



# Bangkok Christian College English Immersion Program

## Course Scope for Southeast Asia 2 Mathayom 5

Semester 2/2024-2025 Teacher Andrew Hailstone



Date	Contents	Comments/ Remarks
25 October	Singapore	
28 October – 1 November	Singapore	
4 - 8 November	Singapore	
11 - 15 November	Laos	
18 - 22 November	Laos	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	Laos	
9 – 13 December	Laos	
16 – 20 December	Indonesia	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	Indonesia	
13 – 17 January	Indonesia	
20 - 24 January	Indonesia	
27 – 31 January	Indonesia	
3 – 7 February	Revision	
10 – 14 February	***Final Exams***	



# Bangkok Christian College English Immersion Program

## Course Scope for Biology Matthayom 5

Semester 2/2024-2025 Teacher Rick Reinders



Date	Contents	Comments/ Remarks
25 October	Unit 4: Skeletal System Overview of the Human Skeleton	
28 October – 1 November	Bone Structure and Function	
4 - 8 November	Bone Growth and Development Joints and Movement Skeletal Disorders	
11 - 15 November	Unit5: Muscular System Types of Muscle Tissues Muscle Structure and Function Muscle Structure and Movement	
18 - 22 November	Role of Organ Systems in Movement	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	Nervous Control of Muscles Muscle Tone and Exercise	
9 – 13 December	Muscle Contraction and Ion Movement	
16 – 20 December	Oxygen and Muscle Performance Muscle Sense	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	Unit 6: Integumentary System Skin Anatomy and Organization	
13 – 17 January	Epidermis and Cellular Function	
20 - 24 January	Dermis and Its Functions	
27 – 31 January	Cutaneous Senses and Secretions	
3 – 7 February	Skin Response to Environmental Factors Subcutaneous Layer and Aging Effects	
10 – 14 February	Review	
17 - 21 February	***Final Exams***	



Date	Contents	Comments/ Remarks
25 October	<p style="text-align: center;"><b>Introduction</b></p> <ul style="list-style-type: none"><li>• Overview of Equilibrium I &amp; Kinetics II</li><li>• Overview of the Math requirements for Kinetics II</li></ul>	
28 October – 1 November	<p style="text-align: center;"><b>Types of Chemical Reactions</b></p> <ul style="list-style-type: none"><li>• Introduction to types of reactions: Combination, Decomposition, Single &amp; Double Displacement, Combustion, and Neutralization.</li><li>• Predicting products and identifying reaction types.</li></ul> <p style="text-align: center;"><b>Balancing Equations</b></p> <ul style="list-style-type: none"><li>• Full and ionic equations with state symbols.</li></ul>	
4 - 8 November	<p style="text-align: center;"><b>Mole Concept and Calculations Review</b></p> <ul style="list-style-type: none"><li>• Understanding the mole, Avogadro's constant, and molar mass.</li><li>• calculating moles.</li></ul> <p style="text-align: center;"><b>Reacting Masses and Gas Calculations</b></p> <ul style="list-style-type: none"><li>• Using chemical equations to calculate reacting masses and identify limiting reagents.</li></ul> <p style="text-align: center;"><b>Gas Calculations</b></p> <ul style="list-style-type: none"><li>• Molar volume of gases at RTP and STP. Introduction to the ideal gas equation</li></ul>	
11 - 15 November	<p style="text-align: center;"><b>Introduction to Dynamic Equilibrium</b></p> <ul style="list-style-type: none"><li>• <b>Define dynamic equilibrium:</b> Conditions under which equilibrium is reached.</li><li>• <b>Characteristics:</b> Rate of forward reaction = rate of backward reaction. Concentrations remain constant.</li><li>• <b>Examples</b> of reversible reactions in closed systems.</li></ul>	
18 - 22 November	<p style="text-align: center;"><b>Factors Affecting Equilibrium Position</b></p> <ul style="list-style-type: none"><li>• <b>Le Chatelier's Principle:</b> Predicting and justifying the effects of changes in concentration, temperature, and pressure.</li><li>• Qualitative analysis of how equilibrium shifts.</li><li>• <b>Practical Activity:</b> Investigate the effect of concentration and temperature using a reversible reaction</li></ul>	
25 – 29 November	<b>***Pearson Exams Week***</b>	
2 – 6 December	<p style="text-align: center;"><b>Industrial Applications</b></p> <ul style="list-style-type: none"><li>• Evaluate the necessity of compromising between yield and rate in industrial processes.</li><li>• <b>Haber Process:</b> Application of temperature, pressure, and catalyst.</li><li>• <b>Contact Process:</b> Optimal conditions for sulfuric acid production.</li></ul>	

