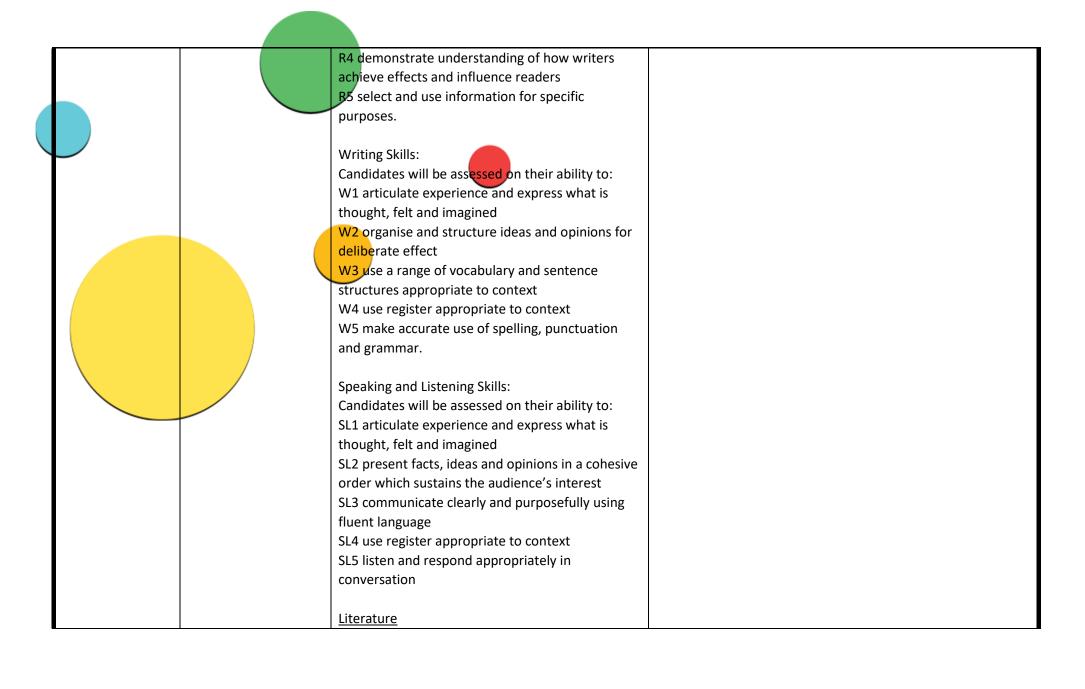


Straits International School Rawang Curriculum Overview Year 11 Autumn Term 2.1 2024/2025

Autumn Term 2.1	What are we learning?	What KUS will we gain?	What will excellence look like?
Mathematics	Chapter 12: Averages & measures of spread Chapter 20: Histogram, cumulative frequency diagrams & scatter diagrams Chapter 19: Symmetry Chapter 17: Simple and compound interest	Students will calculate and interpret measures of central tendency (mean, median, mode) and spread (range, interquartile range, and standard deviation) to summarize and compare data. They will construct and analyze histograms, cumulative frequency diagrams, and scatter diagrams to interpret data, identify trends, and explore correlations between variables. Using these tools, students will extract insights, make predictions, and solve real-world problems. In symmetry, students will identify line, rotational, and reflective symmetry in complex shapes and use these properties to analyze and create patterns. Students will also learn the circle theorems and angle relationships in circle. They will learn to find the simple and compound interest by solving word problems. Across these topics, they will build strong skills in data representation, interpretation, and geometric reasoning.	Excellence will involve confidently calculating and interpreting advanced measures of spread, such as interquartile range and standard deviation, and using these to draw meaningful comparisons between data sets. Students will construct accurate and detailed histograms, cumulative frequency diagrams, and scatter diagrams, analyzing them to identify trends, correlations, and outliers while making informed predictions. In symmetry, they will demonstrate a deep understanding by identifying and applying symmetrical properties to solve complex problems and create precise designs. Excellence will be shown through clear reasoning, accurate analysis, and the ability to connect concepts to solve challenging, real-world problems.

