

Woodgrove Secondary School
O-Level Preliminary Examination 2022
Topics Coverage & Assessment Format

Level/Stream: Sec 4 Express

Subject	Topics/ Chapters	Assessment Format (format, duration, total marks & date of assessment)
English Language & 4NA (SBB Exp)	<p>Paper 1: Writing [35%]</p> <p>Section A: Editing</p> <ul style="list-style-type: none"> Students will be tested on grammatical features taught from Sec 1 – 4. Students will <u>NOT</u> be required to provide the Grammar Error Type (G.E.T.) for the errors identified. <p>Section B: Situational Writing (250 – 350 words)</p> <ul style="list-style-type: none"> One text-type will be assessed based on any text-type taught (e.g. <i>article, informal letter/email, formal letter/email, speech, proposal, etc.</i>) <p>Section C: Continuous Writing (350 – 500 words)</p> <ul style="list-style-type: none"> Students will be required to choose one out of four questions and write an essay based on any of the text-types taught. (e.g. <i>narrative, expository, reflective, etc.</i>) <p>Paper 2: Comprehension [35%]</p> <p>Section A: Comprehension I</p> <ul style="list-style-type: none"> Visual Text <p>Section B: Comprehension II</p> <ul style="list-style-type: none"> Narrative or Recount Text All Question Types <p>Section C: Comprehension III</p> <ul style="list-style-type: none"> Non-narrative Text All Question Types Summary (not more than 80 words) <p>Paper 3: Listening [10%]</p> <ul style="list-style-type: none"> Students listen to a variety of spoken texts and complete a range of listening tasks. Spoken texts such as conversations, speeches, announcements, reports and information texts may be included. <p>Paper 4: Oral Communication [20%]</p> <ul style="list-style-type: none"> Students will read aloud a text as well as engage in a discussion with the examiners on a topic based on a visual stimulus. 	<p>Paper 1 (70 m) Duration: 1 hr 50 mins</p> <p>Paper 2 (50 m) Duration: 1 hr 50 mins</p> <p>Paper 3 (30 m) Duration: 45 mins</p> <p>Paper 4 (30 m) Duration: 15 mins</p>
Elementary Mathematics & 4NA (SBB Exp)	<p>1) Numbers and Algebra Numbers and the four operations, Ratio, Rate and Proportion, Percentage, Speed, Algebraic Representation and Formulae, Algebraic Manipulation, Functions and Graphs, Solutions of Equations and Inequalities, Applications of Mathematics in Practical Solutions, Set Language and Notation, Matrices</p> <p>2) Geometry and Measurement Angles, Triangles and Polygons, Congruence and Similarity, Properties of circles, Pythagoras' Theorem and Trigonometry, Mensuration, Coordinate Geometry, Vectors in two dimensions.</p> <p>3) Statistics and Probability</p>	<p><u>Paper 1 (80 marks)</u> Answer all questions</p> <p>Duration: 2 h</p> <p><u>Paper 2 (100 marks)</u> Answer all questions</p> <p>Duration: 2 h 30 mins</p>

Woodgrove Secondary School
O-Level Preliminary Examination 2022
Topics Coverage & Assessment Format

