Theories of acids and bases
 - Properties of acids and bases
 - The pH scale
 - Strong and weak acids and bases
 - Acid deposition

- 9. Redox processes** (Topics 9 and 19) **2 hrs**
- a Oxidation and reduction
 - b Ion-electron for balancing equations
 - c Electrochemical cells
- 10. Organic chemistry** (Topics 10 and 20) **3 hrs**
- a Fundamentals of organic chemistry (nomenclature and functional groups)
 - b Functional groups chemistry
- 11. Measurement and data processing** (Topics 11 and 21) **2 hrs**
- a Uncertainties and errors in measurement and results
 - b Graphical techniques
 - c Fundamentals of spectroscopic techniques to identify organic compounds.
- 12. Option Topic** (Just one of the options) **3 hrs**

25 Hours of **Physics (HL)**

- ★ For each of the topics listed below, take the time to learn the **definitions** of the terms within the unit - flashcards are a useful tool for this.
- ★ Make sure you understand the **key words from questions**, and know what is required to get full marks for minimum time (i.e., show that, explain etc).
- ★ Learn the **units** and **symbols** for each of the topics and practise questions using the equations from the section in your formula booklet.
- ★ Where appropriate practise questions involving **uncertainties**.
- ★ Use the learning outcomes to identify the main areas you need to work on.
- ★ Practise past papers in different ways, making sure to highlight or underline key information in the questions - a) complete a timed paper and mark from the mark scheme, highlighting errors b) Work through a past paper using all of your resources and then mark c) Pick questions from the topics that you need the most practise with and work through them, using all of the resources you have.
- ★ Practise drawing graphs - Label axes, scales (1,2,5,10), plots & line, and gradient calculations.

The best way to study for physics is doing the past papers, compare your responses to the mark scheme. You have May and June exams of 2 different time zones, select any exam from 2022 (if you find, if not from 2021) up to 2013. That is 36 paper 1, 36 paper 2 and 36 paper 3.

Find question banks with ib questions separated into the different topics.

1. **Topic 1 Measurements & Uncertainties**- 1 Hour
 - Learn the key definitions
 - Uncertainties and errors
 - Vectors and scalars
2. **Options Topic** – Astrophysics and cosmology 1 hour
 - Learn the key definitions
 - Go over past papers and look at previous errors
3. **Practice Paper 3a** – 2 hours
 - Work through the paper timed
 - Mark the paper from the markscheme and review errors
 - Review notes on the topics from the errors

4. **Topic 2 Mechanics**- 2 Hours
 Review units and symbols
 - Motion
 - Forces
 - Work, energy, power
 - Momentum and Impulse

5. **Topic 3 – Thermal physics – 0.25 hours**
 - Thermal Concepts
 - Modelling a gas
6. **Topic 4 Oscillations & Waves** - 1 Hours
 - Oscillations
 - Travelling Waves
 - Wave characteristics
 - Wave behaviour
 - Standing waves

7. **Topic 9 Wave Phenomenon – 0.5 hours**
 - Simple Harmonic Motion
 - Single slit diffraction
 - Interference
 - Resolution
 - Doppler effect

8. **Topic 5 Electricity & Magnetism – 0.5 hours**
 - Electric fields
 - Heating effect of electric currents
 - Electric cells
 - Magnetic effects of electric currents

9. **Topic 10 Fields – 0.25 hours**
 - Describing Fields
 - Fields at work

10. **Topic 11 Electromagnetic induction – 0.25 hours**
 - Electromagnetic induction
 - Power generation and transmission
 - Capacitance

12. **Practice paper 2 – 2 hours**

13. **Topic 6 Circular Motion & Gravity** – 0.5 hours
 - Circular motion
 - Newton's Law of Gravitation
14. **Topic 7 Atomic Nuclear & Particle Physics** – 0.5 hour
 - Discrete energy and radioactivity
 - Nuclear reactions
 - The structure of matter
15. **Topic 12 Quantum and Nuclear Physics** – 0.5 hours
 - The interaction of matter with radiation
 - Nuclear physics
16. **Topic 8 Energy Production** – 0.5 hours
 - Energy sources
 - Thermal energy transfer
17. **Practice Paper 1 5 sets** - 5 Hour
18. **Practice paper 2 5 sets** – 5 hours
19. **Practice paper 3 5 sets** – 5 hours