How will th	nis be assessed?	Mock Exam, Topical tests, Past paper tests	
Additional Mathematics	Chapter 15: Integration Chapter 18: Kinematics	Students will understand integration as the reverse of differentiation, using it to calculate areas under curves and solve real-world problems. They will learn techniques for integrating functions, both definite and indefinite, and apply integration to find areas and volumes. In kinematics, students will study motion through displacement, velocity, and acceleration, using calculus to model and solve related problems. They will use integration and differentiation to analyze motion and interpret motion graphs. These topics will strengthen problem-solving abilities and the ability to apply mathematical concepts to dynamic real-world situations.	Excellence in integration will involve applying advanced integration techniques to solve complex problems, including finding areas, volumes, and solving differential equations with precision. Students will demonstrate a deep understanding of kinematics, accurately modeling and interpreting motion with detailed calculations involving displacement, velocity, and acceleration. They will confidently apply integration and differentiation to solve challenging motion problems and analyze motion graphs in diverse contexts. Excellence will be shown through clear, methodical problem-solving, precise calculations, and the ability to connect concepts to real-world applications.
How will th	nis be assessed?	Mock Exam, Topical tests, Past paper tests	
First Language English + Literature in English	Revision of all topics	Language Reading Skills: Candidates will be assessed on their ability to: R1 demonstrate understanding of explicit meanings R2 demonstrate understanding of implicit meanings and attitudes R3 analyse, evaluate and develop facts, ideas and opinions, using appropriate support from the text	Students will be able to confidently approach all language and literature papers. This will include writing insightful, perceptive and critical literature essays for the literature papers. For language, students will be able to showcase impressive comprehension, vocabulary, inference, analysis, directed writing and composition skills. They will maintain a high level of accuracy in all tasks. Additionally, students will be able to speak confidently and without prompts for 3-4 minutes, and take part in a conversation in which they effectively use both speaking and listening skills to speak naturally and fluently.



	be assessed? Technology and the future	Show detailed knowledge of the content of literary texts in the three main forms (drama, poetry and prose), supported by reference to the text. Understand the meaning of literary texts and their contexts and explore texts beyond surface meanings to show deeper awareness of ideas and attitudes. Recognise and appreciate ways in which writers use language, structure and form to create and shape meanings and effects. Communicate a sensitive and informed personal response to literary texts. Mock exams. Self-assessment, peer assessment Use a range of vocabulary related to the topic of new technology; understand ideas and connections in different reading texts about futuristic technology; understand and use different ways of describing future events, take part in a developed discussion as part of a speaking task; identify details for a specific purpose and understand implied meaning in a text about new technologies.	, formative teacher assessment, minor assessment. Learners can write an article about technology in education; speak about the advantages and disadvantages of digital media with confidence; read a text and give short answers to questions on it to text their understanding of explicit and implicit information and meanings; listen to several people talking about a similar topic, and answer questions to show they understand the ideas and opinions they express and the connections between them.
How will this be assessed?		Teacher/self-assessment, presentation, speaking	g tasks, projects, group work
English as an Additional Language (EAL)	Communication	Students will develop their understanding of various forms of communication by using a range of related vocabulary and selecting relevant information from a text about young people and technology, while also interpreting the writer's	to different forms of communication and extract relevant information from a text about young people and technology, accurately interpreting implied meanings. They will participate

implied meaning. They will contribute effectively to group discussions, sharing their opinions on communication methods. Students will learn and apply reporting verbs, and they will plan and write a report that adheres to the appropriate style, structure, and grammatical features. Additionally, they will write the same report with an emphasis on appropriate levels of formality, ensuring the tone, register, structure, and content are suitable for the context.

communication methods in a clear and well-reasoned manner. Students will demonstrate a thorough understanding of reporting verbs and use them appropriately in writing. They will create reports that are well-organized, stylistically appropriate, and grammatically accurate, adjusting their writing to suit different levels of formality while maintaining the correct tone, register, structure, and content for the given context. Overall, their work will reflect a strong ability to analyse, synthesize, and communicate effectively in both spoken and written formats.

How will this be assessed?

Teacher/self-assessment, presentation, speaking tasks, projects, group work

Combined Science

B15 Organisms an Their Environment B16 Human Influences of Ecosystem Students will be able to:

Knowledge

- Understand how energy flows through ecosystems, starting from the Sun to producers and through various trophic levels.
- Describe the structure of food chains, food webs, and trophic levels (producers, primary consumers, secondary consumers, etc.).
- Identify the roles of decomposers in nutrient cycling and the transfer of energy.
- Recognize the steps of the carbon cycle, including photosynthesis, respiration, combustion, and decomposition.
- Identify causes of habitat destruction, such as deforestation, urbanization, and pollution.