Subject	Topics/ Chapters	Assessment Format (format, duration, total marks & date of assessment)
	Data Handling, Data Analysis, Probability	
Additional Mathematics (4049)	Chapter 1 : Quadratic Functions Chapter 2 : Equations and Inequalities Chapter 3 : Surds Chapter 4 : Polynomials and Partial Fractions Chapter 5 : Exponential and Logarithmic Functions and Equations Chapter 6 : Binomial Expansions Chapter 7 : Coordinate Geometry of Lines and Rectilinear Figures Chapter 8 : Coordinate Geometry of Circles Chapter 9: Trigonometric Functions , Graphs and Equations Chapter 10: Trigonometric Identities and Formulae Chapter 11: Differentiation Chapter 12: Tangents, Normals and Rate of Change Chapter 13: Maxima and Minima Chapter 14: Further Differentiation Chapter 15: Indefinite Integrals Chapter 16: Definite Integrals Chapter 17: Kinematics Chapter 18: Proofs in Plane Geometry Textbook: New Discovery Additional Mathematics (Star Publishing)	Paper 1 (90 marks) Answer all questions Duration: 2 h 15 mins Paper 2 (90 marks) Answer all questions Duration: 2 h 15 mins
Pure Biology	Chapter 2: Cells Chapter 3: Movement of substances Chapter 4: Nutrients Chapter 5: Enzymes Chapter 6: Nutrition in Humans Chapter 7: Nutrition in Plants Chapter 8: Transport in Humans Chapter 9: Transport in Plants Chapter 10: Respiration Chapter 11: Excretion Chapter 12: Homeostasis Chapter 13: The Nervous System Chapter 14: The Human Eye Chapter 15: Hormones Chapter 16: Cell Division Chapter 17: Reproduction in Plants Chapter 18: Reproduction in Humans Chapter 19: Heredity Chapter 20: Molecular Genetics Chapter 21: Ecology Chapter 22: Impact on the Ecosystem Textbook: GCE 'O' Level Biology Matters	Paper 1 [1 h] Multiple Choice Questions (40m) Paper 2 [1h 45mins] <u>Section A (50m)</u> Structured Questions Section B <u>Section B(30m)</u> The first two questions are compulsory questions, one of which will be a data-based question. The last question will be presented in an either/or form.
Pure Chemistry	Chapter 1: Kinetic Particle Theory Chapter 2: Measurement and Experimental Techniques Chapter 3: Purification and Separation Chapter 4: Elements, Mixtures & Compounds Chapter 5: Atomic Structure Chapter 6: Ionic Bonding	Paper 1 [1 h] Multiple Choice Questions (40m) Paper 2 [1h 45 mins]

Woodgrove Secondary School
O-Level Preliminary Examination 2022
Topics Coverage & Assessment Format

Subject	Topics/ Chapters	Assessment Format (format, duration, total marks & date of assessment)
	Chapter 7: Covalent and Metallic Bonding Chapter 8: Writing Equations Chapter 9: The Mole Chapter 10: Chemical Calculations Chapter 11: Acids & Bases Chapter 12: Salts Chapter 13: Oxidation & reduction Chapter 14: Metals Chapter 15: Electrolysis Chapter 16: Periodic Table Chapter 17: Energy Changes Chapter 18: Speed of Reaction Chapter 19: Ammonia Chapter 20: The Atmosphere and Environment Chapter 21: Introduction to Organic Chemistry Chapter 22: Alkanes and Alkenes Chapter 23: Alcohols and Carboxylic Acids Chapter 24: Macromolecules Textbook: GCE 'O' Level Chemistry Matters	<u>Section A (50m)</u> Short Structured Questions <u>Section B (30m)</u> The first two questions are compulsory questions, one of which will be a data-based question. The last question will be presented in an either/or form.
Pure Physics	Chapter 1: Physical Quantities, Units and Measurement Chapter 2: Kinematics Chapter 3: Forces & Dynamics Chapter 4: Mass, Weight and Density Chapter 5: Turning Effect of Forces Chapter 6: Energy, Work & Power Chapter 7: Pressure Chapter 8: Temperature Chapter 9: Kinetic Model of Matter Chapter 10: Transfer of Thermal Energy Chapter 11: Thermal Properties of Matter Chapter 12: Light Chapter 13: General Wave Properties Chapter 14: Electromagnetic Spectrum Chapter 15: Sound Chapter 16: Static Electricity Chapter 17: Current of Electricity Chapter 18: D.C. Circuits Chapter 19: Practical Electricity Chapter 20: Magnetism Chapter 21: Electromagnetism Chapter 22: Electromagnetic Induction Textbook: GCE 'O' Level Physics Matters	Paper 1 [1 h] Multiple Choice Questions (40m) Paper 2 [1h 45mins] <u>Section A (50m)</u> Structured Questions Section B <u>Section B(30m)</u> The first two questions are compulsory questions, one of which will be a data-based question. The last question will be presented in an either/or form.
Combined Science (Biology)	Chapter 2: Cells Chapter 3: Movement of substances Chapter 4: Nutrients Chapter 5: Enzymes Chapter 6: Nutrition in Humans Chapter 7: Nutrition in Plants Chapter 8: Transport in Humans Chapter 9: Transport in Plants Chapter 10: Respiration in Humans	Paper 1 [1 h] Multiple Choice Questions consisting of 20 Biology and 20 Chemistry questions (40 m)

Woodgrove Secondary School
O-Level Preliminary Examination 2022
Topics Coverage & Assessment Format