Revision Strategies: DO PAST PAPERS

Make flashcards to learn all definitions by heart
Try practice questions from each topic which also involve uncertainty calculations to help you prepare for paper 3
Use the learning outcomes to help identify the main areas you need to work on

Useful Links and Resources: <https://ibphysics.org/>
<https://studynova.com/>
<https://blog.prepscholar.com/the-best-ib-physics-study-guide-notes-sl-hl> <https://concordian-thailand.libguides.com/c.php?g=688995&p=4870955>
<https://gradedgorilla.com/IB-physics-revision-questions.php>

25 Hours of **Physics (SL)**

1. **Topic 1 Measurements & Uncertainties**- 0.5 Hours

- Measurements in physics
- Uncertainties and errors
- Vectors and scalars

2. **Astrophysics (Options Topic)** – 0.5 hours

- Stellar quantities
- Stellar characteristics and stellar evolution
- Cosmology

3. **Practice Paper 3a** –0.25 hours

4. **Topic 2 Mechanics**- 1 Hours

- Motion
- Forces
- Work, energy, power
- Momentum and Impulse

5. **Topic 3 – Thermal physics – 0.25 hours**

- Thermal Concepts
- Modelling a gas

6. **Topic 4 Oscillations & Waves – 1 Hours**

- Oscillations
- Travelling Waves
- Wave characteristics
- Wave behaviour
- Standing waves

7. **Topic 5 Electricity & Magnetism – 1 hours**

- Electric fields
- Heating effect of electric currents
- Electric cells
- Magnetic effects of electric currents

8. **Practice paper 1a** – 0.25hours

9. **Practice paper 2a** – 0.25 hours

10. **Topic 6 Circular Motion & Gravity** – 0.25 hours
 - Circular motion
 - Newton's Law of Gravitation

11. **Topic 7 Atomic Nuclear & Particle Physics** – 0.5 hours
 - Discrete energy and radioactivity
 - Nuclear reactions
 - The structure of matter
12. **Topic 8 Energy Production** – 0.5 hour
 - Energy sources
 - Thermal energy transfer

13. **Practice Paper 1b** - 5 Hour

14. **Practice paper 2b** – 5 hours

15. **Practice paper 3b** – 5 hours

Revision Strategies: DO PAST PAPERS

Make flashcards to learn all definitions by heart

Try practice questions from each topic which also involve uncertainty calculations to help you prepare for paper 3

Use the learning outcomes to help identify the main areas you need to work on

Useful Links and Resources: <https://ibphysics.org/>

<https://studynova.com/>

<https://blog.prepscholar.com/the-best-ib-physics-study-guide-notes-sl-hl>

<https://concordian-thailand.libguides.com/c.php?g=688995&p=4870955>

<https://gradedgorilla.com/IB-physics-revision-questions.php>

25 hours ESS

Hi guys;

Hopefully you'll recognise that these are the topic titles and core concepts from the ESS course companion book. Please make sure to borrow one from the library. My advice would be to make sure you have a good set of revision notes for each topic – try to reduce each one to no more than a page of key points, test yourself on these points and make sure you have the key concepts and definitions.

The exam is **not** about recalling this information but more about applying it. Go through the past papers we have already covered. Write your own compilation tests and re-test yourselves. Practice extracting and analysing information in graphs and tables by looking back through the examination resource booklets you've been given.

Foundations of environmental systems and societies (2 hrs note-taking)

- Environmental value systems
- Systems and models
- Energy & equilibria
- Sustainability
- Humans and pollution

Ecosystems and ecology (2 hrs note-taking)

- Species and populations
- Communities and ecosystems
- Flows of energy and matter
- Biomes, zonation and succession
- Investigating ecosystems

Biodiversity and conservation (2 hrs note-taking)

- An introduction to biodiversity
- Origins of biodiversity
- Threats to biodiversity
- Conservation of biodiversity

Water, food production systems and society (2 hrs note-taking)

- Introduction to water systems
- Access to freshwater
- Aquatic food production systems
- Water pollution

Soil systems and society (2 hrs note-taking)

- Introduction to soil systems
- Terrestrial food production systems and food choices
- Soil degradation and conservation

Atmospheric systems and society (2 hrs note-taking)

- Introduction to the atmosphere
- Stratospheric ozone
- Photochemical smog
- Acid deposition

Climate change and energy production (2 hrs note-taking)

