Straits International School Rawang
Curriculum Overview
Year 9 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	**Perimeter Area and Volume** **Pythagoras Theorems and similar shapes** **Understanding Measurement**	Learn to calculate areas and perimeters of two-dimensional shapes and shapes that can be separated into simpler forms. Also, explore how to calculate areas and circumferences of circles, as well as areas and perimeters of circular sectors. This chapter covers using nets for three-dimensional solids, and calculating the volumes and surface areas of solids, including pyramids, cones, and spheres. To use the Pythagoras' theorem to find the unknown sides, Use the properties of similar triangles to find unknown length, areas, surface, areas and volumes of similar solids. Convert between units in the metric system. Find the lower and upper bounds of numbers that have been quoted to given accuracy. Solve problem involving upper and lower bounds, use conversion graphs to change units from one measuring system to another use exchange rates to convert currencies.	Excellence in this context involves demonstrating a deep understanding of geometric and measurement principles. Students will accurately calculate areas, perimeters, and circumferences of 2D shapes and circular sectors, and apply these skills to composite shapes. Students will confidently work with 3D shapes, using nets to explore their properties and calculating volumes and surface areas of solids like pyramids, cones, and spheres. Mastery includes applying the Pythagoras' theorem and properties of similar figures to solve complex problems, converting units seamlessly, and handling real-world scenarios involving bounds, graphs, and currency exchange with precision and logical reasoning.

How will this be assessed?		Class discussions, mental maths, minor assessments.	
First Language English	Fiction Reading	Discuss their own and others' reading, take account of others' views of what they have read, express informed opinions and make recommendations; Analyse how texts are shaped by audiences' preferences and opinions; Select from a range of strategies and use the most appropriate ways to locate, retrieve and compare information and ideas from a variety of texts; Develop interpretations of texts, supporting points with detailed textual evidence; Use a repertoire of reading strategies to analyse and explore different layers of meaning within texts; Show some appreciation of how a writer's language choices contribute to the overall effect on the reader; Analyse in depth and detail a writer's use of literary, rhetorical, and grammatical features and their effects on different readers; Develop precise, perceptive analysis of how language is used; Understand how words are used for different purposes; Demonstrate understanding of the impact of vocabulary on meaning through the selection of appropriate quotations; Develop an understanding of how ideas, experiences and values are portrayed in texts from different cultures and traditions.	Excellence will look like being able to confidently analyse all fiction texts, from novel extracts to short stories. This will involve students being able to write a clear and concise topic sentence, carefully select evidence and quotations to support their statements, and explain the meaning and effect of this evidence in context. Students will be able to perceptively comment on writers' intentions and the effects of a large variety of literary devices. They will understand, and be able to define and explore, the connotations of a variety of vocabulary. Students will demonstrate strong comprehension skills with several texts. They will be able to use inference skills to 'read between the lines' and identify subtle meaning and tone within a text.
How will this be assessed?		Self-assessment, peer assessment, formative teacher assessment, minor assessment.	
English as a Second Language	Unit 4: Science Unit 5: Technology	Learn about how we see colours; talk about developments in medical science; listen to a conversation about DNA and genetics; read about a young Kenyan's invention for protecting livestock and wildlife; differentiate between fact and opinion in texts about endangered species; write an essay giving your views about	Read and answer comprehension questions on the science of colour; listen and discuss DNA and genetics; write a short paragraph about endangered species using facts and opinions; write an essay about zoos; create a poem. Give a speech to discuss how you use social media; debate on the pros and cons of digital media; read an article and answer comprehension questions; write a