	<ul style="list-style-type: none"> <li>• <b>Data Analysis:</b> Use provided data to analyze yield vs. rate trade-offs in various processes.</li> </ul>	
9 – 13 December	<b>Equilibria: Practical</b>	
16 – 20 December	<b>Equilibria Review Unit Test</b> -	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	<p><b>Introduction to Reaction Kinetics</b></p> <ul style="list-style-type: none"> <li>• Define key terms: rate of reaction, rate equation, order, rate constant, half-life, activation energy, and catalyst</li> <li>• <b>Rate Equations:</b> General form, <math>\text{rate} = k[\text{A}]^m[\text{B}]^n</math>.</li> <li>• <b>Order of Reaction:</b> Zero, first, and second order with respect to reactants.</li> <li>• Discuss examples of reactions with varying orders.</li> </ul>	
13 – 17 January	<p><b>Determining the Rate of Reaction</b></p> <ul style="list-style-type: none"> <li>• Calculate half-life from graphs.</li> <li>• Identifying reactions with a constant half-life as first order.</li> <li>• <b>Experimental Techniques</b> for rate determination: Titration, colorimetry, mass change, and gas volume.</li> </ul>	
20 - 24 January	<p><b>Graphical Analysis of Reaction Rates</b></p> <ul style="list-style-type: none"> <li>• <b>Concentration-Time Graphs:</b> Analyzing zero, first, and second-order reactions .</li> <li>• <b>Rate-Concentration Graphs.</b></li> <li>• <b>Initial-Rate Method:</b> Obtaining reaction order using initial rates.</li> <li>• Practice plotting and interpreting graphs.</li> </ul>	
27 – 31 January	<p><b>Reaction Mechanisms and Rate-Determining Step</b></p> <ul style="list-style-type: none"> <li>• Using rate equations to deduce the rate-determining step .</li> <li>• Make predictions about species involved in the rate-determining step.</li> <li>• Deduce possible mechanisms from given data</li> <li>• <b>SN1 and SN2 Mechanisms:</b> Using kinetics data to distinguish between mechanisms in halogenoalkanes.</li> </ul>	
3 – 7 February	<p><b>Determining Activation Energy</b></p> <ul style="list-style-type: none"> <li>• Use <b>Arrhenius Equation:</b> <math>k = Ae^{-E_a/RT}</math>.</li> <li>• Determine activation energy graphically.</li> <li>• <b>CORE PRACTICAL:</b> Finding the activation energy of a reaction using a temperature-rate relationship.</li> </ul>	
10 – 14 February	<b>Equilibria &amp; Kinetics II Review</b>	
17 - 21 February	***Final Exams***	



# Bangkok Christian College English Immersion Program

## Course Scope for Mathematics Matthayom 5

Semester 2/2024-2025 Teacher Mark Street



Date	Contents	Comments/
		Remarks
<b>21 - 25 Oct.</b>	<p>All references here are following “Pure Mathematics 2 – Pearson Edexcel International A Level”.</p> <p>Ch. 1: Algebraic Methods</p> <p>Topics: Algebraic fractions; Dividing polynomials; Factor theorem; Remainder theorem; Mathematical proof</p> <p>Revise: for IGCSE exam</p>	<p>21- 23 Oct. Contract Holiday 25 Oct. Students Return</p>
<b>28 Oct. - 1 Nov.</b>	<p>Ch. 2: Coordinate Geometry</p> <p>Topics: Midpoints, Bisectors; Equations of circles; Tangents; Intersection of lines and circles</p> <p>Revise: for IGCSE exam</p>	
<b>4 – 8 Nov.</b>	<p>Ch. 3: Exponents and Logs</p> <p>Topics: Logarithms and properties of; Solving equations</p>	
<b>11 - 15 Nov.</b>	IGCSE Exams	
<b>18 - 22 Nov.</b>	<p>Ch. 3 (Continued)</p> <p>Topics: Changing base; Solving real-world problems</p>	
<b>25 – 29 Nov.</b>	<p>Ch. 4: Binomial Expansion</p> <p>Topics: Pascal’s Triangle; Factorial; Binomial Expansion</p>	
<b>2 - 6 Dec.</b>	Topics: Solving binomial problems; Estimation	5 Dec. – Rama IX Birthday
<b>9 - 13 Dec.</b>	<p>Ch. 5: Sequences and Series</p> <p>Topics: Arithmetic Sequences; Geometric Sequences</p>	10 Dec. – Constitution Day
<b>16 - 20 Dec.</b>	Topics: Sigma Notation; Arithmetic and Geometric Series	
<b>23 - 27 Dec.</b>	(Holiday – No Classes)	<p>24 Dec. – Christmas Parties</p> <p>25 – 27 Dec. – Christmas Holiday</p>

