

Zhuhai International School

DP Curriculum Booklet 2024 – 2025



Grade 11 and 12

Our Mission: We are courageous and caring lifelong learners committed to personal excellence as internationally-minded leaders in our communities.

Dear Parents

The course outlines in this booklet offer a glimpse into the many explorations planned for our DP students this school year. Here you will find the aims of each subject, a general overview of the concepts and content planned for the units of study, as well as the assessment objectives set as learning targets for the students. As the programme model below suggests, the DP is much more than a list of what is studied and when. The service planned by students, the interdisciplinary studies they undertake, their engagement in understanding who they are as learners, their creativity and critical thinking, these areas of the programme are much more difficult to capture in a booklet of this nature. Still though we hope this booklet acts as an excellent companion to what is shared on Toddle and equips you to be that vital support in the learning journey from home. As planning for teaching and learning must be a fluid process at times, elements of this booklet are subject to revision as the class develops.



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GROUP 1 Language A

Chinese Language and Literature English Language and Literature

Group 1Chinese Language & Literature

Topic	Contents	Assessment	Resources
Topic UNIT 1: 我们怎样交 流?	 Contents 1 了解和熟悉 DP 课程的概览和考试要求,以及学习方法和目标。 2 学习广告对受众的传播影响,其作者的创造力表现,对受众接受和认知的建构。 广告作为一种"神话",其符号性特点如何 有助于读者对文本意义的探究。广告作为一种普遍而传播效力高的大众舆论媒介,如何以此操控人们的思想意识。 学习新闻等自媒体观点输出类型的文章,借助对非文学文本特点的分析,更好地了解非文学文本特点的分析,更好地了解非文学文本特点的分析,更好地了解非文学文本的特点,以及语言表达的方式。学会对语言表达和图像表达进行细节性的分析。 3 借助形式主义和新批判主义下的语言表达经行细节性的分析。 3 借助形式主义和新批判主义下的语言表达使的方式。学会对语言表达和图像表达进行细节性的分析。 3 借助形式主义和新批判主义下的语言表达快行,有助于学生分析语言表达中的"有意为之"。 4 会涉及到的概念:文化(地域文化:文化现象及其产生原因、文化交流/交融,文化欣赏/批判)交流(作者使用的特殊交流方式,受众,风格等) 5 会涉及到的探究领域:读者,作者和文本之间的联系,细读,形式主义文学理论下的语言表达技巧分析,有助于学生产生语感,建构大致分析语言的理论框架,便于学生运用在不同体裁的文本阅读和分析上,成为稳固学科基础的第一步。可能涵盖以下的问题: 我们读者如何理解文本想要表达的意义? 不同的读者会对同一作品有不同的解读吗? 作者的背景对文本有什么影响? 	Assessment Paper 1 (了解以非 文学文本分析作为 重要构成的试卷, IB 需要考察学生的 哪些分析能力) 参考 HL essay IB 样 本,其中的告作为分 有其中的生生模仿 其心,提自己方文的写作。 口头讨论(学生通 过对新闻全球性问题,以及广告所表 现出的文化问题进 行题的意识。)	Resources 参考资源: Page 209 《中文 A 课程概念驱 动的单元设计》 《玩偶之家》 《活着》 《彷徨》
UNIT 2: 戏剧中的女 性	1学生接触西方著名社会家庭剧(需要了 解此类戏剧的创作历史),了解戏剧的基 本艺术技巧,并且通过对内容的学习,充 分探讨女性面临的困境,女性的自我身份 认同以及文化思想对女性承担社会、家庭 职责意识的影响。作者如何以创造性的笔 法对旧戏剧提出的了挑战,与此同时,作	IO 模拟考试,分析 论文写作 对全球性问题的深 入探讨成为这个单 元的重点,学生们 可以搜集很多相关	

Year 1

	 者又是如何挑战当时读者的认知局限的? 作为当今的读者,我们重读作品,是否也 有新的发现和解读以此重构这部经典作品? 2易卜生《玩偶之家》,女性相关非文学 文本 3相关探究领域和概念: 读者、作者和文本、时间和空间(学 生需要调查研究作者及其生活的时代 环境,他的创作动机等,同时对于 《玩偶之家》这部历久弥新的作品自 首演就惊艳四座一直在西方演出舞台 上长盛不衰的原因进行思考,作者对 观众的期待以及观众的心理接受能力 的预估和挑战对于剧本意义的表达有 什么影响?从文本接受理论角度看待 这部剧作) 认同(女性的自我身份认同),创造 力,文化 4学习活动: 对剧本的中国版改编 辩论题目:谁才是家庭里的"弱势群体"? 演讲稿:女性该如何掌控自己的一生?女 性该如何活出自己的个性? 准备 Paper 2 的相关练习。 	的非文学文本进行 比较性的阅读。另 外,作品独特的写 作手法可以启迪学 生创作小说。 Paper 2 文本分析写作(根 据给出论题)	
UNIT 3: 个体与社会 的关系	 1学生通过学习鲁迅的作品来认识中国思想动荡时期的文学经典,同时分析鲁迅在文本中表达的永恒问题——人的困境,人与社会/外界环境的对抗。 2学习鲁迅《彷徨》小说集,背景资料:鲁迅《呐喊》自序 鲁迅相关的背景资料 3相关探究领域和概念: 时间和空间以及文化研究中的阶级、群体等方面概念,可能涵盖以下的问题: 文化或历史背景对文本会产生有多重 	Mock Exam, IO 模拟考试, 研究侧重为霸权统 治的方式,怎样借 助信仰理论和价值 观粉饰和编造强权 合理的谎言?霸权 如何对待那些反抗 的人群?乌合之众 是否注定了霸权不 能被推翻?等相关 问题被探讨,学生 可以对当代生活是 否存在霸权统治提 出建设性的讨论和 建议。	

	要? • 我们如何理解不同于我们自己的时代 和文化的文学文本? • 作为读者,需要哪些历史或文化信息 来充分理解出自不同历史时期或不同 文化的文本? • 观点(旧思想像潜移默化的麻醉药, 急需唤醒沉睡之人,勇敢抵抗,坚持 抗争)创造力(象征、创造力呈现的 方式	Final IO, 口试固定单 元	
UNIT 4 : 生与死	1 学生通过对余华转型巅峰作品《活着》的品读,掌握中国七八十年代当代作家的 创作道路和特点,从共性中发现中国文化 如何应对市场经济大发展的局面,如何对 待中国自建立之后的惨痛历史? 2 余华《活着》,余华随笔 3 文本的探究领域和概念: 文本涉及内容涉及时间和空间,互文性。 作者追求"心灵的真实"而非"历史的真 实"。虚构的时间、空间更多程度上体现 了作者的心理空间。为 Paper 2 互文性准 备。	Paper 2 练习	

Торіс	Contents	Assessment	Resources
UNIT 1: 种族问题用 未完结	 1、学生需要对此主题下的种族歧视、阶级鸿沟、权利悬殊等全球性问题进行的讨论。此论题涉及了较有争议性的种族问题,需要学生储备更多的相关背景知识。 2 学习《最蓝的眼睛》《生来有罪》 3 会涉及到概念是:认同(社会影响人们对自我身份的认同,精神和物质的渴求,认同产生的矛盾和冲突,他人影响和自我影响) 4 内容涉及互文性,可能涵盖以下的问题: 文本之间是如何联系和转化的? 不同体裁的文本样式在同一主题下会 	IO 模拟考试,分析论 文写作 对全球性问题的深入 探讨成为这个单元的 重点,学生们可以搜 集很多相关的非文学 文本进行比较性的阅 读。另外,作品独特 的写作手法可以启迪 学生创作小说。	《生来有罪》先读于 《最蓝的眼睛》,可 以将《生》作为一部 辅助作品。

	产生什么不同? • 作者在同一主题下,有什么不同的思 考和表达? • 作品中的美国梦是如何跨文本,跨文 化进行关联的?		
UNIT 2: 整体练习单 元	结合考试要求,训练学生对三部文学作 品的比较分析。结合论文的写作训练。	IO Final , Mock Exam Paper 1	
UNIT 3: 考试练习	理解评估标准 应试策略		
UNIT 4 : 考试练习	理解评估标准 应试策略		

Works Chosen	SL : 《呐喊》,《雷 雨》,《活着》,《最 蓝的眼睛》	HL:《呐喊》,《雷雨》,《活着》,《最蓝的眼睛》,《撒哈拉的故事》,《玩偶之家》,《李白诗集》
Links to TOK	Topic: 形式主义下的 语言表达分析以及结 构主义文本分析	课程会涉及到文学的研究方法,文学本质的探究,例如讨论:为 什么人们需要研究文学?文学理论是如何产生的?它如何有助于 人们探讨和理解不同的文本?语言本身给文本带来了什么知识? 读者何以确定理解是正确的?
ATL skills	Topic: 文本的批判性 分析	批判性理解是本门课程中的重心,学生通过不同的探究题和论文 写作练习,意图是在不断强化对文本的独创性理解和批判性认 识。不论是读论文,还是写论文,学生对文本的诸多要素的论证 能力都是需要依靠批判性思维和能力的,所以这是研究和交流能 力的双重提高。
IM	Topic: 全球性问题, 校内评估口试	由于评估的要求,校内评估需要根据同一个全球性问题进行不同 文本的比较联系。所以需要拥有全球问题意识,通过跨越种族, 国籍,时空的语言理解,对文本进行深入的探讨和论证分析。通 常学生需要找到不同国籍的互文性作品,并且在不同的体裁中寻 找共同点。比如:在女性主义单元,电影和小说的互文性对女性 话语权丧失的问题进行分析评论。