		zoos; research and present the life of a medical pioneer, give a performance of a poem. Discuss how you use social media; read about the technology in homes of the future; read about how archaeologists used technology to make a remarkable discovery; make predictions of what life will be like in ten years' time; write a report; create a timeline.	report on technology in your school; present a technology timeline for the future.
How will this be assessed?		Teacher/self-assessment, presentation, speaking tasks, projects, group work	
English as an Additional Language (EAL)	Health	Students will explore the topic of health by engaging in various activities, including reading, listening, and watching a passage about cleanliness and answering related questions. They will learn to use *will* and *won't* for expressing future actions and *will be going to* for making predictions, practicing these through speaking activities. Students will read a passage about antibiotics and its usage, responding to open-ended questions to deepen their understanding. They will study the purpose of infinitives in sentences and learn key vocabulary for writing instructions. Discussions and speaking activities will focus on the benefits of exercise and how feelings can impact health. Additionally, students will complete a listening activity to extract factual details and learn how to form first conditional sentences. Finally, they will write an article on health-related topics, demonstrating their understanding and application of the concepts learned.	Students can confidently read, listen, and watch content about health, demonstrating comprehension by answering questions accurately and thoughtfully. They will use *will* and *won't* and *will be going to* for predictions in speaking activities, showcasing clear and correct usage. Students will show a deep understanding of antibiotics through their responses to open-ended questions and apply their knowledge of infinitives to create well-structured sentences. They will use key vocabulary to write clear, step-by-step instructions and engage in meaningful discussions about the benefits of exercise and how emotions can affect health. Through listening activities, they will accurately extract and interpret factual details, and they will form first conditional sentences with ease. Finally, students will write a comprehensive and engaging article on health-related matters, demonstrating their ability to synthesize and apply their learning with clarity and insight.

How will this be assessed?		Teacher/self-assessment, presentation, speaking tasks, projects, group work	

Science	P1 Motion, force & energy (Part 2)
	B3 Movement Into & Out of Cell
		In part 2 of Unit 1 Physics, students will:
		<u>Knowledge</u>
		• Define energy as the ability to do work.
		• Identify forms of energy: kinetic, potential, thermal, chemical, nuclear, elastic, etc.
		• State and apply the law of conservation of energy.
		• Understand work as the product of force and displacement (W = F × d).
		• Define power as the rate of work done or energy transferred (P = W/t or P = ΔE/t).
		• Know the formulas for:
		  ○ Kinetic energy (1/2mv2)
		  ○ Gravitational potential energy (mgh)
		  ○ Work-energy principle (W=ΔE)
		<u>Understanding</u>
		• Explain energy transfers through mechanical work, heating, and radiation.
		• Understand efficiency
		• Relate power output to real-life situations, e.g., engines and household appliances.
		• Explain energy dissipation in systems.
			Students will excel in:
			Critical Thinking and Problem Solving
			• Identifying and addressing gaps in reasoning during problem-solving tasks or practical investigations.
			• Explaining the implications of experimental findings or theoretical models beyond the syllabus content.
			Creativity and Innovation
			• Proposing alternative experimental setups or improvements to established methods.
			• Applying theoretical concepts to explain unfamiliar phenomena or create models for understanding them.
			Communication and Collaboration
			• Articulating ideas clearly and concisely in verbal or written form, using correct scientific terminology.
			• Collaborating effectively in group settings, contributing original ideas and fostering peer learning.

		Skills • Solve numerical problems involving work, energy, and power. • Interpret energy flow diagrams (Sankey diagrams). In Unit 3 of Biology, students will: **Knowledge** • Mastery of definitions, processes, and examples of diffusion, osmosis, and active transport. • Deep understanding of the factors affecting each process and their interdependence with cellular and organismal functions. **Understanding** • Analyzing and synthesizing connections between processes, e.g., how osmosis and active transport work together in root water and nutrient uptake. • Explaining complex ideas clearly, such as the energy dependence of active transport or the osmotic challenges faced by cells in hypertonic environments. • Applying knowledge to novel scenarios, such as predicting outcomes in	