- Energy choices and security
- Climate change – causes and impacts
- Climate change – mitigation and adaptation

Human systems and resource use (2 hrs note-taking)

- Human population dynamics
- Resource use in society
- Solid domestic waste
- Human systems and resource use

Total note preparation time – 16 hours

Self-testing and past paper revision – 9 hours

Before you depart on study leave, I will upload all the past papers we have covered into our ESS Teams file along with the official answer pages. When you are revising these papers take a look at what the examiners were looking for. Check these answers with your own. If there's a concept or idea you don't understand then refer back to your study notes. I will also add some papers that we have not covered – use these to give yourselves your own practice mocks. I will also supply the answers but don't refer to these until you have had a go on your own first.

Finally, don't forget to have some case studies, protocols, and agreements memorised so that you can refer to them in your essays BUT don't throw them in out of desperation! Read the questions carefully and thoroughly and make sure you stick to answering what you have been asked.

Good luck – may the force be with you!

25 Hours of **Maths AI (HL) (SL)**

Please, have a look to our group in Microsoft Teams as you will find there all the information and support that you will need for these final weeks before the exams:

- All the PowerPoints that we have done during the whole academic year.
- Activities and their solutions.
- Maths books for the IB AI SL including some “students guide” to prepare for the exams.
- Support material such as past papers with the solutions modelled by myself.
- Manuals to use the calculators.
- The solutions for the Revision Booklet that I gave you.

How to use your time in a better way? Revise each topic and focus on the resolution of past papers.

TOPIC 1: 2 hours

- 1 Number and algebra
 - 1.1 Scientific notation
 - 1.2 Arithmetic sequences and series
 - 1.3 Geometric sequences and series
 - 1.4 Financial applications
 - 1.5 Exponents and logarithms
 - 1.6 Approximation
 - 1.7 Amortization and annuity
 - 1.8 Equations and equation systems

TOPIC 2: 4 hours

- 2 Functions
 - 2.1 Straight lines
 - 2.2 Functions
 - 2.3 Graphs of functions
 - 2.4 Key features of graphs
 - 2.5 Introduction to modelling
 - 2.6 Modelling skills

TOPIC 3: 5 hours

3 Geometry and trigonometry

- 3.1 Three-dimensional space
- 3.2 Triangle trigonometry
- 3.3 Applications of trigonometry
- 3.4 Circle
- 3.5 Perpendicular bisector
- 3.6 Voronoi diagrams

TOPIC 4: 8 hours

4 Probability and statistics

- 4.1 Collection of data and sampling
- 4.2 Presentation of data
- 4.3 Measures of central tendency and dispersion
- 4.4 Linear correlation of bivariate data
- 4.5 Probability and expected outcomes
- 4.6 Probability calculations
- 4.7 Discrete random variables
- 4.8 The binomial distribution
- 4.9 The normal distribution and curve
- 4.10 Further linear regression
- 4.11 Hypothesis testing

TOPIC 5: 6 hours

5 Calculus

- 5.1 Introduction to differentiation
- 5.2 Increasing and decreasing functions
- 5.3 Derivatives of power functions
- 5.4 Tangents and normals
- 5.5 Introduction to integration
- 5.6 Stationary points
- 5.7 Optimisation
- 5.8 Area of a region

The most important, in my opinion, is to practice exam questions. In this sense, I will keep giving you past papers and posting the solutions in Microsoft Teams.

25 hours of **Maths AA HL**

I have created a folder in teams named "Maths AAHL revision" that I have sent to you all via email.

Here I have posted and will continue to post resources related to exam style questions. As well as this, the following websites are extremely valuable

- www.kognity.com

- www.revisionvillage.com

There are 5 separate chapters each of which you should dedicate 5 hours of revision time to. For each you should follow the following programme:

- Spend 1 hour looking through your revision notes and the Kognity textbook taking special note of any comments marked as "important" in the textbook and any instructions related to how to use your GDC. Make sure to make a list in the back of your book of instructions for any calculations on your GDC listed with each chapter below.
- Spend 30 minutes attempting 40 marks worth of exam questions from the maths AAHL revision folder for paper 1 questions.
- Spend a further 30 minutes going through solutions to these questions and marking down any topic areas you need to work on.
- Go back to your notes and revise what you gave listed as "needed to work on" for a further 30 minutes.
- Repeat the last 3 steps for paper 2 questions found in the Maths AAHL revision folder.