		SL	HL
Internal Assessment Weightings	Individual Oral Assessment	30%	20%
External Assessment Weightings	Guided Textual Analysis	35%	35%
	Comparative Essay	35%	25%
	HL Essay	n/a	20%

Group 1 English Language & Literature

Unit 1:	Non-literary text analysis including,	Formative:
Understanding & Disrupting Systemic Injustice	 but not limited to: Rest in Power: The Trayvon Martin Story Documentary Series S1, E1 The Fresh Prince of Bel-Air, Television Series S1, E6 Black Lives Matter website Malcolm X's Fiery Speech Addressing Police Brutality Speech by the Smithsonian Channel De Vito/Verdi ACLU Advertisement Campaign 	 Text analyses & written compositions Class discussion Speeches & presentations Practice IO Practice Paper 1, 2 HL Essay Planning
	Inis is America Music video by Childish Gambino	Summative:
	 Why English Class is Silencing Students of Color by Ted Talk by Dr. Jamila Lyiscott Literary text analysis including: The Hate U Give by Angie Thomas The Kill a Magkinghig by Harper Loop 	Individual Oral (*Internally assessed and externally moderated)
Assessment Introduction:	10 Kill a Mockingbird by Harper Lee Overview of assessment purpose &	Practice Paper 1, 2 (*Externally)
Completing the Individual Oral	components, scoring criteria analysis, sample IO evaluations, guidance with developing the Global Issue Statement, extract selection & analysis, organizing a balanced discussion, delivery strategies	• HL Essay Planning
Unit 2:	Non-literary text analysis including,	
The Influence of Language: Gender Equality & Individual Responsibility	 but not limited to: Public Service Announcements by Tarana Burke Invisible Women: Exposing Data Bias in a World Designed for Men by Caroline Criado-Perez Women's Footprint in History – An interactive website by UN Women #MeToo artwork, signs, slogans Violence against women—it's a men's issue – Ted Talk by Jackson Katz Literary text analysis including: Selected Poetry The Handmaid's Tale by Margaret Atwood 	
	• The Bluest Eye by Toni Morrison -OR- The Girl with the Louding Voice by Abi	
Assessment Introduction:	The Bluest Eye by Toni Morrison -OR- The Girl with the Louding Voice by Abi Daré Overview of assessment purpose &	

Торіс	Contents	Assessment
Assessment Connection: Completing the HL Essay	Feedback on one complete rough draft; revision and submission of final draft.	Formative:Text analyses &
Unit 3: Broadening Perspectives: Investigating Disability & Inclusion	Non-literary text analysis including, but not limited to: • The Hellen Keller Exorcism – Series 10 Episode 8 of the podcast Radiolab	written compositionsClass discussion

	 Excerpts from Care Work: Dreaming Disability Justice by Leah Lakshmi Piepzna-Samarasinha An Open Letter to Ann Coulter by J. Franklin Stephens Literary text analysis including: The Miracle Worker, a play by William Gibson These Days to See by Halon Kallar 	 Speeches & presentations Practice Paper 1, 2 HL Essay Draft Feedback Summative:
	 Harrison Bergeron, a short story by Kurt Vonnegut Jr. Flowers for Algernon, a short story by Daniel Keyes The Curious Incident of the Dog in the Night-Time, a novel by Mark Haddon 	 HL Essay (*Externally assessed) Practice Paper 1, 2 (*Externally assessed)
Unit 4: Enfranchising Marginalized Voices: Learning from Indigenous Perspectives	 Non-literary text analysis including, but not limited to: Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants, a book by Dr. Robin Wall Kimmerer Fire Is Our Relation, a film by Costa Boutsikaris and Anna Palmer Drokpa: The Nomadic Mountain People of Tibet, a photo essay by Diane Barker –OR-Last Speakers, a photo essay by Paul Adams and Jordan Layton Four Directions Teachings, a website by Blackfoot elders Dr. Reg Crowshoe and Geoff Crow Eagle Native Knowledge: What Ecologists Are Learning from Indigenous People, an article by Jim Robbins Think Indigenous, a Podcast Series Caleb's Crossing, a novel by Geraldine Brooks -OR- Ceremony, a novel by Leslie Marmon Silko Poetry by Joy Harjo 	

		SL	HL
Internal Assessment Weightings	Individual Oral Assessment	30%	20%
External Assessment Weightings	Guided Textual Analysis	35%	35%
	Comparative Essay	35%	25%
	HL Essay	n/a	20%

GROUP 2 Language B

Chinese Language Acquisition English Language Acquisition

Group 2 Chinese Language Acquisition

Торіс	Contents	Assessment	Resources
UNIT 1 : (SL) Education 教育 (HL) The contribution	 (SL) Language and identity 语言与身份认同; Migration 迁移/移民; Education 教育; Community 社会群体; Urban and rural environment 城乡环境; Equality 平等 (HL) 	 Paper 1&2 模 拟考试 IA 模拟考试 	(SL) 媒体采访文 章、视频;电 影;汉语教 材;等。
of language and culture to Identify ourselv es.	Beliefs and values 信仰和价值观; subcultures 次文化; Migration 迁移/移 民; Social engagement 社会参与; Ethics 伦理道德		(FL) 媒体采访文 章、视频;电 影;汉语教 材;等。
UNIT 2: (SL) Customs and traditions 风俗与传统	(SL) Lifestyles 生活方式; Beliefs and values 信 念与价值观; Subcultures 次文化; Life stories 生活故事; Customs and traditions 风俗与传统; Artistic expressions 各种艺术		两部文学作 品:《日 送》、诗歌鉴 赏 15-20 首。
(HL) Human ingenuity is the way in which human minds	表现形式; Social relationships 社会参与; Social engagement 社会关系 (HL) Technology 技术: Scientific innovation 科		
how we think.	学创新; Leisure activities 休闲活动; Globalization 全球化		
ONIT 3 : (SL) Equality 男女平等	(SL) Lifestyles 生活方式; Entertainment 娱乐; Communication and media 交流与媒体; The working world 职场; Social		
(HL) Experienc es make who we are.	relationships 社会关系, Social engagement 社会参与; Equality 平等; Ethics 伦理道德		
	(HL) Holidays and travel 假日和旅行; Life stories 生活故事; Customs and traditions 风俗与传统; Communication and media 交流与媒体; Social relationships 社会关系		
UNIT 4 : (SL) Technolog v innovation 科	(SL) Leisure activities 休闲活动; Holidays and travel 假日与旅行; Technology 技术;		
学与技术	Scientific innovation 科学创新; Communication and media 交流与媒体;		
(HL) Sharing the planet	Globalization 全球化		
the problems.	environment 城乡环境, Peace and conflict 和平与冲突, Human rights 人权, Law and order 法律与秩序		

Торіс	Contents	Assessment	Resources
UNIT 1: (SL) Geography and environment – Session 1 地理 与环境	(SL) Health and well-being 健康和幸福; Rites of passage 生活礼仪; Law and order 法律与秩序; Environment 环境; Urban and rural environment 城市环境与乡村环境	 Paper 1&2 模 拟考试 IA 模拟考试 Interal Assess-ment 	 (SL) 媒体采访文章、 视频;电影;汉 语教材;等 。 (HL) 媒体采访文章、
(HL) The interaction between communities an d human beings.	(HL) Community 社区; Human rights 人 权; Education 教育; Lifestyles 生活方 式; Health and well-being 健康与幸福; Language and identity 语言与身份认同; Entertainment 娱乐		视频;电影;汉 语教材;等。 两部文学作品: 《目送》、诗歌 鉴赏 15-20 首。
UNIT 2: (SL) Geography and environment – Session 2 地理 与环境 (HL) How to make an advertisement more	 (SL) Human rights 人权; Peace and conflict 和平与冲突; Globalization 全球化; (HL) Artistic expression 艺术表达; Communication and media 交流与媒 体; The working world 职场; Equality 平等 		
appealing? UNIT 3: (SL) Reviewing 考前复习 (HL) Horizontal and vertical review 5 themes in 1 unit.	Covering 5 themes and recommended topics.		