Subject	Topics/ Chapters	Assessment Format (format, duration, total marks & date of assessment)
	Chapter 11: The Nervous System Chapter 12: The Human Eye Chapter 13: Hormones Chapter 14: Reproduction in Plants Chapter 15: Reproduction in Humans Chapter 16: Heredity Chapter 17: Molecular Genetics Chapter 18: Ecology Chapter 19: Impact on the Ecosystem Textbook: Discover Biology GCE 'O' Level Science	Paper 4 [1 h 15 min] <u>Section A (45m)</u> Short Structured Questions <u>Section B (20m)</u> Free Response Questions (choose 2 out of 3)
Combined Science (Chemistry) + 4NA SBB (NA)	Chapter 1: Kinetic Particle Theory Chapter 2: Measurement and Experimental Techniques Chapter 3: Separation and Purification Chapter 4: Elements, Compound and Mixture Chapter 5: Atomic Structure Chapter 6: Chemical Bonding Chapter 7: Writing Chemical Equations Chapter 8: The Mole Chapter 9: Chemical Calculations Chapter 10: Acids and Bases Chapter 11: Salts Chapter 12: Oxidation and Reduction Chapter 13: Metals Chapter 14: The Periodic Table Chapter 15: Energy Changes Chapter 16: Speed of Reaction Chapter 17: Atmosphere and Environment Chapter 18: An Introduction to Organic Chemistry Chapter 19: Alkanes and Alkenes Chapter 20: Alcohols and Carboxylic Acids Textbook: Discover Chemistry GCE 'O' Level Science 2nd Edition	Paper 1 [1 h] Multiple Choice Questions consisting of 20 Physics/Biology and 20 Chemistry questions (40 marks) Paper 3 [1 h 15 min] <u>Section A (45m)</u> Short Structured Questions <u>Section B (20m)</u> Free Response Questions (choose 2 out of 3)
Combined Science (Physics) + 4NA SBB (NA)	Chapter 1: Physical Quantities, Units and Measurements Chapter 2: Kinematics Chapter 3: Forces & Pressure Chapter 4: Mass, Weight & Density Chapter 5: Turning Effect of Forces Chapter 6: Energy, Work and Power Chapter 7: Kinetic Model of Matter Chapter 8: Transfer of Thermal Energy Chapter 9: Thermal Properties of Matter Chapter 10: Light Chapter 11: Waves Chapter 12: Electromagnetic Waves Chapter 13: Sound Chapter 14: Static Electricity Chapter 15: Current Electricity Chapter 16: DC Circuits Chapter 17: Practical Electricity Chapter 18: Magnetism and Electromagnetism Textbook: Discover Physics GCE 'O' Level Science	Paper 1 [1 h] Multiple Choice Questions consisting of 20 Physics and 20 Chemistry questions (40 m) Paper 2 [1 h 15 min] <u>Section A (45m)</u> Short Structured Questions <u>Section B (20m)</u> Free Response Questions (choose 2 out of 3)

Woodgrove Secondary School
O-Level Preliminary Examination 2022
Topics Coverage & Assessment Format