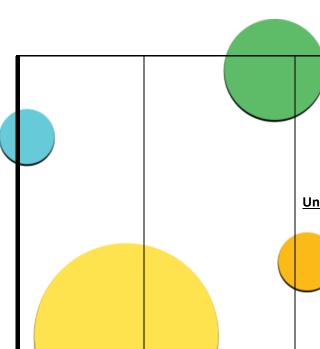
Students will excel in:

Critical Thinking

- Identifying and analyzing the long-term impacts of human activities on energy flow, food webs, and carbon cycling with a global perspective.
- Proposing sustainable solutions that balance ecological preservation with human needs, demonstrating creativity and scientific rigor.

Data Interpretation and Representation

- Producing polished, accurate representations of food webs and nutrient cycles, including annotated diagrams that reflect a deep understanding of ecological processes.
- Using data from case studies or experiments to draw meaningful conclusions about energy transfer, biodiversity, or conservation strategies.



- Understand the importance of conservation and sustainable practices in preserving biodiversity and ecosystems.
- Identify examples of conservation strategies, such as reforestation, protected areas, and breeding programs.

Understanding

- Analyze how energy transfer is inefficient at each trophic level, explaining the concept of energy loss as heat, respiration, or excretion.
- Evaluate the interdependence of organisms in food chains and food webs, recognizing the impact of changes at one level on the entire ecosystem.
- Explain the role of carbon in biological processes and its movement through ecosystems, emphasizing the balance between sources and sinks.
- Assess the environmental consequences of habitat destruction, including loss of biodiversity and disruption of ecosystems.
- Evaluate the effectiveness of conservation methods in maintaining ecological balance and preventing extinction.
- Relate human activities, such as industrialization and agriculture, to

Global and Ethical Awareness

- Demonstrating awareness of the ethical implications of habitat destruction and conservation, articulating the importance of biodiversity for ecological balance and human well-being.
- Making informed, well-reasoned arguments for conservation initiatives, considering cultural, economic, and environmental factors.

		disruptions in energy flow, food webs, and the carbon cycle. Skills Construct and interpret food chains and food webs, identifying relationships and energy transfers between organisms. Use data to calculate and represent energy transfer efficiency between trophic levels. Analyze case studies on habitat destruction and propose solutions for mitigating impacts. Design and evaluate conservation strategies tailored to specific ecosystems or species. Investigate the carbon cycle using models and diagrams, identifying processes and their contributions to the cycle.	
How will th	is be assessed?	Quiz, presentation, group work and mock exam	
Biology	Variation & Inheritance Biotechnology & Genetic Engineering	In the study of Variation and Inheritance within the context of Biotechnology and Genetic Engineering, we will gain a deep understanding of the fundamental principles of genetics, including how traits are passed from one generation to the next through inheritance patterns such as Mendelian inheritance. We will explore the role of genetic variation in evolution and its significance in the development of new biotechnological tools and applications. The knowledge will cover techniques	Excellence in the study of Variation and Inheritance within Biotechnology and Genetic Engineering will be demonstrated by a deep and comprehensive understanding of genetic principles and their practical applications. It will involve the ability to critically analyse genetic data, apply advanced techniques such as gene editing, and evaluate the ethical, social, and environmental implications of genetic modifications. Excellence will also be reflected in the ability to design and conduct experiments, interpret results with precision, and effectively communicate complex genetic concepts. Mastery of