Texts	网络相关视频、	新闻媒体报道文章、电影、广告、汉语教材等。
Links	Topic:	课程会涉及到特定的地理与环境是如何影响人们的生活文化与文化艺术形
to	地理与环境	式。文化的产生与人们的风俗传统又多大程度上受到地理与环境的影响。
TOK		不同的地理与环境如何有助于人们探讨和理解不同的文化。
ATL skills	Topic : 个人的经历经 验	交流技能是本课程的核心所在,包括使用语言的口头和书面形式进行有效 的交流。学生必须能够在不同的情境中,针对不同的爱人进行告知、描述、叙述、解释、说服和论证,发展自己的语言技能和自信,更能通过观察语言和文化之间的相互关系而促进多元文化理解,提升自己的国际情怀。
IM	Topic : 全球性问题, 校内评估口试	学生需要根据同一个全球性问题进行不同话题之间的比较与联系。学生需要拥有全球问题意识,通过跨越种族、国籍、文化等对文本材料进行深入的探讨。比如,在地理与环境单元中,探讨全球化背景下的媒体报道的公平与公正。

		SL	HL
Internal Assessment Weightings	Individual Oral Assessment	25%	25%
External Assessment Weightings	Productive Skills - Writing	25%	25%
	Receptive Skills – Listening Comp.	25%	25%
	Reading Comprehension	25%	25%

Group 2 English Language Acquisition

Topic	Contents	Assessment	Resources
UNIT 1: Identities	Fit for Life Lifestyles Mental Health A Healthy Life 	Formative assessments:Preview questionsReading checksDiscussion	Oxford IB DP English B- Course Companion
UNIT 2: Experiences	 Sketching Our Lives Migration Holidays and Travel Leisure Activities 	QuestionsRole playReflection	
UNIT 3: Human Ingenuity	Celebrity Artistic Expression Media and Communication Entertainment 	 End of unit summative assessments: Paper 1 (450-600 words; various text types) 	
UNIT 4: Social Organization	 Volunteering Community Social Engagement Social Relationships 	 Paper 2 (reading comprehension IO 	
UNIT 5: Sharing the Planet	 Protecting the Planet The Environment Urban and Rural Environments Meeting the Challenge 	End of year examinations	

Торіс	Contents	Assessment	Resources
UNIT 1: Social Organization	 21st Century Learning The Working World Higher Education Education 	 Formative assessments: Preview questions Reading checks Discussion 	Oxford IB DP English B- Course Companion
UNIT 2: Identities	Who We Are! Values Language and Identity Subcultures 	QuestionsRole playReflection	
UNIT 3: Human Ingenuity	Scientific and Technical Innovation Scientific Innovation Technical Innovation The Future of Humanity 	 End of unit summative assessments: Paper 1 (450-600) words; various text types) 	
UNIT 4: Sharing the Planet	Our Rights! Human Rights Ethics Equality	 Paper 2 (reading comprehension IO 	
UNIT 5: Experiences	 Facing Life's Challenges Life Stories Customs and Traditions Rites of Passage 	End of year examinations	

Texts	HL only: <i>The Lord of the Flies</i> by William Golding and <i>Pay It Forward</i> by Catherine Ryan Hyde (<i>The Outsiders</i> by S.E. Hinton).		
Links to TOK	Topic: Migration	Students will read an article entitled "Migration and Language Contact." This article explores how migration affects the evolution of language. Brainstorming examples of how this can / cannot be seen within the Chinese language. Discussion questions: How has immigration affected English? Has any language escaped the effects of migration? How do the arguments in the article affect our understanding of the role of language, as a way of knowing?	
ATL skills	Topic: Identities: Lifestyles	Communication- utilizing techniques to improve reading for meaning (read each question critically, preview and skim, summarize main points and conclusions, locate exact phrases) Critical Thinking- find a quote from the to support answer selection	
IM	Topic: Social Organization: Social Relationships	Students will take a closer look at what it means to be a global citizens. How can global cooperation and understanding be promoted? The importance of values such as diversity, identity, and participation. The rise of nationalistic views in Anglophone countries and what that means for the world.	

Assessment requirements will be introduced during the first week and continually referenced throughout the course. Internal and external assessment requirements will be studied in each unit. Internal assessment preparation will occur gradually to instill student confidence. External assessment preparation will occur through text type study / practice and reading comprehension exercises.

Year 1: IA- November 2020, April 2021; Paper 1- September 2020, November 2020, May 2020; Paper 2- January 2021, March 2021, May 2021

Year 2: IA- September 2021, November 2021, January 2022; Paper 1- September 2021, January 2022, March 2022, April 2022; Paper 2- November 2021, January 2022, March 2022, April 2022 Internal Examination: February / March 2022 External Examinations: April / May 2022

		SL	HL
Internal Assessment Weightings	Individual Oral Assessment	25%	25%
External Assessment Weightings	Productive Skills - Writing	25%	25%
	Receptive Skills – Listening Comp.	25%	25%
	Reading Comprehension	25%	25%

GROUP 3 Humanities

Business Management Economics

Group 3 Business Management

Торіс	Contents	Assessment	Resources
UNIT 1: Introduction to Business Management UNIT 2:	 1.1 What is a business? 1.2 Types of business entities 1.3 Business objectives 1.4 Stakeholders 1.5 Growth and evolution 1.6 Multinational companies (MNCs) 2.1 Introduction to human 	 End of unit mid- term, In-class summative exam Mock exam Mock IA paper End of unit mid- term In class 	 Digital Oxford Textbook. Class notes created and provided by subject teacher. Online media. IB Business
Human Resource Management	 resource management 2.2 Organisational structure 2.3 Leadership and management 2.4 Motivation and demotivation 2.5 Organisational (corporate) culture (<i>HL only</i>) 2.6 Communication 2.7 Industrial/employee relations (<i>HL only</i>) 	 In-class summative exam Mock exam IA proposal 	 Management Guide. Past exams and samples of past IA's provided by the IB.
UNIT 3: Finance and Accounts	 3.1 Introduction to finance 3.2 Sources of finance 3.3 Costs and revenues 3.4 Final accounts 3.5 Profitability and liquidity ratio analysis 3.6 Efficiency ratio analysis (<i>HL only</i>) 3.7 Cash flow 3.8 Investment appraisal 3.9 Budgets (<i>HL only</i>) 		
UNIT 4: Marketing	 4.1 Introduction to marketing 4.2 Marketing planning 4.3 Sales forecasting (<i>HL</i> only) 4.4 Market research 4.5 The seven Ps of the marketing mix 4.6 International marketing (<i>HL</i> only) 		
UNIT 5: Operations management	 5.1 Introduction to operations management 5.2 Operations methods 5.3 Lean production and quality management (<i>HL only</i>) 5.4 Location 5.5 Break-even analysis 	•	•

 5.6 Production planning (<i>HL</i> only) 5.7 Crisis management and contingency planning (<i>HL</i> only) 5.8 Research and
 StorResearch and development (<i>HL only</i>) 5.9 Management information systems (<i>HL only</i>)

Торіс	Contents	Assessment	Resources
UNIT 1: Introduction to Marketing	 The role of marketing, Marketing planning, Sales forecasting (<i>HL only</i>) Market research 	 End of unit mid- term, In-class summative exam 	 Digital Oxford Textbook. Class notes created and
UNIT 2: Marketing continued	 The four P's (product, price, promotion, place), The extended marketing mix of seven Ps, (<i>HL only</i>) International marketing (<i>HL only</i>) E-commerce 	 Mock exam Mock IA paper End of unit mid- term In-class summative exam 	 subject teacher. Online media. IB Business Management
UNIT 3: Operations Management	 The role of operations management Production methods Lean production and quality management (HL only) Location Production planning (HL only) Research and development (HL only) Crisis management and contingency planning (HL only) 	Mock examIA proposal	 Past exams and samples of past IA's provided by the IB.

Links to TOK	Topic: Management versus leadership	To what degree is it misleading to claim that a manager and a leader are different? How helpful is this terminology? This would be an excellent example of a class discussion that can be had based on the questions. At the end of every chapter such opportunities are available to explore a TOK connection.
ATL skills	Topic: Finance and Accounting - ratios	Allow students to develop their research skills by utilizing the ratios of they have just learned to use in the analysis of companies of interest. This coupled with a research project will also help them to develop their self-management skills.
IM	Topic: Compensation	This is a fantastic topic to be used in developing a more international mindset within our students as compensation is very diverse across different countries and societies. We can use online resources to discover the different compensation packages in different cultures and from their compare and contrast to achieve a deeper understanding of the international community.