Overall this leaves you with 2 hours of revision time. 1 hour of this should be dedicated to practicing and marking the past paper 3 in the Maths AAHL Revision folder. This then leaves one hour to revise what you still feel you need to work on from the above revision.

The following are the chapters and topics you will need to revise:

1. Number and Algebra

- 1 Number and algebra
 - 1.1 Scientific notation
 - 1.2 Arithmetic sequences and series
 - 1.3 Geometric sequences and series
 - 1.4 Financial applications
 - 1.5 Exponents and logarithms
 - 1.6 Deduction
 - 1.7 Further exponents and logarithms
 - 1.8 Sum of infinite geometric sequences
 - 1.9 The binomial theorem
 - 1.10 Counting principles and the generalised binomial theorem
 - 1.11 Partial fractions
 - 1.12 Introduction to complex numbers
 - 1.13 Complex numbers in polar and Euler forms
 - 1.14 Powers and roots of complex numbers
 - 1.15 Proof
 - 1.16 Systems of linear equations

2. Functions

- 2 Functions
 - 2.1 Straight lines
 - 2.2 Functions
 - 2.3 Graphs of functions
 - 2.4 Key features of graphs
 - 2.5 Composite and inverse functions
 - 2.6 Quadratic functions
 - 2.7 Quadratic equations and quadratic inequalities
 - 2.8 Rational functions
 - 2.9 Exponential functions
 - 2.10 Solving equations
 - 2.11 Transformations of graphs
 - 2.12 Polynomial functions
 - 2.13 Further rational functions
 - 2.14 Odd and even functions
 - 2.15 Solving inequalities
 - 2.16 Further graph transformations

3. Geometry

- 3 Geometry and trigonometry
 - 3.1 Three-dimensional space
 - 3.2 Triangle trigonometry
 - 3.3 Applications of trigonometry
 - 3.4 The circle
 - 3.5 Trigonometric ratios beyond acute angles
 - 3.6 Trigonometric identities
 - 3.7 Circular functions
 - 3.8 Trigonometric equations
 - 3.9 Reciprocal trigonometric ratios and inverse trigonometric functions
 - 3.10 Trigonometric identities revisited
 - 3.11 Further circular functions
 - 3.12 Vectors
 - 3.13 Scalar product
 - 3.14 Lines in two and three dimensions
 - 3.15 Relative positions of lines
 - 3.16 Vector product
 - 3.17 Vector equations of a plane
 - 3.18 Intersections and angles between lines and planes

4. Statistics

- 4 Probability and statistics
 - 4.1 Collection of data and sampling
 - 4.2 Presentation of data
 - 4.3 Measures of central tendency and dispersion
 - 4.4 Linear correlation of bivariate data
 - 4.5 Probability and expected outcomes
 - 4.6 Probability calculations
 - 4.7 Discrete random variables
 - 4.8 The binomial distribution
 - 4.9 The normal distribution and curve
 - 4.10 Further linear regression
 - 4.11 Conditional probability and independence
 - 4.12 The standard normal distribution
 - 4.13 Bayes' theorem
 - 4.14 Continuous random variables

5. Calculus

- 5 Calculus
 - 5.1 Introduction to differentiation
 - 5.2 Increasing and decreasing functions
 - 5.3 Derivatives of power functions
 - 5.4 Tangents and normals
 - 5.5 Introduction to integration
 - 5.6 Differentiation rules
 - 5.7 Further graph properties
 - 5.8 Optimisation
 - 5.9 Kinematics
 - 5.10 Indefinite integrals
 - 5.11 Definite integrals
 - 5.12 Limits and continuity
 - 5.13 Limits of indeterminate forms
 - 5.14 Applications of differentiation
 - 5.15 Further differentiation
 - 5.16 Further integration
 - 5.17 Area and volume
 - 5.18 Differential equations
 - 5.19 Maclaurin series expansions

25 hours of **Maths AA SL**

I have created a folder in teams named "Maths AASL revision" that I have sent to you all via email.

Here I have posted and will continue to post resources related to exam style questions. As well as this, the following websites are extremely valuable

- www.kognity.com

- www.revisionvillage.com

There are 5 separate chapters each of which you should dedicate 5 hours of revision time to. For each you should follow the following programme:

- Spend 1 hour looking through your revision notes and the Kognity textbook taking special note of any comments marked as "important" in the textbook and any instructions related to how to use your GDC. Make sure to make a list in the back of your book of instructions for any calculations on your GDC listed with each chapter below.