such as gene editing (e.g., CRISPR), cloning, and this field will involve innovative problem-solving skills, where recombinant DNA technology, which are used to students not only understand existing technologies but also manipulate genetic material. We will also develop contribute to the development of new methods that advance skills analysing genetic sequences, biotechnological progress in medicine, agriculture, and understanding gene expression, and applying this environmental science. knowledge to areas such as medicine, agriculture, and environmental sustainability. This knowledge is essential for creating innovative solutions to address global challenges such as disease prevention, food security, and biodiversity conservation. Assessment in the study of Variation and Inheritance within Biotechnology and Genetic Engineering will be comprehensive, focusing on both theoretical understanding and practical application. Students will be evaluated through written examinations that test their grasp of genetic principles and inheritance patterns, as well as their ability to apply knowledge to solve problems. Practical assessments, such as laboratory reports, will assess skills in How will this be assessed? conducting experiments, analysing genetic data, and using biotechnology tools like gene editing. Additionally, project work and presentations will gauge students' ability to design research, communicate complex ideas, and consider the ethical implications of genetic technologies. This combination of assessments ensures a well-rounded evaluation of both technical proficiency and critical thinking in real-world contexts. In studying Organic Chemistry, we will gain a deep understanding of the structure, properties, and Excellence in Organic Chemistry will be demonstrated by a reactions of organic compounds, focusing on the role of carbon in forming diverse molecules. We will explore various functional groups, reaction mechanisms, and the principles behind the synthesis of complex compounds. The knowledge **Organic Chemistry** Chemistry will also encompass the application of organic chemistry in fields such as pharmaceuticals, materials science, and environmental chemistry.

Additionally, we will develop practical skills in

laboratory techniques, including the synthesis,

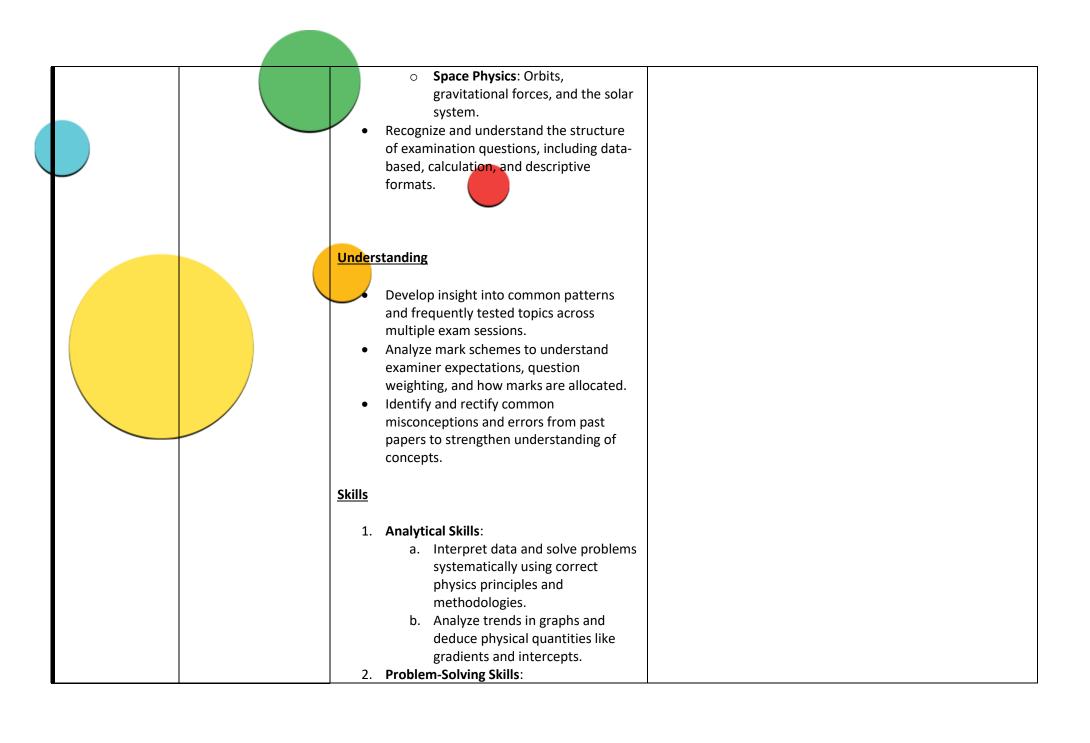
purification, and analysis of organic compounds,

while also enhancing our ability to solve problems,

interpret spectroscopic data, and critically assess

thorough and precise understanding of the fundamental concepts, such as reaction mechanisms, molecular structure, and functional group chemistry. It will involve the ability to apply this knowledge to solve complex problems, predict reaction outcomes, and design efficient synthetic routes for organic compounds. Excellence will also be reflected in a high level of practical competence, including the ability to perform laboratory techniques accurately, analyse and interpret spectroscopic data with precision, and synthesise compounds with a clear understanding of their properties and uses. Furthermore, students will exhibit critical thinking by assessing the environmental, economic, and health implications of