Subject	Topics/ Chapters	Assessment Format (format, duration, total marks & date of assessment)
Humanities (Social Studies)	<p><u>Source-Based Case Study (SBCS) Skills</u></p> <ul style="list-style-type: none"> - Inference - Compare and Contrast - Reliability - Utility - Are you surprised? + Hybrid questions - Evaluation <p><u>Structured Response Questions</u></p> <ul style="list-style-type: none"> - Explain 2 suggestions - Evaluate factors <p>Textbook: Upper Secondary Social Studies, Ch 1 - 11</p>	<p>Section A (35 m)</p> <ul style="list-style-type: none"> - Source-Based Case Study - 5 sub-questions (all compulsory) <p>Section B (15 m)</p> <ul style="list-style-type: none"> - Structured Response Questions - 2 sub-questions (all compulsory) <p>Total: 50 marks Duration: 1 hr 45 mins</p>
Humanities (Geography Elective)	<ol style="list-style-type: none"> 1. Geographical Skills and Investigation Gateway 1, 2 and 3 (Sec 3 textbook pp. 124 – 177) 2. Variable Weather and Changing Climate Gateway 1 and 2 (Sec 3 textbook pp. 70 - 123) 3. Global Tourism Gateway 1, 2 and 3 (Sec 4 textbook pp. 2 – 89) 4. Living with Tectonic Hazards Gateway 1, 2 and 3 (Sec 3 textbook pp. 2 - 69) 5. Food Resources Gateway 1 and 2 (Sec 4 textbook pp. 90 – 152) <p>Textbook:</p> <ol style="list-style-type: none"> 1. All About Geography Upper Secondary – Physical Geography Elective (Revised Edition) (Hodder Education) AND 2. All About Geography Upper Secondary – Human Geography Elective (Revised Edition) (Hodder Education) 	<p>Section A (13m)</p> <p>Q1 or Q2: Geographical investigation on variable weather and changing climate and global tourism</p> <p>Section B (12m)</p> <p>Q3 or Q4: Structured questions on variable weather and changing climate and/or global tourism</p> <p>Section C (25m)</p> <p>Q5 or Q6: Structured questions on living with tectonic hazards and/or food resources</p> <p>Total: 50 marks Duration: 1 hr 40 mins</p>
Humanities (History Elective)	<p><u>Source-Based Case Study (SBCS) Skills</u></p> <ul style="list-style-type: none"> - Inference - Compare and Contrast - Reliability - Utility - Evaluation - Are you surprised? + Hybrid <p><u>Structured Essay Questions (SEQ)</u></p> <ul style="list-style-type: none"> - Explain events and/or issues [8m] - Evaluate and make judgement on event and/or issue [12m] <p>Textbooks: The Making of Contemporary World Order, 1870s-1991, Unit 2: The World in Crisis and Unit 3: Bipolarity & the Cold War.</p>	<p>Section A (30m)</p> <p>Source-Based Case Study</p> <ul style="list-style-type: none"> - 5 sub-questions (all compulsory) <p>Section B (20m)</p> <p>Structured Response Questions</p> <ul style="list-style-type: none"> - 2 questions with sub-parts, answer 1. <p>Total: 50 marks Duration: 1 hr 40 mins</p>

Woodgrove Secondary School
O-Level Preliminary Examination 2022
Topics Coverage & Assessment Format

Subject	Topics/ Chapters	Assessment Format (format, duration, total marks & date of assessment)
Humanities (Literature Elective)	<p>Set Text Prose and Unseen Poetry</p> <p><u>Section A: Prose - Fahrenheit 451</u> Students will be given a two-part passage-based question and two essay questions on <i>Fahrenheit 451</i> by Ray Bradbury. Students must answer only one.</p> <p><u>Section B: Unseen Poetry</u> Students will answer a two-part question on an unseen poem. Students will have two poems to choose from – one Singaporean poem and one non-Singaporean poem.</p>	<p>Total: 50 marks</p> <p>Duration: 1hr 40mins</p>
Full Geography	<p>Paper 1</p> <p>Global Tourism</p> <ul style="list-style-type: none"> Gateway 1: How does the nature of tourism vary from place to place? Gateway 2: Has tourism become a global phenomenon? Gateway 3: Developing tourism at what costs? <p>Coast</p> <ul style="list-style-type: none"> Gateway 1: How and why are coastal environments different and dynamic? Gateway 2: Why are coastal areas valuable? (Focus is on tropical coasts) Gateway 3: How can we manage coastal areas in a sustainable manner? <p>Paper 2</p> <p>Weather and Climate</p> <ul style="list-style-type: none"> Gateway 1: Why do different places experience different weather and climate? Gateway 2: What is happening to Earth's climate? Gateway 3: Is the weather becoming more extreme? <p>Living with Tectonic Hazards</p> <ul style="list-style-type: none"> Gateway 1: Why are some areas more prone to tectonic hazards? Gateway 2: What landforms and associated tectonic phenomena are found at plate boundaries? Gateway 3: How do people prepare for and respond to earthquakes? <p>Food Resources</p> <ul style="list-style-type: none"> Gateway 1: How and why have food consumption patterns changed since the 1960s? Gateway 2: What are the trends and challenges in the production of food crops? Gateway 3: How can the problem of food shortage be addressed? <p>Health and Diseases</p>	<p>Paper 1 Duration: 1hr 40 mins Total: 50 marks Date: 12 Sep 2022</p> <p>Section A (Geographical investigation)</p> <ul style="list-style-type: none"> Q1: Compulsory <p>Section B (Coast & Tourism)</p> <ul style="list-style-type: none"> Structured questions (25m) <p>Answer one question from Section B. Section B - Q2 OR Q3:</p> <p>Paper 2 Duration: 1 hr 30 mins Total: 50 marks Date: 31 Aug 2022 (Wed)</p> <p>Answer one question from each section.</p> <p>Section A (Plate tectonic & Weather & climate) - Q1 OR Q2:</p> <ul style="list-style-type: none"> Structured questions (25m) <p>Section B (Food Resource + Health & Diseases) - Q3 OR Q4:</p> <ul style="list-style-type: none"> Structured questions (25m)