<b>30 Dec.-3 Jan.</b>	(Holiday – No Classes)	30 Dec. – 3 Jan. – Christmas Holiday
<b>6 – 10 Jan.</b>	Ch. 6: Trigonometric Equations and Identities Topics: Trigonometric values; Trig Identities and Equations	
<b>13 - 17 Jan.</b>	Topics: Harder trigonometric equations	16 Jan. – Teacher’s Day
<b>20 - 24 Jan.</b>	Ch. 7: Differentiation Topics: Limits; Rates of Change; Sketching curves	
<b>27 – 31 Jan.</b>	Topics: Differentiation continued; solving problems	
<b>3 - 7 Feb.</b>	Ch. 8: Integration Topics: Definite and Indefinite Integrals; Area under the curve; Area under the X-axis; Trapezoid Rule	
<b>10 - 14 Feb.</b>	Review for Final Exam	12 Feb – Makha Bucha
<b>17 - 21 Feb.</b>	<b>Final Exam Week</b>	



**Bangkok Christian College English Immersion Program**  
**Course Scope for Physics Matthayom 5**  
**Semester 2/2024-2025 Teacher Nicholas Barrett**



<b>Date</b>	<b>Contents</b>	<b>Comments/ Remarks</b>
<b>25 October</b>	Introduction to Semester Two	
<b>28 October – 1 November</b>	The Fundamentals and Conservation of Electric Charge	
<b>4 - 8 November</b>	The Triboelectric Effect and Polarisation	
<b>11 - 15 November</b>	Coulomb's Law and Electrostatic Forces	
<b>18 - 22 November</b>	Electric Fields	
<b>25 – 29 November</b>	***Pearson Exams Week***	
<b>2 – 6 December</b>	Electrostatics Lab	
<b>9 – 13 December</b>	Electric Current in Parallel and Series Circuits	
<b>16 – 20 December</b>	Potential Difference, Resistance and Ohm's Law	
<b>23 – 27 December</b>	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
<b>30 December – 3 January</b>	***Christmas Holiday***	
<b>6 – 10 January</b>	Resistivity	
<b>13 – 17 January</b>	Further Characteristics of Electrical Circuits (Internal Resistance, Thermistors, LDR's and more)	
<b>20 - 24 January</b>	The Potential Divider	
<b>27 – 31 January</b>	Electricity: Project	
<b>3 – 7 February</b>	Electrical Work, Power, and Graphical interpretations of components in circuits	
<b>10 – 14 February</b>	Unit Test: Electrostatics and Electricity	
<b>17 - 21 February</b>	***Final Exams***	



**Bangkok Christian College English Immersion Program**  
**Course Scope for Science and Technology (Projects) Matthayom 5**  
**Semester 2/2024-2025 Teacher Steven Fournier**



Date	Contents	Comments/ Remarks
25 October	IGSCE: Unit 7: Radioactivity and Particles. Chapter 1 Atoms and Radioactivity. History/units/ pg 657-668	
28 October – 1 November	IGSCE: Unit 7: Radioactivity and Particles. Chapter 2. Radiation and Half-Life. 669-677	
4 - 8 November	Worksheets on Alpha, Beta and Gamma decay (2 worksheets) + halflife worksheets (1). Prepare for Test.	
11 - 15 November	Test 1. Radioactivity and Particles: decay, halflife, and atomic structure.	
18 - 22 November	IGSCE: Unit 7: Applications of Radioactivity. Look at a cyclotron used for making radioactive tracers. Pg 677-686	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	IGSCE: Unit 7: Fission and Fusion. Review of all chapters	
9 – 13 December	Test 2 on all chapters, plus research time for debate: Is Thailand ready for Nuclear Power? Why or Why not... Build evidence and avoid bias.	
16 – 20 December	Debate: Is Thailand ready for Nuclear Power? Why or why not? Forum discussion. (Speaking Assessment) Project 1.	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	Unit 8: IGSCE Astrophysics. Talk about how old cultures looked at the sky. Project 2 Create a poster of a space story/catastrophe. Pg 259-265	
13 – 17 January	Unit 8: IGSCE Astrophysics: Gravity, calculations and 4 fundamental forces. Stellar evolution. Pg 265-271	
20 - 24 January	Review of topics and worksheets on gravity.	
27 – 31 January	Project 2 due, Test 3 + feedback on scores	
3 – 7 February	IGCSE: Unit 8: Cosmology, 271-274. Big bang.	
10 – 14 February	Mock Final Exam(Test 2): Feedback on scores, wait for missing work/worksheet.	
17 - 21 February	***Final Exams***	