- Spend 30 minutes attempting 40 marks worth of exam questions from the maths AASL revision folder for paper 1 questions.

- Spend a further 30 minutes going through solutions to these questions and marking down any topic areas you need to work on.

- Go back to your notes and revise what you gave listed as "needed to work on" for a further 30 minutes.

- Repeat the last 3 steps for paper 2 questions found in the Maths AASL revision folder.

Overall, this leaves you with 2 hours of revision time. 1 hour of this should be dedicated to practicing and marking the past paper 3 in the Maths AAHL Revision folder. This then leaves one hour to revise what you still feel you need to work on from the above revision.

The following are the chapters and topics you will need to revise:

1. Number and Algebra

- 1 Number and algebra
 - 1.1 Scientific notation
 - 1.2 Arithmetic sequences and series
 - 1.3 Geometric sequences and series
 - 1.4 Financial applications
 - 1.5 Exponents and logarithms
 - 1.6 Deduction
 - 1.7 Further exponents and logarithms
 - 1.8 Sum of infinite geometric sequences
 - 1.9 The binomial theorem

2. Functions

- 2 Functions
 - 2.1 Straight lines
 - 2.2 Functions
 - 2.3 Graphs of functions
 - 2.4 Key features of graphs
 - 2.5 Composite and inverse functions
 - 2.6 Quadratic functions
 - 2.7 Quadratic equations and quadratic inequalities
 - 2.8 Rational functions
 - 2.9 Exponential functions
 - 2.10 Solving equations
 - 2.11 Transformation of graphs

3. Geometry

- 3 Geometry and trigonometry
 - 3.1 Three-dimensional space
 - 3.2 Triangle trigonometry
 - 3.3 Applications of trigonometry
 - 3.4 The circle
 - 3.5 Trigonometric ratios beyond acute angles
 - 3.6 Trigonometric identities
 - 3.7 Circular functions
 - 3.8 Trigonometric equations

4. Statistics

- 4 Probability and statistics
 - 4.1 Collection of data and sampling
 - 4.2 Presentation of data
 - 4.3 Measures of central tendency and dispersion
 - 4.4 Linear correlation of bivariate data
 - 4.5 Probability and expected outcomes
 - 4.6 Probability calculations
 - 4.7 Discrete random variables
 - 4.8 The binomial distribution
 - 4.9 The normal distribution and curve
 - 4.10 Further linear regression
 - 4.11 Conditional probability and independence
 - 4.12 The standard normal distribution

5. Calculus

- 5 Calculus
 - 5.1 Introduction to differentiation
 - 5.2 Increasing and decreasing functions
 - 5.3 Derivatives of power functions
 - 5.4 Tangents and normals
 - 5.5 Introduction to integration
 - 5.6 Differentiation rules
 - 5.7 Further graph properties
 - 5.8 Optimisation
 - 5.9 Kinematics
 - 5.10 Indefinite integrals
 - 5.11 Definite integrals

Study Guide: Visual arts (25 hours)

ART EXHIBITION

The final exhibition is the culmination of the students' IB Art experience. Students present a selection of their best work in the form of a curated final show and defend and articulate their purpose and intention in a written rationale.

1. Finishing and selecting work for the Exhibition (14 hours)

Choose the strongest, most resolved artworks which show these qualities:

- technical skills
- appropriate use of materials, techniques, processes
- coherent relationships among the works
- well resolved work in line with stated intentions in rationale. Resolved is the new way of saying completed, but with a different emphasis. Resolved doesn't just mean finished, but signifies work that has been successfully developed to a stage of completion that is ready to show.
- consideration for the overall experience of the viewer (through exhibition, [Methods of Display](#) or presentation).

(note: students can present work for the exhibition in any medium, having met the requirements for the Process Portfolio of working in a range of Art Making Forms)

Number of artworks submitted

HL: 8-11

SL:4-7

2. Exhibition Overview Photos (1 hour)

Students must include two high quality photographs of the overall exhibition. This is to help the moderator (who won't see the actual exhibition) better understand the overall layout and experience.

(Note: only include the exhibition artworks submitted for assessment in the photos, and no people)

3. Documentation of artworks for the exhibition (SL:4 hours, HL: 6 hours)

An examiner sees only the photograph, not the original work, so make sure the documentation is as good as can be.