		SL	HL
Internal Assessment Weightings	Written Commentary	25%	25%
External Assessment Weightings	Paper 1	30%	35%
	Paper 2	45%	40%

Group 3 Economics

Торіс	Contents	Assessment	Resources
UNIT 1: Introduction to Micro- economics	Competitive markets: Demand and supply, Markets, Demand, Supply, Market equilibrium, The role of the price mechanism, Market efficiency, Elasticity, Price elasticity of demand (PED), Cross price elasticity of demand (XED), Income elasticity of demand (YED), Price elasticity of supply (PES)	 End of unit mid- term, In-class summative exam Mock exam Mock IA paper End of unit mid- term In-class 	 IB Economics Course Book (International Baccalaureate) Ellie Tragakes Class notes created and provided by subject
UNIT 2: Micro- economics Continued	Government intervention, Indirect taxes, Subsidies, Price controls, Market failure, The meaning of market failure, Types of market failure, Theory of the firm and market structures (HL only), Monopoly, Oligopoly	 summative exam Mock exam IA Commentary 1 	 teacher. Online media. IB Economics Guide. Past exams and samples of past IA's provided by the
UNIT 3: Introduction to Macro- economics	The level of overall economic activity, The business cycle, Aggregate demand and aggregate supply, Equilibrium, The Keynesian multiplier, Macroeconomic objectives, Low unemployment, Low and stable rate of inflation, Economic growth, Equity in the distribution of income		iB.
UNIT 4: Macro- economics Continued	Fiscal policy, The government budget, The role of fiscal policy, Monetary policy, The role of monetary policy, The role of supply- side policies, Interventionist supply- side policies, Market-based supply- side policies, Evaluation of supply- side policies		

Торіс	Contents	Assessment	Resources
UNIT 1: Introduction to International Economics	Free trade, The benefits of trade, Absolute and comparative advantage (HL only), The World Trade Organization (WTO), Restrictions on free trade: Trade protection, Exchange rates, freely floating exchange rates, Determination of freely floating exchange rates, Government intervention,	 End of unit mid- term, In-class summative exam Mock exam IA Commentary 1,2,3 	 IB Economics Course Book (International Baccalaureate) Ellie Tragakes Class notes created and provided by subject teacher. Online
UNIT 2: International Economics Continued	The structure of the balance of payments, Current account deficits, Current account surpluses, Economic integration, Forms of economic integration, Preferential trade Agreements, Trading blocs, Monetary union, Terms of trade (HL only), The meaning of the terms of trade		 media. IB Economics Guide. Past exams and samples of past IA's provided by the IB.
UNIT 3: Development Economics	The nature of economic growth and economic development, Measuring development, The role of domestic factors, The role of international trade, The role of foreign direct investment (FDI), Foreign direct investment and multinational corporations (MNCs), The roles of foreign aid and multilateral development assistance, Multilateral development assistance, The role of international debt, The balance between markets and intervention)		

Links to TOK	Topic: Hypotheses, theories, laws and models	Even assuming that testing methods could be perfected and data vastly improved, can there ever be complete certainty about our knowledge of the social (and natural) worlds? This would be an excellent example of a class discussion that can be had based on the questions. At the end of every chapter such opportunities are available to explore a TOK connection.
AIL	l opic: Hypotheses	Using the topic from our links to the TOK the students can practice
51(115	theories, laws and models	side for and the other against.
IM	Topic: International Trade	This topic is a at times a hot button issue in geo-politics and can also be an exciting item of discovery in IB Economics. Through exports one nation can benefit significantly but perhaps the opposite could be said of the nation who is importing. What is an equitable global trading system – which the WTO attempts to construct – for all the world's nations with each at different stages of development?

		SL	HL
Internal Assessment Weightings	Written Commentary	20%	20%
External Assessment Weightings	Paper 1	40%	30%
	Paper 2	40%	30%
	Paper 3	NA	20%

GROUP 4 Sciences

Biology Environmental Systems & Societies Physics

Group 4 Biology

Topic	Contents	Assessment	Resources
Theme A: Unity and diversity Theme A:	Molecules and Cells A1.1 Water A1.2 Nucleic acids A2.1 Origins of cells [HL only] A2.2 Cell structure A2.3 Viruses [HL only] Organisms and Ecosystems	Formative: Class discussions, use of simulations, think-pair share, debates, assigned homework problems, case studies, games, mini- quizzes. Entry/exit tickets. Practice,	Cambell, Biology (12 ed). Biology Course Companion (2014 Oxford Publication) Biology Course Companion (2023
Unity and diversity	A3.1 Diversity of organisms A3.2 Classification and cladistics [HL only] A4.1 Evolution and speciation A4.2 Conservation of biodiversity	discussion, and analysis of past- papers. Study of current research in journals. Practical activities : Practicals conducted throughout the term	Oxford Publication) Computer Based : -You Tube -Bozeman Science -Phet Colorado simulations
Theme B: Form and Function	Molecules and Cells B1.1 Carbohydrates and lipids B1.2 Proteins B2.1 Membranes and membrane transport B2.2 Organelles and compartmentalization B2.3 Cell specialization	(see practical table below). Use of simulations to supplement hands-on practicals Database research Modeling activities Role-playing Scientific report writing Research methodology	-Labster simulations -Kahoot -Socrative
Theme B: Form and Function	Organisms and Ecosystems B3.1 Gas exchange B3.2 Transport B3.3 Muscle and motility [HL only] B4.1 Adaptation to environment B4.2 Ecological niches	Data analysis and discussion Summative • Paper 1 and Paper 2 style assessments • Unit end assessments	
Theme C: Interaction And Interdepen- dence	Molecules C1.1 Enzymes and metabolism C1.2 Cell respiration C1.3 Photosynthesis	 Semester end assessments 	
Aim	The aim of the syllabus is to integrate conscience through inquiry.	oncepts, topic content ar	nd the nature of

Торіс	Contents	Assessment	Resources
Theme C Interaction and	Cells	These are the same type and format as during Year 1	Cambell, Biology (12 ed).
Interdependence	2.1 Chemical signalling [HL only] 2.2 Neural signalling	during real 1	Biology Course Companion (2014 Oxford Publication)
Theme C Interaction and Interdependence	Organisms and Ecosystems 3.1 Integration of body systems		Biology Course Companion (2023 Oxford Publication)
	 3.2 Defence against disease 4.1 Populations and communities 4.2 Transfer of energy and matter 		Computer Based : -You Tube -Bozeman Science -Phet Colorado
Theme D	Molecules and Cells		simulations -Labster
Continuity and change	 1.1 DNA replication 1.2 Protein synthesis 1.3 Mutations and gene editing 2.1Cell and nuclear division 2.2 Gene expression [HL only] 2.3 Water potential 		simulations -Kahoot -Socrative
Theme D	Organisms and Ecosystems		
Continuity and chang	3.1 Reproduction3.2 Inheritance3.3 Homeostasis4.1 Natural selection, stabilityand climate change.		
Scientific Investigation	This is an individual research project. Guided by the teacher, but otherwise student led and directed.		

The collaborative sciences proj

The collaborative sciences project is an interdisciplinary sciences project, providing a worthwhile challenge to DP students, addressing real-world problems that can be explored through the sciences.

The nature of the challenge should allow students to integrate factual, procedural and conceptual knowledge developed through the study of their disciplines.

Through the identification and research of complex issues, students can develop an understanding of how interrelated systems, mechanisms and processes impact a problem.

Students will then apply their collective understanding to develop solution-focused strategies that address the issue. With a critical lens they will evaluate and reflect on the inherent complexity of solving real-world problems.

Links to TOK	Topic: Genetics	 How can we know whether there is a causal link or correlation between sickle cell anemia and the prevalence of malaria? Exploration of the genetic point mutation that causes hemoglobin protein to change its shape Discuss/propose how this change affects red blood cells, then consider impact on human physiology. Distribution data of prevalence of sickle-cell anemia AND malaria Exploration to see if the data presents evidence of correlation or causal linkage Consider how we question what is presented as fact, and how to discern between cause and correlation Link with international mindedness in considering evidence Link importance of scientific method design Recognize consequences on carriers of sickle cell traits Link with mathematical skills - statistics
ATL skills	Topic: Chromosomes	 Thinking, Self-management, Research Students familiarize themselves with the structure, composition, its role in sex determination and in heredity. Discover disease associated with the abnormality in chromosomes. This process enhances the critical thinking and research skills to differentiate the normal karyotype and the abnormal. Research skills could be established on the clinical cytogenetics – to distinguish the chromosomes, analyze the karyotypes and interpretation of chromosomal abnormalities Additional: students apply the skills to a new scenario,(i.e. transfer skills) develop self-management (reflective), decision of the prenatal diagnosis screening of chromosomes abnormalities gives an indication of the fetus is normal (or) abnormal.
IM	Topic: Defense again st infectious diseases	 The spread and containment of diseases such as SARS-Cov-2 (Covid-19) requires international coordination and communication Review various scientific papers related to the Coronavirus and the epidemic spread. In teams, review and critique PAHO/WHO materials for effectiveness as informational sources, suggest better analysis criteria, explore other WHO educational materials and critique effectiveness in Propose consequences of not having international efforts in research, treatment, vaccines, and sharing other materials for prevention (ethics)

		SL	HL
Internal Assessment Weightings	Scientific Investigation	20%	20%
External Assessment Weightings	Paper 1	36%	36%
	Paper 2	44%	44%

Environmental Systems and Societies (2017)