**Bangkok Christian College English Immersion Program**  
**Course Scope for General Science Matthayom 5**  
**Semester 2/2024-2025 Teacher Steven Fournier**



Date	Contents	Comments/ Remarks
25 October	Physics Unit 7: Radioactivity and Particles: (pg 657-669) Atoms and Radioactivity._	
28 October – 1 November	Physics Unit 7: Radioactivity and Particles (pg 669-677) Radiation and Half-life. Worksheet 1: Half life.	
4 - 8 November	Physics Unit 7: Radioactivity and Particles: (pg 677-694) Applications of Radioactivity and Fission/Fusion Quiz 1: Online. (657-694)	
11 - 15 November	One period for research, then Lab: Debate: Should Thailand invest in Nuclear energy. Points for and against with 4 teams: (For (current tech), Against (current tech), For (future tech [fusion, microfission...], Against (future tech [fusion, microfission])	
18 - 22 November	Debate continued if needed, Review + Test 1 (Radioactivity and Particles).	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	<b>Biology Review: Units 1-4. Animal Physiology, Plant Physiology, Ecology</b>	
9 – 13 December	Biology Review: Units 5/6 DNA and Microorganisms. Lab: Making Sauerkraut/Kimchi.	
16 – 20 December	Testing Sauerkraut/Kimchi Test 2: Biology Test Optional Activity: Planting seeds.	
23 – 27 December	<b>Finish up work, present Lab results, review Term 2 part 1</b>	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	Chemistry Unit 2: Alkali Metals, Halogens, and Gases in the Atmosphere (345-358). Acids and Bases. (386-398)	
13 – 17 January	Chemistry Lab: Red Cabbage indicator. Quiz 2: Online Quiz on Chemistry.	
20 - 24 January	Test 2: Demonstration Test. Testing for pH. Worksheet 2 on chemical changes of acids and bases. Test 3	
27 – 31 January	Physics 8: Astrophysics. Introduction, looking at orbits, debating the need for space. Worksheet: Opinion on the future of space.	
3 – 7 February	Physics 8: Astrophysics: Motion of the Universe. Pg 695-701. Calculating orbits, looking at satalites.	
10 – 14 February 17 - 21 February	<b>Physics Unit 8: Astrophysics: Stellar formation. Look at stages of a star, planets, stars, galaxies, and universe Test 4 + Review for exam.</b>  ***Final Exams***	



**Bangkok Christian College English Immersion Program**  
**Course Scope for Physical Education Matthayom 5**  
**Semester 2/2024-2025 Teacher Ben Fishman**



Date	Contents	Comments/ Remarks
25 October	Ice Breaker/What is a health goal?	School Starts
28 October – 1 November	Fitness Test <ul style="list-style-type: none"> <li>● Burpees</li> <li>● 40 yard dash</li> <li>● Max jump height</li> </ul>	
4 - 8 November	Supplements 101 <ul style="list-style-type: none"> <li>● Creatine</li> <li>● Caffeine and why it's bad but actually good</li> <li>● Multi-Vitamin</li> </ul>	
11 - 15 November	Football <ul style="list-style-type: none"> <li>● Handling Drills</li> <li>● Defensive Drills</li> <li>● Live Games</li> </ul>	
18 - 22 November	Basketball <ul style="list-style-type: none"> <li>● Handling Drills</li> <li>● Defensive Drills</li> <li>● Live Games</li> </ul>	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	(Western) Boxing <ul style="list-style-type: none"> <li>● Why it's the safest but also the most dangerous</li> <li>● How to wrap your wrists</li> <li>● Other combat sports explained</li> </ul>	
9 – 13 December	Western Boxing Drills <ul style="list-style-type: none"> <li>● Shadowboxing</li> <li>● Footwork</li> </ul>	
16 – 20 December	Western Boxing Drills <ul style="list-style-type: none"> <li>● Padwork</li> </ul>	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	American Football <ul style="list-style-type: none"> <li>● Rules &amp; Strategies</li> <li>● 7 on 7 games</li> </ul>	
13 – 17 January	Football 2.0 <ul style="list-style-type: none"> <li>● Handling Drills</li> <li>● Defensive Drills</li> <li>● Live Games</li> </ul>	
20 - 24 January	Nutrition 101 <ul style="list-style-type: none"> <li>● Calculating Caloric Maintenance</li> <li>● Safe Weight loss/gain</li> <li>● “Gaintaing” and why it literally never works except for you</li> </ul>	
27 – 31 January	Re-do Fitness Test <ul style="list-style-type: none"> <li>● Burpees</li> <li>● 40 yard dash</li> <li>● Max jump height</li> </ul>	Results will be compared to the beginning of the semester
3 – 7 February	Capture the Flag	
10 – 14 February	End of Unit Assessments	
17 - 21 February	***Final Exams***	