Woodgrove Secondary School
O-Level Preliminary Examination 2022
Topics Coverage & Assessment Format

Subject	Topics/ Chapters	Assessment Format (format, duration, total marks & date of assessment)
	<ul style="list-style-type: none"> Gateway 1: What are the global patterns of health and diseases? Gateway 2: What influences the spread and impact of infectious diseases? (*Focus is on Malaria & HIV/AIDS) Gateway 3: How can we manage the current and future spread of infectious diseases? 	
Design & Technology	<p>Written Paper (40%) 80 marks Q1 Design-centric question::Technology in Society, Design Situation, Ideation, Evaluation, Research, Design Communication, Ergonomics & Anthropometry (26 marks) Q2 Electronics (18 marks) Q3 MEchanism (18 marks) Q4:Structures (18 marks)</p> <p>Refer to D&T revision guide</p> <p>60% of overall marks from coursework</p>	<p>Answer all questions</p> <p>Duration: 2 hour</p> <p>Total: 80 marks</p>
Nutrition & Food Science	<ol style="list-style-type: none"> Proteins Carbohydrates Fats Vitamins Minerals Water Dietary Fibre Diet & Health Problems Diet & Meal Planning Meal Analysis Sustainable Food Consumption Convenience Food Food Safety Preparation and Cooking of Food Methods of Cooking Reactions in Food during Preparation and Cooking Sensory Evaluation <p>Textbook: Nutrition and Food Science(CPDD) Star Publishing Pte Ltd</p>	<p>Format: Written Paper Duration: 2 hrs Total 100 marks</p> <p>Section A: 15 marks (multiple choice questions)</p> <p>Section B: 55 marks (short-answer-type questions and data-response-type questions)</p> <p>Section C: 30 marks (open-ended questions)</p>
Art	<p>Art Paper 2</p> <p>Candidates will be given the question paper three weeks prior to the examination day. Candidates choose one stimuli from the list of given themes. The preparatory works are to be done in class during Art lesson and at home. Candidates must keep their investigation and developments between three to five A3 sheets of the preparatory studies. They are to bring the preparatory works for submission on the examination day.</p> <p>Students are to bring their own drawing and colouring materials such as colour pencils, acrylic paints, brushes, markers, etc.</p> <p>PREPARATORY WORKS:</p>	<p>Art Paper 2: Drawing & Painting Duration: 3 hours Total Marks: 100</p> <p>Candidates are to redraw the selected layout onto the A3 size drawing paper provided and complete the drawing with full rendering using colour pencils / acrylic</p>

Woodgrove Secondary School
O-Level Preliminary Examination 2022
Topics Coverage & Assessment Format

Subject	Topics/ Chapters	Assessment Format (format, duration, total marks & date of assessment)
	<p>Students are to produce:</p> <ol style="list-style-type: none"> 1. 8 Observational drawings: <i>(The chosen objects are to be coloured & shaded)</i> 2. 6 Developmental studies <i>(The drawings are to be coloured & shaded)</i> 3. 2 Layouts: <i>(Candidates must produce 2 different layout within the size of A4 drawing paper)</i> 4. 2 Colour Scheme: <i>(Candidates produce 2 different colour schemes based on the layout they have chosen)</i> 	<p>paint / markers. Candidates are to submit their preparatory boards and final work for submission.</p>
<p>Study of Visual Arts</p>	<p>Instruction for Art students:</p> <p>Students will be sitting for a 2 hours Art Theory paper. Students will be tested on SOVA components based on the list of SOVA artists in Section A and Section B.</p>	<p>Art Paper 3:SOVA Duration: 2 hours Total Marks: 90</p> <p>Answer three questions</p> <p>Section A- answer one questions (all parts)</p> <p>Section B - answer one question (all parts)</p> <p>Section A or Section B - answer one question (all parts)</p>