Topic	Contents	Assessment	Resources
UNIT 1: Foundations of environmental	1.1 Environmental value systems1.2 Systems and models1.3 Energy and equilibria	Formative: Class discussions, use of simulations online, Q	Oxford Environmental Systems and
systems and societies	1.4 Sustainability1.5 Humans and pollution	+ A discussion and debate (building on MUN skills).	Societies 2015 Computer Based:
UNIT 2: Ecosystems and ecology	 2.1 Species and populations 2.2 Communities and ecosystems 2.3 Flows of energy and matter 2.4 Biomes, zonation and succession 2.5 Investigating ecosystems 	 Web-based research practice internal assessments. Study of current research in journals. Practical activities: Fieldwork conducted throughout the term. Modeling activities 	-TED Talks -Britannica online -Infobase
UNIT 3: Biodiversity and conservation	3.1 An introduction to biodiversity3.2 Origins of biodiversity3.3 Threats to biodiversity3.4 Conservation of biodiversity	 Modeling activities Scientific report writing Data analysis and discussion Summative Practice Internal Assessments Unit end assessments Semester end assessments 	
UNIT 4: Water and Aquatic Food Production Systems and Societies	4.1 Introduction to water systems4.2 Access to fresh water4.3 Aquatic food productionsystems4.4 Water pollution		
UNIT 5: Soil Systems and Terrestrial Food Production Systems and Societies	5.1 Introduction to soil systems5.2 Terrestrial food productionsystems and food choices5.3 Soil degradation andconservation		

Торіс	Contents	Assessment	Resources
UNIT 6: Atmospheric systems and societies	6.1 Introduction to the atmosphere6.2 Stratospheric ozone6.3 Photochemical smog6.4 Acid deposition	These are the same type and format as during Year 1	Oxford Environmental Systems and Societies 2015
UNIT 7: Climate change and energy production	 7.1 Energy choices and security 7.2 Climate change—causes and impacts 7.3 Climate change—mitigation and adaptation 		Computer Based : -You Tube -TED Talks -Britannica online -Infobase
UNIT 8: Human systems and resource use	 8.1 Human population dynamics 8.2 Resource use in society 8.3 Solid domestic waste 8.4 Human population carrying capacity 		
Internal Assessment (IA)	This is an individual research project. Guided by the teacher, but otherwise student led and directed. It is 25% of final grade.		
External Assessments	Paper 1 (25%), Paper 2 (50%)		

Environmental Systems and Societies (2024)

Торіс	Contents	Assessment	Resources
UNIT 1: Foundations	1.1 Perspectives1.2 Systems1.3 Sustainability	Formative: Class discussions, use of simulations online, Q + A discussion and debate (building on MUN skills).	Oxford Environmental Systems and Societies 2024 Computer Based:
UNIT 2: Ecology	 2.1 Individuals, populations, communities and ecosystems 2.2 Energy and biomass in ecosystems 2.3 Biogeochemical cycles 2.4 Climate and biomes 2.5 Zonation, succession, and change in ecosystems 2.6 Practical work: Ecology lab and field work 	 Web-based research practice internal assessments. Study of current research in journals. Practical activities: Fieldwork conducted throughout the term. Modeling activities Scientific report writing Data analysis and 	-TED Talks -Britannica online -Infobase
UNIT 3: Biodiversity and conservation	3.1 Biodiversity and evolution3.2 Human impact on biodiversity3.3 Conservation andregeneration	Summative • Practice Internal	
UNIT 4: Water	 4.1 Water systems 4.2 Water access, use and security 4.3 Aquatic food production systems 4.4 Water pollution 	 Unit end assessments Semester end assessments 	
UNIT 5: Land	5.1 Soil 5.2 Agriculture and food		

Торіс	Content	Assessment	Resources
UNIT 6: Atmosphere and climate change	 6.1 Introduction to the atmosphere 6.2 Climate change – causes and impact 6.3 Climate change – mitigation and adaptation 6.4 Stratospheric ozone 	These are the same type and format as during Year 1	Oxford Environmental Systems and Societies 2024 Computer Based: -You Tube
UNIT 7: Natural resources	 7.1 Natural resources – uses and management 7.2 Energy Sources – uses and management 7.3 Solid waste 		-TED Talks -Britannica online -Infobase
UNIT 8: Human population and urban systems	8.1 Human population8.2 Urbanc systems and urbanplanning8.3 Urban air pollution		
HL lenses	HL.a Environmental law HL.b Environmental economics HI.c Environmental ethics		
Internal Assessment (IA)	This is an individual research project. Guided by the teacher, but otherwise student led and directed. SL - 25% of final grade. HL - 20% of final grade		
External Assessments	SL Paper 1 (25%), Paper 2 (50%) HL - Paper 1 (30%), Paper 2 (50%)		

Links to TOK	Topic: Environmental value systems	 Significant historical influences on the development of the environmental movement have come from literature, the media, major environmental disasters, international agreements and technological developments An environmental value system (EVS) is a worldview or paradigm that shapes the way an individual, or group of people, perceives and evaluates environmental issues, influenced by cultural, religious, economic and socio-political contexts An EVS might be considered as a system in the sense that it may be influenced by education, experience, culture and media (inputs) and involves a set of inter-related premises, values and arguments that can generate consistent decisions and evaluations (outputs) There is a spectrum of EVSs from ecocentric through anthropocentric to technocentric value systems
ATL skills	Topic: Energy choices and security	 Thinking, Self-management, Research: There is a range of different energy sources available to societies that vary in their sustainability, availability, cost and socio-political implications The choice of energy source is controversial and complex: Energy security is an important factor in making energy choices

IM	Topic: Climate change and its effect on biodiversity and ecosystems	 C ir fa S ra E 	Climate determines the type of biome in a given area although ndividual ecosystems may vary due to many local abiotic and biotic actors Succession leads to climax communities that may vary due to andom events and interactions over time Ecosystem stability, succession and biodiversity are intrinsically nked

The Group 4 Project (which was cancelled for May 2022, **is in place for May 2023**) takes place in 3 stages (Planning, Action and Evaluation) in the April of the second year of the programme, during the Science lessons, totally 10 hours with the entire group. Students make groups of 2-3 students combining individuals from the different Group 4 subjects (Biology, Physics). Students are given 3-4 themes based on their brainstorming sessions, choosing 1 theme to work on. Students can use the Sustainable Development Goals as a start. At the end of the project, students write a reflection report that is submitted along with their IA cover sheet.

For Example:

- 1. Students brainstorm broad topics like: bee farming on Qiao, local beverages or ecosystems.
- 2. Students investigate in a cross-disciplinary manner using the scientific method.
- 3. Students think of problems connected to their pick which allows for good inter-disciplinary connections with related filed and laboratory work.
- 4. Students assign roles in the group, work on their broad research questions, hypothesis and variables. This is communicated to the facilitators to ensure required materials and resources are available. (Exploration 2 hrs.) Students collect and analyse the data to write their reports. (Execution/Investigation 6 hrs.)
- 5. Students collate and evaluate their findings and present them as a group. Their reflection is written on *Managebac*. (Evaluation and communication 2 hrs.)

	(2017 Syllabus)	SL
Internal Assessment Weightings	Individual Investigation	25%
External Assessment Maightings	Paper 1	25%
	Paper 2	50%

	(2024 Syllabus)	SL	HL
Internal Assessment Weightings	Individual Investigation	25%	30%
External Assessment Weightings	Paper 1	25%	20%
External Assessment Weightings	Paper 2	50%	50%

Physics

Group 4

Topic	Contents	Assessment	Resources
Unit 1 / Topic A: Space, time and motion	 A.1 Kinematics (SL/HL) A.2 Forces and momentum (SL/HL) A.3 Work, energy and power (SL/HL) A.4 Rigid body mechanics (HL) A.5 Galilean and special relativity (HL) 	 Formative: Question bank assessments Past paper questions Unit-end assessments Semester-end (mock) 	 Textbooks: Tsokos – Physics for the IB Diploma 7th Edition Software: Vernier LoggerPro Microsoft Excel Microsoft Word
Unit 2 / Topic B: The particulate nature of matter	 B.1 Thermal energy transfers (SL/HL) B.2 Greenhouse effect (SL/HL) B.3 Gas laws (SL/HL) B.4 Thermodynamics (HL) B.5 Current and circuits (SL/HL) 	 assessments Summative: Paper 1 and 2 style assessment formats Practical activities: Use IA assessment 	 Websites: YouTube (Chris Doner IB Physics, Physics Girl, Veritasium) Khan Academy Geogebra
Unit 3 / Topic C: Wave behaviour	C.1 Simple harmonic motion (SL/HL) C.2 Wave model (SL/HL)	Ose IA assessment documents/ppt slides to guide the	 Geogebra PhET interactive simulations
Internal Assessment	This is an individual research project. Guided by the teacher, but otherwise student led and directed. Aim is to have PE/Ex sections complete by end of year 12	 Practicals conducted throughout term – using all aspects of scientific report writing (not just measurements, data presentation etc.) Use IA assessment documents/ppt slides to guide the IA report writing 	