**Bangkok Christian College English Immersion Program**  
**Course Scope for Chemistry Matthayom 5**  
**Semester 2/2024-2025 Teacher Sepehr Massoumi Alamouti**



Date	Contents	Comments/ Remarks
25 October	<p style="text-align: center;"><b>Introduction</b></p> <ul style="list-style-type: none"><li>• Overview of Equilibrium I &amp; Kinetics II</li><li>• Overview of the Math requirements for Kinetics II</li></ul>	
28 October – 1 November	<p style="text-align: center;"><b>Types of Chemical Reactions</b></p> <ul style="list-style-type: none"><li>• Introduction to types of reactions: Combination, Decomposition, Single &amp; Double Displacement, Combustion, and Neutralization.</li><li>• Predicting products and identifying reaction types.</li></ul> <p style="text-align: center;"><b>Balancing Equations</b></p> <ul style="list-style-type: none"><li>• Full and ionic equations with state symbols.</li></ul>	
4 - 8 November	<p style="text-align: center;"><b>Mole Concept and Calculations Review</b></p> <ul style="list-style-type: none"><li>• Understanding the mole, Avogadro's constant, and molar mass.</li><li>• calculating moles.</li></ul> <p style="text-align: center;"><b>Reacting Masses and Gas Calculations</b></p> <ul style="list-style-type: none"><li>• Using chemical equations to calculate reacting masses and identify limiting reagents.</li></ul> <p style="text-align: center;"><b>Gas Calculations</b></p> <ul style="list-style-type: none"><li>• Molar volume of gases at RTP and STP.</li></ul> <p>Introduction to the ideal gas equation</p>	
11 - 15 November	<p style="text-align: center;"><b>Introduction to Dynamic Equilibrium</b></p> <ul style="list-style-type: none"><li>• <b>Define dynamic equilibrium:</b> Conditions under which equilibrium is reached.</li><li>• <b>Characteristics:</b> Rate of forward reaction = rate of backward reaction. Concentrations remain constant.</li><li>• <b>Examples</b> of reversible reactions in closed systems.</li></ul>	
18 - 22 November	<p style="text-align: center;"><b>Factors Affecting Equilibrium Position</b></p> <ul style="list-style-type: none"><li>• <b>Le Chatelier's Principle:</b> Predicting and justifying the effects of changes in concentration, temperature, and pressure.</li><li>• Qualitative analysis of how equilibrium shifts.</li><li>• <b>Practical Activity:</b> Investigate the effect of concentration and temperature using a reversible reaction</li></ul>	
25 – 29 November	<b>***Pearson Exams Week***</b>	
2 – 6 December	<p style="text-align: center;"><b>Industrial Applications</b></p> <ul style="list-style-type: none"><li>• Evaluate the necessity of compromising between yield and rate in industrial processes.</li><li>• <b>Haber Process:</b> Application of temperature, pressure, and catalyst.</li><li>• <b>Contact Process:</b> Optimal conditions for sulfuric acid production.</li><li>• <b>Data Analysis:</b> Use provided data to analyze yield vs. rate trade-offs in various processes.</li></ul>	