Once students have completed and selected the works for the exhibition they will need to focus on documenting their work in the best possible way, and make sure to adhere to the formats and files compatible for uploading. This page looks at the key issues in documenting work for E submission for Exhibition.

Accurate "professional" documentation

Take care to photograph work as professionally as possible as this is the only evidence that the moderator will see and distractions such as poor quality, blurry photos, background interference etc will detract from the viewing of the work.

Schedule some time for a proper photoshoot. Photos should be accurate representations of the work, not altered in photoshop, except for adjusting exposure etc.

Files accepted and sizes

Image: JPG, TIF-MAX 5 MB

The maximum size for image files is 5MB, however it is expected that most files will not exceed 3MB.

Video: F4V, M4V, MOV, MP45 minutes/500 MB

4. Curatorial Rationale: (3 hours)

Structuring the Curatorial Rationale:

The Curatorial Rationale explains and supports the final exhibition. It is also a chance to highlight any challenges or discoveries along the way, including why these artworks were chosen, the connections among them, and your decisions around presentation and display.

Word count requirements

SL 400 words max

HL 700 words max

HL students also reflect on the relationship with the viewer and how meaning is communicated through presentation. ([Exhibition Assessment](#))

For some students it is easier to structure the rationale if you divide it into three parts:

4.1 Overview, concepts and ideas

You set the stage, so to speak, introducing us to the exhibition, what it is about and what are the underlying themes or threads.

·What are the concepts, issues or ideas you have explored here and how are they linked in your work?

- What experiences have contributed to the making of this work?
- What artists have influenced you?

4.2 Selection of work

The second paragraph can be a general discussion of the works in the show, or you may choose to list and discuss each piece individually, making connections among them. Maybe there is a particular piece that is pivotal to the rest of the show and you discuss this one in relation to the others.

- What materials and techniques have you used and why did you choose these?
- Do the materials have an impact on the meaning of the work?
- How do you justify your selection of works chosen?

4.3 Arrangement and Viewer relationship

The third part of the rationale can address the arrangement of the artworks (both SL and HL) and, for HL students only, the relationship with the audience and how the curatorial decisions you made may contribute to the viewers response.

- How did you consider the arrangement of the works within the space that you have available?
- Do you have an overall vision for presenting this body of work?
- How does the way the work is displayed, hung, otherwise presented contribute to how it communicates with the viewer? (HL)

5. Exhibition text (SL: 3 hours-6 hours)

For each piece of artwork included in **The Exhibition** students must write a brief exhibition text which states the **title, medium, size, followed by a brief text that supports or explains** your focus/intentions in this piece.

What do we mean by intentions?

The bulk of the student's supporting statement will be in the [Curatorial Rationale](#) but each piece in the exhibition has an accompanying short paragraph that can help the moderator to understand the students intentions or provide important information that might not be readily deducible from the photograph. This can be a short paragraph or a few lines, 500 charactersmax (including spaces) and some pieces will require more information than others. This is also a place to mention particular artists or experiences that directly influenced this piece, or technical details regarding materials and process.

Below is one example of a piece and its' **exhibition text** by student Kamila Salikhbaeva, you can see how helpful the text is in communicating her intentions.



Title: Selling Out

Medium: photographic print with added paper and tape

Size: 200x100cm

Intention The background is a photograph of a wall which was taken by me on the streets of Tashkent. I decided to print it out as a banner to create an imitation of a wall with ads, which

are common in Uzbekistan. Then I added my own ads that say things like “Trading fortune for dignity. Goods cannot be returned” and “We offer Freedom!” which communicate the idea of ‘selling out’ - of emotions, feelings and human qualities. The ads that I made were based on the Seven Deadly Sins described in the Bible, and on life in Uzbekistan.’

6. COMPARATIVE STUDY (check details, grammar and presentation: 5 hours)

-SL 10-15 screens

-HL 10-15 screens + 3-5 screens which analyze the extent to which their work has been influenced by the art and artists examined.

-The screens submitted examine and compare at least three artworks (and 3 is sufficient) at least two of these artworks are by different artists.

-The work selected for comparison should come from contrasting contexts (local, national, international and/or intercultural). Ideally students should see one of the works firsthand. -Acknowledge sources and provide an additional sources page (word doc)

Contents:

-Analysis of the main formal elements of the 3 different artworks.