Торіс	Contents	Assessment	Resources
Internal Assessment	Decided by student; should relate to an aspect of IBDP Physics course	Same as in Year 1 of the course	Same as Year 1 of the course
Unit 3 / Topic C:	C.3 Wave phenomena (SL/HL)		
Wave behaviour	C.4 Standing waves and resonance (SL/HL) C.5 Doppler effect (SL/HL)		
Unit 4 / Topic D:	D.1 Gravitational fields (SL/HL)		
Fields	D.2 Electric and magnetic fields (SL/HL)		
	D.3 Motion in electromagnetic fields (SL/HL) D.4 Induction (HL)		
Unit 5 / Topic E:	E.1 Structure of the atom (SL/HL)		
Nuclear and	E.2 Quantum physics (SL/HL)		
quantum	E.3 Radioactive decay (SL/HL)		
physics	E.4 Fission (HL)		
	E.5 Fusion and stars (SL/HL)		
FULL COURSE REVIEW	Revision		

Links to TOK	Topic: Measurements and uncertainties	"One aim of the physical sciences has been to give an exact picture of the material world. One achievement of physics in the twentieth century has been to prove that this aim is unattainable." – Jacob Bronowski. Can scientists ever be truly certain of their discoveries? How accurately can we draw conclusions based on measurements that always include error/uncertainty?
		Students determine the density of a glass marble. Students practice taking mass and volume (radius) measurements to the best of their noting the amount of error in each measurement. Using the uncertainty propagation rules, they see the uncertainty increase based on imprecision in equipment and human error.
		Based on the end result and percent error, students must conclude if their value for the density of the glass marble appears accurate. What is an acceptable percent error to feel confident about this result?
		Identify systematic and random errors and how they skew the end result (i.e. density) high or low.
ATL skills	Topic: Mechanics	Social – cooperating to carry out practical experiments where each member of the group has a specific role to complete. Discussing solutions, questioning and debating method, etc.
		Communication – scientific writing using the conventions of scientific writing, reporting values with uncertainties, and lab report structure.
		Self-management – meeting lab report deadlines, developing resilience and perseverance when results are not as desired

IM	Topic: Energy	The production of energy from fossil fuels has a clear impact on the world we live in and therefore involves global thinking. The geographic concentrations of fossil fuels have led to political conflict and economic inequalities. The production of energy through alternative energy resources demands new levels of international collaboration.
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The Group 4 Project is outlined in *Biology* section of this booklet (pp. 23 and 24).

		SL	HL
Internal Assessment Weightings	Individual Investigation	20%	20%
External Assessment Weightings	Paper 1	36%	36%
	Paper 2	44%	44%

GROUP 5 Mathematics

Analysis & Approaches Applications & Interpretation

Group 5 Analysis & Approaches SL

Торіс	Contents	Assessment	Resources
UNIT 1: Measurement, Accuracy, and 2D Geometry	Numbers, algebraic expressions, measurement, upper/lower bound, accuracy, trigonometric ratios, length of arc	Unit Tests Modelling and investigations	https://www.ted. com/talks https://www.ixl.c
UNIT 2: Sequences and Series UNIT 3: Functions	Arithmetic and geometric sequences and series, compound interest, annual depreciation, annuity and amortization, growth and decay, exponents and logarithms Functions (domain, range, graphs): linear, quadratic, exponential, sinusoidal	Exam Paper 1 Exam Paper 2	om/ https://brilliant.or g/ TI-84 Plus CE graphic display calculators
UNIT 4: Statistics and applications I	Descriptive statistics: population, sampling, continuous/discrete data, representing data through graphs, measures of spread and central tendency, regression lines, correlations		
UNIT 5: Probability	Concepts of trial, outcome, equally likely outcomes, relative frequency, sample space and events; probability: events, complementary events, combined events, mutually exclusive events, conditional probability, independent events; Venn diagrams, tree diagrams, sample space diagrams and tables of outcomes; discrete random variables; binomial distribution		
UNIT 6: 3D Geometry	3D solids (right cylinder, pyramid, right cone, sphere, hemisphere), angle between two lines and between a line and a plane, volumes, surface area		

Торіс	Contents	Assessment	Resources
UNIT 1:	Normal distribution, chi-squared test, t-	Unit Tests	https://www.ted.c
Statistics and	test	Medalling and	<u>om/talks</u>
applications II		Modelling and	
UNIT 2:	Trigonometric laws (sine rule, cosine	investigations	https://www.ixi.co
Trigonometry	rule, area of a triangle), applications	Evam Paper 1	<u>m/</u>
	with trigonometry		https://brilliant.org
UNIT 3:	Limit, derivative, tangent line, normal	Evam Daper 2	/
Calculus	line, local maximum/minimum,		<u>/</u>
	optimization, integration	Dractice Denora	
UNIT 4:	 Mathematics exploration 	for rovision	
Exploration and	 Revise for May External 		
Revision	Assessment		

Links	Topic:	Students will use second level questions to find ways in which Calculus
to	Functions and	and Algebraic Functions intertwine to build all of our modern
TOK	Calculus	conveniences.
		There will also be TEDtalks used to describe deeper meanings of
		mathematics. Please refer to the links listed.
ATL	Topic:	Students are expected to research a mathematical topic of their choice.
skills	Internal	They must think deeply about this subject and communicate their findings
	Assessment	in a complete and concise way.
IM	Topic:	All of these topics were created by different cultures and they all work
	Calculus,	together to create our modern society. There will be discussions in class
	Algebra, and	about how mathematics is used to create cultural awareness.
	Geometry	

		SL	HL
Internal Assessment Weightings	Mathematical Exploration	20%	20%
External Assessment Weightings	Paper 1	40%	30%
	Paper 2	40%	30%
	Paper 3	n/a	20%

Group 5 Analysis & Approaches HL

Торіс	Contents	Assessment	Resources
UNIT 1: Series and Sequence	 Arithmetic and geometric sequences and series, Proof, Counting principle and binomial theorem 	Unit Tests Modelling and investigations	https://www.ted.c om/talks https://www.ixl.co m/
UNIT 2: Functions and complex numbers	 Functional relationships Special functions Classification of functions Operations with functions Function transformations Functions (domain, range, graphs): linear, quadratic, exponential, sinusoidal, complex numbers, system of equations 	Exam Paper 1 Exam Paper 2	<u>https://brilliant.org</u> / TI-84 Plus CE graphic display calculators
UNIT 3: Calculus I: Differentiation	 Limits Continuity Convergence Derivative of a function Differentiation rules Graphic interpretation of derivatives Applications Implicit differentiation 		
UNIT 4: Statistics and Probability	 Concepts of trial Outcome, equally likely outcomes Relative frequency Sample space and events Probability: events, complementary events, combined events, mutually exclusive events, conditional probability, independent events Venn diagrams, tree diagrams, sample space diagrams and tables of outcomes; discrete random variables; Binomial distribution Descriptive statistics: population, sampling, continuous/discrete data, representing data through graphs, measures of spread and central tendency, regression lines, correlations 		
UNIT 5: Geometry and Trigonometry	 Properties of three dimensional space Angles of measurement Ratios and identities Trigonometric laws (sine rule, cosine rule, area of a triangle) Applications with trigonometry, 		

Торіс	Contents	Assessment	Resources
UNIT 1: Calculus II: Relationships -Logarithms, exponents and	 Exponents and logarithms Integration as antidifferentiation and definite integrals Derivatives of exponential and logarithmic functions 	Unit Tests Modelling and investigations	https://www.te d.com/talks https://www.ixl. com/
integration	 Tangents Normals Integration techniques 	Exam Paper 2	<u>https://brilliant.</u> org/
UNIT 2: Calculus III	 Areas and volumes Kinematics Ordinary differential equations Limits revisited 	Practice Papers for revision	
UNIT 3: Vectors	 Geometrical representation of vectors Introduction to vector algebra Scalar product and its properties Vector equation of a line Vector product and properties Equation of a plane Lines Planes and angles Application of vectors 		
UNIT 4: Complex Numbers II	 Forms of complex numbers Operations with complex numbers in polar form Powers and roots of complex numbers in polar form 		
UNIT 4: Probability II FXPLORATION	 Axiomatic probability systems Probability distributions Continuous random variables Binomial distribution Normal distribution 	-	

Links	Topic:	Students will use second level questions to find ways in which Calculus
to	Functions and	and Algebraic Functions intertwine to build all of our modern
ТОК	Calculus	conveniences.
		There will also be TEDtalks used to describe deeper meanings of
		mathematics. Please refer to the links listed.
ATL	Topic:	Students are expected to research a mathematical topic of their choice.
skills	Internal	They must think deeply about this subject and communicate their findings
	Assessment	in a complete and concise way.
IM	Topic:	All of these topics were created by different cultures and they all work
	Calculus,	together to create our modern society. There will be discussions in class
	Algebra, and	about how mathematics is used to create cultural awareness.
	Geometry	

		SL	HL
Internal Assessment Weightings	Mathematical Exploration	20%	20%
External Assessment Weightings	Paper 1	40%	30%
	Paper 2	40%	30%
	Paper 3	n/a	20%