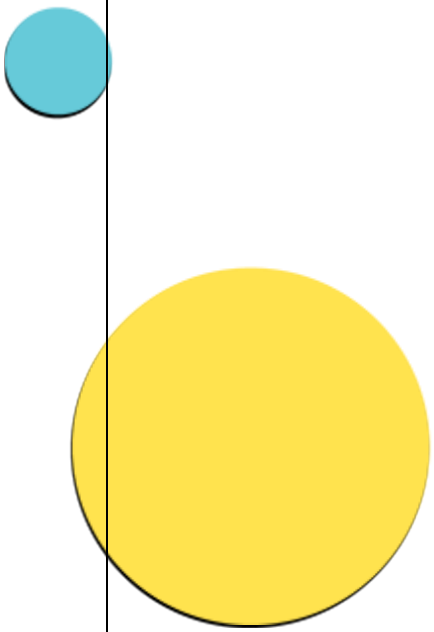
		experiments or real-life biological phenomena. **Skills** • Conducting and evaluating practical investigations with precision, e.g., determining water potential using osmosis experiments with different concentrations. • Presenting data through graphs, tables, or diagrams, with accurate labeling and detailed interpretation. • Designing innovative experiments to investigate diffusion or active transport, ensuring variables are appropriately controlled. • Using scientific terminology fluently and appropriately in written and verbal explanations.	
How will this be assessed?		Quiz, presentation, group work and minor assessment	
History		By studying the rise of dictators in the 1920s and 1930s, including Hitler's ascent to power, Year 9 students learn about the political, economic, and social challenges that allowed authoritarian leaders to emerge. They explore the impact of events such as the Treaty of Versailles, the Great Depression, and the weaknesses of democratic systems,	Excellence in this topic is demonstrated by a deep understanding of how and why dictators like Hitler rose to power, as well as the ability to explain these events using historical evidence. Students who excel can evaluate different perspectives, make insightful connections between causes and effects, and communicate their ideas clearly and effectively in

		examining how Hitler used propaganda, intimidation, and public support to consolidate power. Students also analyse the consequences of dictatorship, including the loss of freedoms, persecution of minorities, and preparation for war.	both discussion and writing. They can also reflect on the lessons these events offer for modern societies.
How will this be assessed?		Worksheets, Minor Assessment, Self-Assessment and Peer-Assessment	
Enterprise	Market research	Understanding primary research (e.g., surveys, interviews) and secondary research (e.g., industry reports, online data). Awareness of qualitative vs. quantitative data and their applications. Recognising why market research is essential for business planning, product development, and reducing business risks. Understanding how to interpret and use research findings to inform business decisions. Designing and conducting surveys or interviews. Analysing data sets to identify trends and patterns.	Demonstrate a deep understanding of both primary and secondary research methods, explaining their advantages, limitations, and appropriate applications. Evaluate the impact of market research findings on business decisions, showing a nuanced understanding of consumer behaviour and market dynamics. Design and conducts well-structured, unbiased surveys or interviews that yield meaningful insights. Analyse complex datasets accurately, identifying key trends and drawing insightful conclusions.
How will this be assessed?		Teacher/self-assessment, presentation, speaking tasks, projects, group work	
ICT	Chapter 1- Computational thinking and programming	• **Knowledge**: Students should understand the structure and purpose of pseudocode, the concept of iteration (repeating processes), how to design algorithms, and the use of loops (e.g., for, while) in text-based programming.	Excellence is demonstrated by creating robust and efficient algorithms with clear documentation, seamlessly implementing complex loops in programs, and debugging iterative solutions to ensure accuracy and optimization. Advanced students should be able to evaluate and refine algorithms for scalability and efficiency.

		• **Understanding**: They should comprehend how to break down problems into steps, recognize when and how to use iteration to simplify repetitive tasks, and translate pseudocode into functional loops and algorithms in programming. **Skills**: Students develop the ability to: • Write and interpret pseudocode to represent problem-solving steps. • Implement iteration techniques in algorithms and loops in programming. • Create and optimize algorithms for solving structured and real-world problems. • Transition logical designs into executable code using text-based programming languages like Python.	
How will this be assessed?		Minor Assessment, Worksheets, Project	
Malay Language	Unit 15: Panduan Arah	In Unit 15: Panduan Arah (Giving Directions), Year 9 students will develop the skills to give and understand directions, helping them navigate and explain routes. They will learn how to use prepositions such as di atas (on), di bawah (under), di sebelah (beside), and depan (in front) to describe locations and guide others effectively. Students will also explore Kata Arah (directional words) and practice how to read and interpret maps, explaining how to get from one place to another using these	In this unit, students will excel in the following areas: 1. **Giving and Understanding Directions**: Students will learn how to clearly give and follow directions in various contexts, using appropriate phrases and vocabulary. 2. **Using Prepositions to Describe Locations**: Students will master the use of prepositions to describe the position of objects and places, enhancing their ability to explain spatial relationships.