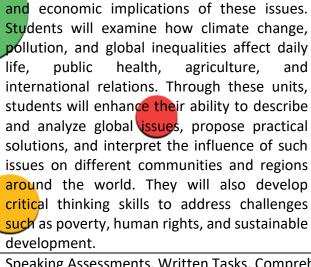
		the environmental and health impacts of chemical processes.	chemical processes and communicating their findings clearly and effectively.
How will th	is be assessed?	examinations will test understanding of core concerability to apply knowledge to solve complex chemic will evaluate students ability to conduct experiment Additionally, students may be assessed through asset to design synthetic routes or critically assess the presentations or case studies may be used to assess the mistry concepts effectively.	combination of theoretical and practical components. Written epts, such as reaction mechanisms, molecular structure, and the cal problems. Practical assessments, including laboratory reports, ats, synthesise organic compounds, and analyse data accurately. Signments or project work, where they demonstrate their ability environmental and health impacts of organic reactions. Finally, is communication skills and the ability to explain complex organic
Physics	Past Paper Practice	Gain familiarity with the breadth and depth of the IGCSE Physics syllabus by reviewing past examination papers. Recall and apply key physics concepts from all units, including: Mechanics: Motion, forces, energy, work, and power. Thermal Physics: States of matter, heat transfer, and thermal properties. Waves: Properties of light, sound, and wave behavior. Electricity and Magnetism: Circuit components, Ohm's law, electromagnetism. Nuclear Physics: Atomic structure and radioactivity.	 Demonstrate confidence and fluency in answering a wide range of past paper questions. Exhibit the ability to apply theoretical and practical physics concepts effectively in diverse scenarios. Achieve precision in calculations, graphical interpretation, and written responses, aligned with examiner expectations. Develop a strong understanding of question patterns, common pitfalls, and time management strategies. Show measurable improvement in accuracy, speed, and overall performance across past paper attempts.



	a. Solve quantitative problems using formulas and ensure proper unit conversions. b. Apply theoretical knowledge to practical, real-world scenarios described in questions. 3. Examination Techniques: a. Manage time effectively by practicing exam conditions. b. Identify command words such as state, explain, calculate, and describe to tailor answers appropriately. c. Ensure clarity and precision in written responses to maximize marks. 4. Reflection and Adaptation: a. Compare responses to mark schemes to identify gaps and improve future answers. b. Learn to self-assess and target weak areas for focused improvement.	
How will this be assessed?	Quiz, presentation, group work and mock exam	
History	By studying how far the USSR was able to exert its influence over the Eastern Bloc from 1956 to 1989, Year 11 IGCSE History students learn about key events that challenged Soviet control and the responses to them. They examine the Hungarian Uprising of 1956, the Prague Spring in Czechoslovakia, the construction and	Excellence in this topic is demonstrated by a deep understanding of the causes, events, and consequences of these challenges to Soviet control. Students who excel can evaluate the effectiveness of the USSR's responses, compare the impact of different events, and explain how they contributed to

		significance of the Berlin Wall, and the role of Solidarity in Poland. Students explore how the USSR maintained authority through military interventions and political pressure, while also analyzing the growing resistance and eventual decline of Soviet dominance leading to the end of the Cold War.	and make insightful connections to broader themes of Cold War history, showing critical thinking and clear communication in their work.
How will th	is be assessed?	Past GCSE Questions, Minor Assessment, Group Wo	rk, Presentations
Business Studies	Section 6: External influences on business activity	Understanding how economic conditions, such as inflation, interest rates, unemployment, and exchange rates, affect business activities. Analysing and evaluating the potential impact of external influences on a business's operations, strategy, and performance. Being able to anticipate potential challenges or opportunities for a business in response to changing external conditions. Identifying external risks (economic downturns, political instability, supply chain disruptions) and developing plans to minimize their impact on business operations.	Analysing and interpreting a wide range of external factors that affect business activity, showing a deep understanding of their interconnections. Proactively suggesting strategies for businesses to navigate challenges or leverage opportunities presented by these external influences. Communicating effectively about how external factors affect a business, using evidence and real-world examples to support their conclusions. Applying their knowledge and skills in practical scenarios, demonstrating critical thinking, problem-solving, and adaptability in response to changes in the external business environment.
How will this be assessed?		Teacher/self-assessment, presentation, past-year qu	
Economics	Section 6: International trade and globalisation	Understanding the difference between exports (goods/services sold to other countries) and imports (goods/services purchased from other countries). Understanding globalisation as the process by which businesses, ideas, and cultures	Analysing the effects of international trade policies and globalization on businesses, economies, and societies, providing well-reasoned arguments and recommendations. Effectively applying theories of trade, such as comparative advantage, to real-world scenarios. Identifying global