Group 5 Applications & Interpretation SL

Торіс	Contents	Assessment	Resources
UNIT 1: Measurement, Accuracy, and 2D Geometry	Numbers, algebraic expressions, measurement, upper/lower bound, accuracy, trigonometric ratios, length of arc	Unit Tests Modelling and investigations	https://www.ted. com/talks https://www.ixl.c
UNIT 2: Sequences and Series	Arithmetic and geometric sequences and series, compound interest, annual depreciation, annuity and amortization, growth and decay, exponents and logarithms	Exam Paper 1 Exam Paper 2	om/ https://brilliant.or g/
UNIT 3: Functions UNIT 4: Statistics and applications I	Functions (domain, range, graphs): linear, quadratic, exponential, sinusoidal Descriptive statistics: population, sampling, continuous/discrete data, representing data through graphs, measures of spread and central tendency, regression lines, correlations	- -	TI-84 Plus CE graphic display calculators Haese Mathematics <i>Applications and</i> <i>Interpretations</i>
UNIT 5: Probability	Concepts of trial, outcome, equally likely outcomes, relative frequency, sample space and events; probability: events, complementary events, combined events, mutually exclusive events, conditional probability, independent events; Venn diagrams, tree diagrams, sample space diagrams and tables of outcomes; discrete random variables; binomial distribution		SL
3D Geometry	between two lines and between a line and a plane, volumes, surface area		

Торіс	Contents	Assessment	Resources
UNIT 1:	Normal distribution, chi-squared test, t-	Unit Tests	https://www.ted.c
Statistics and	test	NA - de llie e e e d	<u>om/talks</u>
applications II		Modelling and	
UNIT 2:	Trigonometric laws (sine rule, cosine	investigations	https://www.ixl.co
Trigonometry	rule, area of a triangle), applications	Exam Paper 1	<u>m/</u>
	with trigonometry		http://hrilliant.arg
UNIT 3:	Limit, derivative, tangent line, normal	Exam Dapar 2	<u>nups://brimant.org</u>
Calculus	line, local maximum/minimum,	Exam Faper 2	<u>/</u>
	optimization, integration	Due eties Deve eve	
UNIT 4:	Mathematics exploration, revise for May	for rovision	
Exploration and	External Assessment		
Revision			

Links	Topic:	Students will use second level questions to find ways in which Calculus
to	Functions and	and Algebraic Functions intertwine to build all of our modern
TOK	Calculus	conveniences.
		There will also be TEDtalks used to describe deeper meanings of
		mathematics. Please refer to the links listed.
ATL	Topic:	Students are expected to research a mathematical topic of their choice.
skills	Internal	They must think deeply about this subject and communicate their findings
	Assessment	in a complete and concise way.
IM	Topic:	All of these topics were created by different cultures and they all work
	Calculus,	together to create our modern society. There will be discussions in class
	Algebra, and	about how mathematics is used to create cultural awareness.
	Geometry	

		SL	HL
Internal Assessment Weightings	Mathematical Exploration	20%	20%
External Assessment Weightings	Paper 1	40%	30%
	Paper 2	40%	30%
	Paper 3	n/a	20%

Group 5 Applications & Interpretation HL

Торіс	Contents	Assessment	Resources
Unit 1: Measurement, Accuracy, and 2D Geometry	Numbers, algebraic expressions, measurement, upper/lower bound, accuracy, trigonometric ratios, length of arc, bearings, percentage error, volume of surface area of 3D figures	Unit Tests Modelling and investigations	https://www.ted.c om/talks https://www.ixl.co m/
Unit 2: Sequences and Series	Arithmetic and geometric sequences and series, compound interest, annual depreciation, annuity and amortization, growth and decay, exponents and logarithms, logarithmic and exponential models.	Exam Paper 1 Exam Paper 2	<u>https://brilliant.org</u> <u>/</u> TI-84 Plus CE graphic display
Unit 3: Functions	Functions (domain, range, graphs): linear, quadratic, exponential, sinusoidal, complex numbers.	-	calculators
Unit 4: Statistics and applications I	Descriptive statistics: population, sampling, continuous/discrete data, representing data through graphs, measures of spread and central tendency, regression lines, correlations		Mathematics Applications and Interpretations HL
Unit 5: Probability	Concepts of trial, outcome, equally likely outcomes, relative frequency, sample space and events; probability: events, complementary events, combined events, mutually exclusive events, conditional probability, independent events; Venn diagrams, tree diagrams, sample space diagrams and tables of outcomes; discrete random variables; binomial distribution		
Unit 6: 3D Geometry	3D solids (right cylinder, pyramid, right cone, sphere, hemisphere), angle between two lines and between a line and a plane, volumes, surface area		

Торіс	Contents	Assessment	Resources
Unit 7: Statistics and applications II	Normal distribution, chi-squared test, t-test	Unit Tests Modelling and	https://www.te d.com/talks
Unit 8: Trigonometry	Trigonometric laws (sine rule, cosine rule, area of a triangle), applications with trigonometry	investigations Exam Paper 1	https://www.ixl. com/
Unit 9: Calculus	Limit, derivative, tangent line, normal line, local maximum/minimum, optimization, integration	Exam Paper 2	org/
Unit 10: Vectors	Displacement Vectors, Scalar and Vector Products, Vector Equations of Lines, Vector quantities, Motion with variable velocity, applied vector relationships	for revision	
Unit 11: Matrices	Matrix Operations, Solving Systems of equations, Transformations, System Representation		
Unit 12: Graph Theory	Constructing Graphs, Unweighted Graphs, Weighted Graphs, Spanning Trees, Chinese Postman Problem, Traveling Salesman Problem		
Unit 10: Exploration and Revision	Mathematics exploration, revise for May External Assessment		

Links	Topic:	Students will use second level questions to find ways in which Calculus
to	Functions and	and Algebraic Functions intertwine to build all of our modern
ток	Calculus	conveniences.
		There will also be TEDtalks used to describe deeper meanings of
		mathematics. Please refer to the links listed.
ATL	Topic:	Students are expected to research a mathematical topic of their choice.
skills	Internal	They must think deeply about this subject and communicate their findings
	Assessment	in a complete and concise way.
IM	Topic:	All of these topics were created by different cultures and they all work
	Calculus,	together to create our modern society. There will be discussions in class
	Algebra, and	about how mathematics is used to create cultural awareness.
	Geometry	

		SL	HL
Internal Assessment Weightings	Mathematical Exploration	20%	20%
External Assessment Weightings	Paper 1	40%	30%
	Paper 2	40%	30%
	Paper 3	n/a	20%

GROUP 6 The Arts

Visual Art

Group 6 Visual Art

Торіс	Contents	Assessment	Resources
UNIT 1:	Art Making Practice	Visual Art	Art materials
How	 What is the visual art journal? 	Journal	Laptops
(Visual Arts	Making the Journal a habit	Written reports	
Journal)	Being creative involves purposeful play and rick taking with the care elements	Portfolio	
	and fisk-taking with the core elements,	Presentations	Textbook
LINIT 2	Art Making Practice	Critiquee/	(Oxford DP
Why	 Formal Elements of Art & Principles of 	Interviews	visual Art)
(My DP	Design		Gallery space
Foundation)	• Assessment in the DP (Objectives 1-4)	Exhibits	Managebac
,	Investigating Art Forms	Digital feedback	
	Art making skills and techniques		
	Submission requirements of the DP		ARTISTS:
	 Skills techniques and processes for the DD 		Henry
LINIT 3	DF Theoretical practice		Matisse
What	Work of artists from different cultural		Yves Klein
(Comparative	contexts		Paul Gaugin
Study)	Art history		• Dorothea
olddy)	Cultural Studies		Lange
	Art criticism		• Kazimir
	DP submission requirements		Malevich
	Assessment criterion		• Jacob
UNIT 4:	Art Making Practice		Lawrence
When	Experimentation with various media and techniques		• Sun Fuan and Peng Yu
(Process	Students develop concents through		Anna Atkins
Porttolio)	 Students develop concepts through processes that are informed by skills 		
	techniques and media		
UNIT 5:	Curatorial Practice		
Where	 Students select and present resolved 		
(Mini-	works for exhibition		
Exhibition)	Students explain the ways in which the warks are connected		
	WORKS are connected Students discuss how artistic judgments		
	impact the overall presentations		

Торіс	Contents	Assessment	Resources
UNIT 1: Develop (Coursework Criteria) UNIT 2: Surprise (Visual Arts	 <u>Art Making & Theoretical practice</u> Understand requirements, make choices and get informed Students examine and compare the work of artists from different cultural contexts and discuss Art making forms <u>Art Making Practice</u> Planning, recording, research and development of ideas. Experimentation! 	the Visual Art Journal Written reports Portfolio Presentations Critiques/Intervie ws Exhibits	Art materials Laptops Textbook (Oxford DP Visual Art) Gallery space Managebac ARTISTS:
UNIT 3: Communicate (Comparative Study)	 <u>Theoretical practice</u> Art History Contemporary Artists IB Submission requirements and assessment criterion for CS 	Digital roodback	 Kazimir Malevich Henry Matisse Yves Klein
UNIT 4: Select (Exhibition)	 <u>Curatorial Practice</u> The selection and presentation of creative work ZIS Visual Art requirements and assessment criterion for exhibit 		 Vivien Maier Sebastiano Salgado Jacob Lawrence
UNIT 5: Present (E-Portfolio)	 <u>Curatorial Practice</u> The selection and presentation of creative work 		

Links to TOK	Topic: Comparative Study	This course discusses a variety of topics using TOK style instruction either through the form of readings or mini-lessons. DP Art not only makes connections to history, physics, process & product in art but also perceptions of color, the Museum experience, the 'Usefulness' of art, and originality.
ATL skills	Topic: Coursework Criteria & My DP Foundation	These units help to teach students self management skills through the use of calendars, checklists, visual rubrics, and clear deadlines. Beyond this, rich use of thinking skills through provocative inquiry questions and research. Additionally, students will be pushed to communicate and develop their social practice by talking about their work.
IM	Topic: Comparative Study	We will use a number of videos from ART 21, which is a PBS TV show about art to show artists from a variety of ethnic or cultural backgrounds, so that students may be exposed to a context or understanding of art from a different or unique perspective.