-Analysis of the function and purpose of 3 different artworks.

-Analysis of the cultural significance of 3 different artworks.

-Comparison of the 3 artworks in relation to visual analysis, cultural significance and function and purpose. -HL: Connection of the artworks with your own work.

7. PROCESS PORTFOLIO (5 hours)

Students submit a given number of screens rather than pages. There is no set specification as to how many words etc. but a balance of visual and written content is desirable. Writing should be clearly legible with fonts not less than 12 pt. Organise screens in a manner that gives the examiner the clearest, most coherent narrative of the development rather than organizing them by criteria.

Although the number of screens differ for HL and SL, the assessment criteria are the same.

Number of screens per level

HL 13-25

SL 9-18

NEWS: PDF max file size allowed is now 50 MB (n.b. large file sizes can sometimes upload very slowly depending on internet connection, which can be frustrating for the examiner... so 20 MB might still be preferable)

An additional screen listing Sources is now required for the Process Portfolio. This page will not affect the number of screens submitted.

25 hours of Music

The course defines musicianship as comprising three, intrinsically connected aspects.

1. Knowledge and understanding of **diverse musical material**
2. Engagement with the **musical processes** of exploring, experimenting and presenting
3. Competencies and skill in the **musical roles** of researchers, creators and performers

The course encourages the acquisition of knowledge and understanding of diverse musical material, and development of musical competencies and related musical skills in the roles of researchers, creators and performers through the practical processes of exploring, experimenting and presenting. Throughout the music course, students at SL and HL:

1. engage with **diverse musical material**
2. understand and practise three **musical processes** • develop skills and competencies in three **musical roles**.

Musical roles		Researcher	Creator	Performer
Musical processes	Exploring music in context (8hr)	▪	▪	▪
	Experimenting with music (8hr)	▪	▪	▪
	Presenting music (9hr)	▪	▪	▪
The contemporary music maker (HL only) (10hr) Students at HL plan and create a music project that is rooted in the learning of the course and inspired by real-life practices of music-making.				

Diverse musical material

This course introduces students to a wide range of music from familiar and unfamiliar contexts that expands their horizons and provides new and exciting musical stimuli for their own work. To achieve this, the course uses a framework of areas of inquiry and contexts. Students broaden their knowledge by engaging with diverse musical material from **personal, local and global contexts**. They develop their musical identities by considering music and its functions in four **areas of inquiry**.

Specific musical works are not prescribed, allowing teachers and students flexibility depending on their background. The course framework is intended to be used creatively to stimulate both students' and teachers' imaginations.

Students will engage with diverse musical material through four areas of inquiry. Through the exploration and inquiry into **personal, local and global contexts**, students engage with both familiar and unfamiliar music.

Areas of inquiry

1. Music for sociocultural and political expression

This area focuses on music that **expresses** and communicates social and cultural messages, conveys political ideas and/or helps preserve social and cultural traditions.

Examples of relevant musical materials may include the following genres.

1. Protest songs
2. Liturgical music
3. National anthems

2. Music for listening and performance

This area focuses on music that expresses and communicates intrinsic aesthetic values. Such music is sometimes referred to as “absolute music”.

Examples of relevant music materials may include the following genres.

1. Chamber music of the Western art tradition
2. Cool jazz
3. Experimental music

3. Music for dramatic impact, movement and entertainment

This area focuses on music used for dramatic effect, music that supports choreographed movement or dance and/or music that is incidental or intended to purposefully serve as entertainment. Examples of relevant music materials may include the following genres.

1. Music for film
2. Music for ballet
3. Musical theatre

4. Music technology in the electronic and digital age

This area focuses on music created, performed and/or produced using electronic or digital technologies. Such technologies are an important aspect of contemporary musical experiences, often transforming some of the ways that we understand and engage with music.

Examples of relevant musical materials may include the following genres.

1. Electronic dance music
2. *Elektronische Musik*

3. Technology in popular **music production**

These areas of inquiry are not intended to categorize all musical genres and styles definitively, but to offer a flexible approach for understanding and working with a variety of musical materials and experiences.

Some genres and styles may lend themselves to being **explored** through one area; others may be creatively explored through multiple areas.

In each area, students should consider **musical intentions** and purposes, the methods and techniques used to create the music, the role of musical **conventions**, and the impact and experience of the audience.