		spread across the globe. Analysing the impact of international trade and globalization on businesses, economies, and societies, considering both positive and negative aspects. Evaluating the effectiveness of different trade policies and agreements and their impact on global economic development.	opportunities and challenges for businesses, and proposing strategies for success in international markets. Demonstrating an ability to think critically about the social, political, and ethical dimensions of globalization, while communicating complex ideas clearly to diverse audiences.
How will thi	s be assessed?	Teacher/self-assessment, presentation, past-year qu	uestions, projects, group work
ICT	Chapter 6: ICT Applications PYO Practice	 Knowledge: Understand various ICT applications, including communication, data handling, manufacturing, medicine, banking, and satellite systems like GPS and GIS. Understanding: Grasp how ICT enhances efficiency, accuracy, and decision-making across industries while considering ethical implications. Skills: Analyze, evaluate, and recommend ICT solutions for specific needs, optimizing processes in diverse contexts. 	Critically assess and propose innovative ICT applications, demonstrating advanced problem-solving and evaluative skills.
How will thi	s be assessed?	Past year Questions	
Malay Language	Unit 30: Isu-Isu Dunia	Students will explore <i>isu-isu dunia</i> (global issues), focusing on key topics such as environmental challenges, social problems, and the interconnectedness of global systems. They will gain an understanding of the impact of human activities like deforestation, urbanization, and industrialization on the environment, as well as the social, political,	 Accurate use of vocabulary related to global issues such as climate change, deforestation, poverty, human rights, and sustainable development in both discussions and written tasks. Clear understanding of the social, political, and environmental impacts of human activities on a global scale.



- Well-structured written work with detailed explanations of global issues, clearly organized arguments, and minimal errors.
- Engaging participation in discussions, demonstrating insightful thinking about the causes, effects, and possible solutions to global challenges such as poverty, human rights, and environmental sustainability.

How will this be assessed?

Mandarin

第一语言: 历年试卷 习题

第二语言:

Speaking Practice:
Focus on improving spoken Mandarin through practice conversations and role-plays.
IGCSE Past Year
Papers: Review and practice with past

writing.

Mandarin as a

Foreign Language:

exam papers, focusing

on all skills: listening,

speaking, reading, and

Speaking Assessments, Written Tasks, Comprehension Tests, Class Discussions

第一语言: 学生通过完成历年试卷,阅读各种文章对不同的故事展开讨论,并从中提升对现代汉语及古代汉语的阅读理解能力。另外,学生在进相关课题进行探讨,发表自己的看法,利用所学到的写作手法书写不同主题的文章。

第二语言:

- **Knowledge**: Familiarity with IGCSE exam format and question types.
- Understanding: Develop strategies for answering speaking, reading, and writing questions effectively.
- Skills: Enhance listening comprehension, speaking fluency, reading accuracy, and writing skills.

Mandarin as a Foreign Language:

第一语言: 学生将阅读的文章如: 《不可言述的痛》、《菜场上见君子》等, 及文言文《李疑传》、《沧浪亭记》等, 通过课堂讨论及回答问题从而探讨文中的相关的知识点以及提高学生的写作技巧。

第二语言:

- Confident and fluent speaking with accurate pronunciation and grammar.
- High accuracy in answering listening, reading, and writing questions from past papers.
- Demonstrating improved performance across all skills in mock exams.

Mandarin as a Foreign Language:

- Confidently apply exam strategies in practice papers.
- Demonstrate improvement in all language skills.
- Achieve high accuracy and fluency in mock exams, reflecting exam readiness.