The weightings of internal and external assessments do not differ from the Standard Level to the Higher Level. The difference lies in what is expected for those elements.

Standard Level requires 4-6 different pieces of artwork. **Higher Level** requires 7-10 different pieces of artwork and an additional reflective component in the Comparative Study.

		SL	HL
Internal Assessment Weightings	Exhibition	40%	40%
External Assessment Weightings	Comparative Study	20%	20%
	Process Portfolio	40%	40%

THE CORE

Extended Essay Theory of Knowledge Creativity Activity Service

CORE Extended Essay - EE

The Extended Essay

The Extended Essay is an in-depth study of a limited topic within a subject. Its purpose is to provide the student with an opportunity to engage in independent research at an introductory level. Emphasis is placed on the process of engaging in personal research, on the communication of ideas and information in a logical and coherent manner, and on the overall presentation of the Extended Essay in compliance with IB guidelines. Students are required to devote 40 hours to the essay.

Subject choice

In choosing a subject, an essential consideration should be the personal interest of the student. The subject should offer the opportunity for in depth research but should also be limited in scope. It should present the candidate with the opportunity to collect or generate information and/or data for analysis and evaluation.

Extended Essays submitted in Language B (Spanish or Chinese) must be written in that language.

All other essays must be in English.

Organization of the Extended Essay

The Extended Essay is limited to 4,000 words and should include an introduction, a development methodology, a conclusion, a bibliography, and any necessary appendices.

Assessment

The Extended Essay is externally examined. Marks are awarded against a set of published criteria (both general and subject-specific).

The final Extended Essay grade and the final TOK grade are entered into the Diploma points matrix (see below) to award a possible maximum of three extra points to be added to a student's Diploma score. Candidates not submitting satisfactory work in either area will fail the Diploma.

Core Point Matrix						
TOK EE	Α	В	С	D	Е	
Α	3	3	2	2	Fai conc	
В	3	2	2	1	ling lition	

С	2	2	1	0	
D	2	1	0	0	
Е	Failing condition				

CORE Theory Of Knowledge - TOK

Торіс	Contents	Assessment
UNIT 1: Knowledge and The Knower	Culture & identity What it means to be the "Core Theme" Unpacking the theme using the knowledge framework Connections to the learner profile Begin TOK Journal on Toddle 	 Formative: TOK Journal entries The Knower Self
Assessment Introduction: The TOK Exhibition	Overview of the exhibition requirements, selecting the IA prompt from the list of 35 options, selecting objects, completing the exhibition commentary organizer, interpreting and responding to feedback, completing the live exhibition	PortraitExhibition Plan Organizer
UNIT 2: Knowledge and Language	Perspectives & Paradigms 1. Unpacking the theme using the knowledge framework 2. Connections to core theme 3. Connections to the learner profile 4. Exhibition Item Idea	• 1/3 Practice Exhibition Summative:
UNIT 3: Optional Theme— Student's choice	*Students' choice of focus from 12 concepts 1. Unpacking the AOK using the knowledge framework 2. Connections to core theme 3. Connections to the learner profile 4. Exhibition Item Idea	Ine TOK Exhibition (*Internally assessed and
UNIT 4: Human Sciences	Truth & Objectivity 1. Unpacking the AOK using the knowledge framework 2. Connections to core theme 3. Connections to the learner profile 4. Exhibition Item Idea	externally moderated)
UNIT 5: The Arts	Interpretation & Explanation 1. Unpacking the AOK using the knowledge framework 2. Connections to core theme 3. Connections to the learner profile 4. Exhibition Item Idea	

Торіс	Contents	Assessment	
Assessment Introduction: Introduction to the TOK Essay	Overview of the essay requirements, unpacking the prescribed titles, selecting the title, writing an essay plan, the 3 formal interactions, written reflections, and meeting deadlines	 Formative: TOK Journal Entries Class discussions 	
UNIT 6: Natural Sciences	Values & Responsibilities 1. Unpacking the AOK using the knowledge framework 2. Connections to core theme 3. Connections to the learner profile 4. Exhibition Item Idea	 Essay Plan Organizer 3 Essay Interactions 	
UNIT 7: History	Evidence & Proof 1. Unpacking the AOK using the knowledge framework 2. Connections to core theme 3. Connections to the learner profile 4. Exhibition Item Idea	Summative: • TOK Essay	
UNIT 8: Mathematics	Justification & Conviction 1. Unpacking the theme using the knowledge framework 2. Connections to core theme 3. Connections to the learner profile 4. Exhibition Item Idea	assessed)	

Internal Assessment Weight

Exhibition

33%

CORE Creativity, Activity, Service - CAS

What is it?

CAS is one of the three essential elements that every student must complete as part of the Diploma Programme (DP).

Studied throughout the Diploma Programme, CAS involves students in a range of activities alongside their academic studies.

It is not formally assessed. However, as a result of their CAS experience as a whole, including their reflections, there should be evidence that students have:

- Increased awareness of their won strength and areas of growth
- Undertake new challenges
- Planned and initiate activities
- Worked collaboratively
- Shown perseverance and commitment
- Engaged with issues of global importance
- Considered ethical implications of their actions

How is CAS structured?

The three strands of CAS, which are interwoven with activities, are characterized as follows:

- Creativity arts, and other experiences that involve creative thinking.
- Activity physical exertion contributing to a healthy lifestyle, complementing academic work elsewhere in the DP.
- Service an unpaid and voluntary exchange that has a learning benefit for the student. The rights, dignity and autonomy of all those involved are respected.

What do CAS projects involve?

CAS requires students to take part in a range of experiences and at least one project. These should involve:

- · real, purposeful activities, with significant outcomes
- personal challenge
- thoughtful consideration, such as planning, reviewing progress, reporting
- reflection on outcomes and personal learning

The CAS project can address any single strand of CAS, or combine two or all three strands of creativity, activity and service.

Getting the Grade

How DP assessment is scored

There is a maximum of seven points available for each of the six required elective courses; in addition, there are three points available for the combination of TOK and the Extended Essay. This makes a maximum total of 45 points. A minimum of three courses must be at Higher Level.

In general, in order to receive the IB Diploma, a student will have to score at least a 4 in each subject, or 24 points or more in total. The full criteria for passing the IB DP are set out below and students need to be aware that a score of 24 points will not always guarantee a pass.

The IB Diploma will be awarded to a candidate whose total score is 24, 25, 26 or 27 points, provided all the following requirements have been met:

- Numeric grades have been awarded in all six subjects registered for the IB Diploma;
- All CAS requirements have been met;
- Grades A (highest) to E (lowest) have been awarded for both Theory of Knowledge and an Extended Essay, with a grade of at least D in one of them;
- There is no grade 1 in any subject;
- There is no grade 2 at higher level;
- There is no more than one grade 2 at standard level;
- Overall, there are no more than three grade 3s or below;
- At least 12 points have been gained on higher level subjects (candidates who register for four higher level subjects must gain at least 16 points at higher level);
- At least nine points have been gained on standard level subjects (candidates who register for two standard level subjects must gain at least six points at standard level);
- The final award committee has not judged the candidate to be guilty of malpractice.

Awarding the IB Diploma

When a candidate has a total score of 28 points or above, the IB Diploma is awarded provided all the following requirements have been met:

- Numeric grades have been awarded in all six subjects registered for the IB Diploma;
- All CAS requirements have been met;
- Grades A (highest) to E (lowest) have been awarded for both Theory of Knowledge and an Extended Essay, with a grade of at least D in one of them;
- There is no grade 1 in any subject;
- There is no more than one grade 2 at higher level;
- There are no more than two grade 2 at standard level;
- Overall, there are no more than three grade 3 or below;
- At least 11 points have been gained on the 3 Higher Level subjects;
- At least **8 points** have been gained on Standard Level subjects; and there has been no malpractice. *Reference- IB Subject guides, IBDP Publications on MY IB*