<b>9 – 13 December</b>	<b>Equilibria: Practical</b>	
<b>16 – 20 December</b>	<b>Equilibria Review Unit Test</b> -	
<b>23 – 27 December</b>	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
<b>30 December – 3 January</b>	***Christmas Holiday***	
<b>6 – 10 January</b>	<p style="text-align: center;"><b>Introduction to Reaction Kinetics</b></p> <ul style="list-style-type: none"> <li>Define key terms: rate of reaction, rate equation, order, rate constant, half-life, activation energy, and catalyst</li> <li><b>Rate Equations:</b> General form, <math>\text{rate} = k[\text{A}]^m[\text{B}]^n</math>.</li> <li><b>Order of Reaction:</b> Zero, first, and second order with respect to reactants.</li> <li>Discuss examples of reactions with varying orders.</li> </ul>	
<b>13 – 17 January</b>	<p style="text-align: center;"><b>Determining the Rate of Reaction</b></p> <ul style="list-style-type: none"> <li>Calculate half-life from graphs.</li> <li>Identifying reactions with a constant half-life as first order.</li> <li><b>Experimental Techniques</b> for rate determination: Titration, colorimetry, mass change, and gas volume.</li> </ul>	
<b>20 - 24 January</b>	<p style="text-align: center;"><b>Graphical Analysis of Reaction Rates</b></p> <ul style="list-style-type: none"> <li><b>Concentration-Time Graphs:</b> Analyzing zero, first, and second-order reactions .</li> <li><b>Rate-Concentration Graphs.</b></li> <li><b>Initial-Rate Method:</b> Obtaining reaction order using initial rates.</li> <li>Practice plotting and interpreting graphs.</li> </ul>	
<b>27 – 31 January</b>	<p style="text-align: center;"><b>Reaction Mechanisms and Rate-Determining Step</b></p> <ul style="list-style-type: none"> <li>Using rate equations to deduce the rate-determining step .</li> <li>Make predictions about species involved in the rate-determining step.</li> <li>Deduce possible mechanisms from given data</li> <li><b>SN1 and SN2 Mechanisms:</b> Using kinetics data to distinguish between mechanisms in halogenoalkanes.</li> </ul>	
<b>3 – 7 February</b>	<p style="text-align: center;"><b>Determining Activation Energy</b></p> <ul style="list-style-type: none"> <li>Use <b>Arrhenius Equation:</b> <math>k = Ae^{-E_a/RT}</math>.</li> <li>Determine activation energy graphically.</li> <li><b>CORE PRACTICAL:</b> Finding the activation energy of a reaction using a temperature-rate relationship.</li> </ul>	
<b>10 – 14 February</b>	<b>Equilibria &amp; Kinetics II Review</b>	
<b>17 - 21 February</b>	***Final Exams***	



**Bangkok Christian College English Immersion Program**  
**Course Scope for Biology Matthayom 5**  
**Semester 2/2024-2025 Teacher Rick Reinders**



Date	Contents	Comments/ Remarks
25 October	Unit 4: Skeletal System Overview of the Human Skeleton	
28 October – 1 November	Bone Structure and Function	
4 - 8 November	Bone Growth and Development Joints and Movement Skeletal Disorders	
11 - 15 November	Unit5: Muscular System Types of Muscle Tissues Muscle Structure and Function Muscle Structure and Movement	
18 - 22 November	Role of Organ Systems in Movement	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	Nervous Control of Muscles Muscle Tone and Exercise	
9 – 13 December	Muscle Contraction and Ion Movement	
16 – 20 December	Oxygen and Muscle Performance Muscle Sense	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	Unit 6: Integumentary System Skin Anatomy and Organization	
13 – 17 January	Epidermis and Cellular Function	
20 - 24 January	Dermis and Its Functions	
27 – 31 January	Cutaneous Senses and Secretions	
3 – 7 February	Skin Response to Environmental Factors Subcutaneous Layer and Aging Effects	
10 – 14 February	Review	
17 - 21 February	***Final Exams***	



**Bangkok Christian College English Immersion Program**  
**Course Scope for English Matthayom**  
**Semester 2/2024-2025 Teacher Scott Johnson**



Date	Contents	Comments/ Remarks
25 October	Unit 1: Global Education Introduction to Global Education	
28 October – 1 November	Unit 1: Global Education School Types and Subjects	
4 - 8 November	Unit 1: School Life Global School Routines Writing: A day in Your School	
11 - 15 November	Unit 1: Classroom Behavior Future of Education Writing an Opinion Paragraph	
18 - 22 November	Unit 1: Trends in Education Research Trends in Education Finalize Project 1 Presentations	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	Project 1: Group Presentation – “Future Trends in Education” Reflection on Project 1	
9 – 13 December	Unit 2: Jobs and Industries Job Ads and Writing Cover Letters	
16 – 20 December	Unit 2: Work Culture and Job Preferences	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	Unit 2: Writing a Resume	
13 – 17 January	Unit 2: Finalizing Resumes and Cover Letters	
20 - 24 January	Unit 2: Project 2 Preparation (Mock Job Interview)	
27 – 31 January	Project 2: Mock Job Interview + Report	
3 – 7 February	Review and Reflection Week	
10 – 14 February	***Final Exams***	



**Bangkok Christian College English Immersion Program**  
**Course Scope for M5 Literature Studies Matthayom 5**  
**Semester 2/2024-2025 Teacher Scott Johnson**