	Past Papers and Examination Preparation: Review and practice with past papers, focusing on all language skills (listening, speaking, reading, writing) to prepare for the exam.	 Knowledge: Familiarity with the exam format and common question types. Understanding: Apply strategies for effective exam preparation and time management. Skills: Strengthen all language skills through targeted practice and self-assessment. 	
Art & Design	Component 2	In this unit, students will gain a comprehensive understanding of the specific requirements and objectives of Component 1 in the IGCSE exam, while expanding their knowledge of various media, processes, and techniques in art and design. They will recognize the importance of personal expression and analytical skills in meeting assessment criteria. Students will also learn to select and control media effectively to create cohesive work, understanding the significance of form, composition, and relationships in their artwork. Through critical thinking and evaluation, they will develop the ability to solve creative problems, organize visual elements, and refine technical skills in a range of media. Additionally, students will enhance their analytical skills by evaluating both their own work and that of others, while cultivating	Excellence will be demonstrated by students' ability to confidently and independently select, control, and experiment with a range of media and techniques. Their work will show thoughtful organization of elements, resulting in visually balanced and meaningful compositions. Students will demonstrate strong analytical skills, both in their personal responses and when evaluating form, relationships, and techniques in their work. Their problem-solving abilities will shine through as they address artistic challenges, with outcomes that are original, personal, and reflective of their understanding of the IGCSE requirements. Excellence will also be shown in their ability to communicate a clear and mature artistic vision.

	problem-solving abilities to produce original, meaningful personal responses.	
How will this be assessed?	experimentation with materials. Observation of studer creatively throughout the course. Summative Assessment: Assessment of the final project technical skill, composition, and personal response. Each techniques, and how effectively they communicated	ment of sketchbook work, including initial ideas, research, and nts' ability to organize visual elements and solve problems ect for Component 2 based on IGCSE criteria, including creativity, Evaluation of how well students demonstrate control over mediate their artistic vision. Clarity of thought, problem-solving, and the use of analytical skills
	Knowledge and understanding: Demonstrate knowledge and understanding of facts, terms and concepts of travel and tourism. Application: Apply knowledge and understanding of facts, terms and concepts to familiar and unfamiliar contexts in travel and tourism. Analysis: Analyse travel and tourism issues and show an understanding of the possible impacts of those issues on travel and tourism. Evaluation: Evaluate information to develop arguments, understand implications, draw inferences and make judgements, recommendations and decisions.	Excellence will look like students understanding and having a deep knowledge of all 5 Units of the syllabus. They will be able to apply this knowledge to a range of situations and case studies and will also be able to use case studies and other previous areas of study to help analyse and evaluate. Students will know the meaning of all command words and will be able to answer questions suitably according to the command word used. They will have a good understanding of the level of detail they will need to include in each question, and which skills to demonstrate. In particular, they will be able to answer 6-and 9-mark questions with confidence and the correct level of detail, analysing and evaluating with enough insight to achieve full marks.
		misight to achieve full marks.

Humanities –
Global
Perspectives

How will this be assessed?

Vo

Volleyball:

Students will gain foundational knowledge of volleyball, focusing on digging, setting and serving techniques. They will also learn the basic rules of the game, fostering an understanding of gameplay and the importance of teamwork. These skills will improve their hand-eye coordination, communication, and ability to participate confidently in the sport.

Healthy living

Teamwork, communication, decision making, spatial awareness

Swimming:

Students will develop technical skills in two swimming strokes, focusing on proper pulling, kicking, and coordination to ensure efficiency and effectiveness in the water. They will also work on improving either speed or endurance, depending on their focus, enhancing their

Volleyball:

- Digging: Delivers accurate, controlled digs, effectively handling challenging balls and setting up plays.
- **Serving**: Executes powerful and precise serves, placing the ball strategically to challenge opponents.
- **Setting**: Produces consistent, well-placed sets that enable teammates to execute successful attacks.
- **Spiking**: Demonstrates strong, accurate spikes with excellent timing, power, and placement to score points.
- Blocking: Effectively reads opponents' plays and executes well-timed blocks to disrupt their attacks.
- Roles: Shows a clear understanding of team roles, performing effectively in different positions and contributing to team strategy with strong communication and teamwork.

Healthy Living

- **Teamwork**: Proactive collaboration, effective support, and positive team dynamics.
- **Communication**: Clear, precise, and effective verbal and non-verbal communication.