Studying musical materials in this way encourages students to make and appreciate new and rich connections between different works and ideas encountered in the course.

Contexts

Students are required to engage with the diverse nature of music, looking beyond their own contexts to explore music with which they are unfamiliar, and which will broaden both their cultural and musical perspectives.

This fosters international-mindedness and encourages the exploration of less familiar musical work to inspire student's practical work.

Three contexts will be used to guide the student's choice of material.

Personal context

1. This includes music that has significance to the student, and that they are most familiar with.
2. Students consider their immediate cultural context and interests that contribute to their emerging musical identity.

Local context

1. This includes music that has local significance, but that may be unfamiliar to the student.
2. This can be music from within the student's local, regional or cultural communities, and may include music that the student is not currently engaged with.

Global context

1. This includes unfamiliar music from a variety of places, societies and cultures.
2. This may include music that the student has not connected or engaged with. The music may be from a distant global region but may also include music in closer proximity that has not been previously accessible to the student.

Discussion and joint decision-making between teachers and students is strongly recommended when selecting diverse musical material to be studied.

Students' engagement with diverse musical material will be evidenced in the work submitted for assessment.

Note about assessment

Diversity and breadth are achieved by a choice of contrasting materials from **personal, local and global contexts** in the areas of inquiry listed below.

1. Music for sociocultural and political **expression**
2. Music for listening and performance
3. Music for dramatic impact, movement and entertainment
4. Music technology in the electronic and digital age

It is important to treat musical material in a **balanced** way; students must distribute their attention equally across areas of inquiry and contexts throughout the course.

Each assessment task will specify the submission requirements for the choice of music. It is the candidate's responsibility to justify their choices and demonstrate to the examiner how they have satisfied the task requirements.

Musical processes

Musical processes are an important aspect of learning and teaching in the music course. These processes give students insights into how musicians work, develop their musicianship and help them to become independent learners in music.

The music course identifies three integrated musical processes—**exploring, experimenting and presenting**—through which students engage in relevant practical activities. Through these processes, students **analyse** diverse musical material, **identify** musical prompts relevant to their own work as researchers, creators and performers, justify their musical choices and prepare music for presentation. Through engagement with these processes, students develop their understanding of how musicians work, and deepen their knowledge and understanding of diverse musical material from **personal, local and global contexts**.

The musical processes are reflected as the three components of the SL music course.

1. Exploring music in context
2. Experimenting with music
3. Presenting music

The processes do not represent a chronological experience but work together and inform each other. Through these processes, students will learn about musical conventions and **practices** while applying their findings to their own practical work. They will improve their musical skills through the continuous practice of exploring, experimenting with, and presenting, music.

HL students will have the opportunity to further expand these skills in a real-life music project.

4. The contemporary music maker

Musical roles

A major goal of the course is to develop students' musicianship, in line with the IB's philosophy of developing the holistic learner. The development of students' musical roles as **researchers**, **creators** and **performers** is central to the music curriculum as students develop their musical identities through these roles. While these roles are in continuous interaction with one another, each one helps students better understand and practise the important musical processes of exploring, experimenting and presenting while experiencing and using diverse musical material. A balanced development of these roles allows students to engage effectively with music and improve their music-making over time.

In the role of **researcher**, students learn to **investigate** music in **authentic** ways, including aural, kinaesthetic and scholarly research. To do so, students will engage with **primary** and **secondary sources** to collect findings that inform their understanding of music and its place within history and culture. Students present their findings in musical ways and explain their understanding using accurate terminology.

In the role of **creator**, students make music by **composing**, improvising and arranging. Students learn about different ways of turning musical thoughts and ideas into musical pieces. Students learn to present their created work through recorded performances, digitally created tracks and appropriate forms of **notation**.

In the role of **performer**, students develop their skills in practical music-making and delivery, including **interpretation**, expression and **technical proficiency**. Students present their work, and the work of others, through recordings and videos of live performances.

All three musical roles are of equal value and should not be taught in isolation throughout the course. In different components, attention may be drawn to certain roles while others play a supporting role. Development through the three roles strengthens and expands students' levels of musicality and musicianship, encouraging critical **reflection** on their own practice, as well as evaluation of their work and the work of others. These roles also empower students to nurture their own interests and skills, and develop new musical competencies, thereby enabling them to become lifelong learners in music.