Date	Contents	Comments/ Remarks
25 October	Introduction to Rediscovering the Past	
28 October – 1 November	Famous Ancient Civilizations	
4 - 8 November	Project 1: Presentations – rediscovering the Past	
11 - 15 November	Introduction to Green Concerns	
18 - 22 November	Ecosystem Protection Efforts	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	Green Technologies	
9 – 13 December	Project 2: Preparation – Green Concerns	
16 – 20 December	Project 2 Presentations – Green Concerns	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	Reflection on Green Concerns	
13 – 17 January	Project Review and feedback	
20 - 24 January	Revisiting Rediscovering the Past: Secrets of Stonehenge	
27 – 31 January	Green Concerns: Your Water Footprint	
3 – 7 February	Review for the Final	
10 – 14 February	***Final Exams***	



**Bangkok Christian College English Immersion Program**  
**Course Scope for Business English M514**  
**Semester 2/2024-2025 Teacher Scott Johnson**



<b>Date</b>	<b>Contents</b>	<b>Comments/ Remarks</b>
<b>25 October</b>	Unit 1: Communication Introduction	
<b>28 October – 1 November</b>	Unit 1: Communication Cross-cultural Communication	
<b>4 - 8 November</b>	Unit 1: Communication Email Writing	
<b>11 - 15 November</b>	Unit 1: Communication Project 1: Effective Business Communication	
<b>18 - 22 November</b>	Unit 2: International Marketing Introduction	
<b>25 – 29 November</b>	***Pearson Exams Week***	
<b>2 – 6 December</b>	Unit 2: International Marketing Global Branding and Adaptation Project 1: Presentations	
<b>9 – 13 December</b>	Unit 2: International Marketing Advertising and Promotions	
<b>16 – 20 December</b>	Unit 3: Building Relationships Networking and Professional Relationships	
<b>23 – 27 December</b>	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
<b>30 December – 3 January</b>	***Christmas Holiday***	
<b>6 – 10 January</b>	Unit 3: Building Relationships Partnerships and Collaborations	
<b>13 – 17 January</b>	Unit 3: Building Relationships Trust and Loyalty in Business	
<b>20 - 24 January</b>	Review and Final Project 2 Preparation	
<b>27 – 31 January</b>	Project 2: Mock Business Negotiation “Building a Successful Partnership”	
<b>3 – 7 February</b>	In-class Final Exam	
<b>10 – 14 February</b>	***Final Exams***	





**Bangkok Christian College English Immersion Program**  
**Course Scope for Multi-Media Studies M514**  
**Semester 2/2024-2025 Teacher Scott Johnson**



<b>Date</b>	<b>Contents</b>	<b>Comments/ Remarks</b>
<b>25 October</b>	Multi-Media Trends	
<b>28 October – 1 November</b>	Advanced Multi-Media Tools: hands-on Presentations	
<b>4 - 8 November</b>	Project 1: Preparation	
<b>11 - 15 November</b>	Project 1: Work Session	
<b>18 - 22 November</b>	Project 1: Presentations	
<b>25 – 29 November</b>	***Pearson Exams Week***	
<b>2 – 6 December</b>	Intro to Video Editing	
<b>9 – 13 December</b>	Project 2: Preparation	
<b>16 – 20 December</b>	Project 2: Work Session	
<b>23 – 27 December</b>	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
<b>30 December – 3 January</b>	***Christmas Holiday***	
<b>6 – 10 January</b>	Project 2: Presentations	
<b>13 – 17 January</b>	Introduction to Digital Graphics	
<b>20 - 24 January</b>	Project 3: Preparation	
<b>27 – 31 January</b>	Project 3: Presentations and Final Review	
<b>3 – 7 February</b>	In-class Final Exam	
<b>10 – 14 February</b>	***Final Exams***	