		directional terms. By engaging in activities such as role-playing and map exercises, students will gain confidence in offering clear, accurate directions and using directional vocabulary correctly in real-life situations.	3. **Interpreting Maps**: Students will develop the skills to read maps and use directional language to explain routes from one place to another. 4. **Applying Kata Arah**: Students will gain a strong understanding of **Kata Arah** (directional terms) and use them correctly in both written and spoken communication.
How will this be assessed?		Speaking Assessments, Written Tasks, Comprehension Tests, Class Discussions	
Mandarin	**Advanced**: 生活方式 **Intermediate:** **Extra-Curricular Activities (ECA)**: Discuss which ECAs you will join and why. **Eating Habits (饮食习惯)**: Talk about your favorite and least favorite foods. **Healthy Lifestyle（健康生活)**: Learn how to maintain a healthy lifestyle and the importance of a balanced diet.	**Advanced**：在这个单元学生将会认识与掌握关于生活方式文章和词汇，同时也了解和明白在疫情后人类改变了哪些生活方式和厌食症课题。 **Intermediate:** • **Knowledge**: Understand vocabulary related to ECAs, food, and healthy living. • **Understanding**: Be able to express reasons for joining activities and describe personal eating habits. • **Skills**: Form clear sentences, express preferences, and discuss healthy habits confidently.	**Advanced:** • 听懂关于风俗与传统的短文或文章，能捕捉文内容中主要传达的信息。 • 运用所学习的词汇和语法，谈论自己的自己以及身边所接触或未接触的风俗和传统的仪式。 • 掌握各类文章的写法，准确地表达自己的观点。 **Intermediate:** • Articulate reasons for joining ECAs and discuss food preferences with fluency. • Write clear, well-organized sentences about maintaining a healthy lifestyle. • Demonstrate understanding of healthy diets and explain them thoughtfully in conversation.
How will this be assessed?		Teacher/self-assessment, presentation, speaking tasks, projects, group work	

Art & Design	Inspiring Modern Artwork Through Cultural Practices	Students will gain knowledge of various cultural art forms and their significance. They will understand how art is used to communicate cultural traditions, stories, and social values. Students will also develop practical skills in using materials and techniques specific to each culture, enhancing their creative ability and technical proficiency.	Students' ability to create artwork that thoughtfully reflects the cultural elements they studied, demonstrating both an understanding of tradition and personal creativity. Their work will show high technical skill in using the chosen techniques, originality in adapting these techniques, and a clear connection to the cultural context.
How will this be assessed?		Presentation and Minor Assessment	
Music	Popular Music	The Popular Music unit introduces students to the concept of popular music and its significance in their lives. Throughout the unit, students will explore various types of popular music, focusing on the importance of musical structure within the genre. They will analyze key musical elements and structures, gaining a deeper understanding of composition and how they contribute to the creation of pop music.	Excellence will be demonstrated through a clear understanding of the structure of popular music, with students applying this knowledge to create their own compositions.
How will this be assessed?		Composition, Assessment	
PE		**Basketball**: Students will develop essential basketball skills, including dribbling with control, accurate passing, and effective shooting techniques. Through gameplay, they will learn teamwork, strategic thinking, and court awareness, enhancing their decision-making and collaboration skills. **Volleyball**:	**Basketball**: • **Passing**: Delivers accurate, well-timed passes under various conditions, using different techniques to maintain ball movement and create scoring opportunities. • **Shooting**: Consistently accurate from various positions, with proper form and the ability to perform effectively under pressure. • **Dribbling Under Pressure**: Maintains control and composure while dribbling in high-pressure

		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.	situations, using both hands effectively and adapting to defensive challenges. • **Gameplay**: Demonstrates advanced court awareness, quick decision-making, and strong teamwork, making strategic contributions on both offense and defense. **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.
How will this be assessed?	Basketball and volleyball match		