# Bangkok Christian College English Immersion Program



## Course Scope for Mathematics Mathayom 5

Semester 2/2024-2025 Teacher Mark Street

Date	Contents	Comments/ Remarks
21 - 25 Oct.	<p>All references here are following "Pure Mathematics 2 – Pearson Edexcel International A Level".</p> <p>Ch. 1: Algebraic Methods</p> <p>Topics: Algebraic fractions; Dividing polynomials; Factor theorem; Remainder theorem; Mathematical proof</p> <p>Revise: for IGCSE exam</p>	21- 23 Oct. Contract Holiday 25 Oct. Students Return
28 Oct. - 1 Nov.	<p>Ch. 2: Coordinate Geometry</p> <p>Topics: Midpoints, Bisectors; Equations of circles; Tangents; Intersection of lines and circles</p> <p>Revise: for IGCSE exam</p>	
4 – 8 Nov.	<p>Ch. 3: Exponents and Logs</p> <p>Topics: Logarithms and properties of; Solving equations</p>	
11 - 15 Nov.	IGCSE Exams	
18 - 22 Nov.	<p>Ch. 3 (Continued)</p> <p>Topics: Changing base; Solving real-world problems</p>	
25 – 29 Nov.	<p>Ch. 4: Binomial Expansion</p> <p>Topics: Pascal's Triangle; Factorial; Binomial Expansion</p>	
2 - 6 Dec.	Topics: Solving binomial problems; Estimation	5 Dec. – Rama IX Birthday
9 - 13 Dec.	<p>Ch. 5: Sequences and Series</p> <p>Topics: Arithmetic Sequences; Geometric Sequences</p>	10 Dec. – Constitution Day
16 - 20 Dec.	Topics: Sigma Notation; Arithmetic and Geometric Series	
23 - 27 Dec.	(Holiday – No Classes)	24 Dec. – Christmas Parties 25 – 27 Dec. – Christmas Holiday

<b>30 Dec.- 3 Jan.</b>	(Holiday – No Classes)	30 Dec. – 3 Jan. – Christmas Holiday
<b>6 - 10 Jan.</b>	Ch. 6: Trigonometric Equations and Identities Topics: Trigonometric values; Trig Identities and Equations	
<b>13 - 17 Jan.</b>	Topics: Harder trigonometric equations	16 Jan. – Teacher’s Day
<b>20 - 24 Jan.</b>	Ch. 7: Differentiation Topics: Limits; Rates of Change; Sketching curves	
<b>27 – 31 Jan.</b>	Topics: Differentiation continued; solving problems	
<b>3 - 7 Feb.</b>	Ch. 8: Integration Topics: Definite and Indefinite Integrals; Area under the curve; Area under the X-axis; Trapezoid Rule	
<b>10 - 14 Feb.</b>	Review for Final Exam	12 Feb – Makha Bucha
<b>17 - 21 Feb.</b>	<b>Final Exam Week</b>	



# Bangkok Christian College English Immersion Program

## Course Scope for English Matthayom

Semester 2/2024-2025 Teacher Scott Johnson



Date	Contents	Comments/ Remarks
25 October	Unit 1: Global Education Introduction to Global Education	
28 October – 1 November	Unit 1: Global Education School Types and Subjects	
4 - 8 November	Unit 1: School Life Global School Routines Writing: A day in Your School	
11 - 15 November	Unit 1: Classroom Behavior Future of Education Writing an Opinion Paragraph	
18 - 22 November	Unit 1: Trends in Education Research Trends in Education Finalize Project 1 Presentations	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	Project 1: Group Presentation – “Future Trends in Education” Reflection on Project 1	
9 – 13 December	Unit 2: Jobs and Industries Job Ads and Writing Cover Letters	
16 – 20 December	Unit 2: Work Culture and Job Preferences	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	Unit 2: Writing a Resume	
13 – 17 January	Unit 2: Finalizing Resumes and Cover Letters	
20 - 24 January	Unit 2: Project 2 Preparation (Mock Job Interview)	
27 – 31 January	Project 2: Mock Job Interview + Report	
3 – 7 February	Review and Reflection Week	
10 – 14 February	***Final Exams***	



# Bangkok Christian College English Immersion Program

Course Scope for Multi-Media Studies M514

Semester 2/2024-2025 Teacher Scott Johnson



Date	Contents	Comments/ Remarks
25 October	Multi-Media Trends	
28 October – 1 November	Advanced Multi-Media Tools: hands-on Presentations	
4 - 8 November	Project 1: Preparation	
11 - 15 November	Project 1: Work Session	
18 - 22 November	Project 1: Presentations	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	Intro to Video Editing	
9 – 13 December	Project 2: Preparation	
16 – 20 December	Project 2: Work Session	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	Project 2: Presentations	
13 – 17 January	Introduction to Digital Graphics	
20 - 24 January	Project 3: Preparation	
27 – 31 January	Project 3: Presentations and Final Review	
3 – 7 February	In-class Final Exam	
10 – 14 February	***Final Exams***	



# Bangkok Christian College English Immersion Program

## Course Scope for Physics Matthayom 5

Semester 2/2024-2025 Teacher Nicholas Barrett



Date	Contents	Comments/ Remarks
25 October	Introduction to Semester Two	
28 October – 1 November	The Fundamentals and Conservation of Electric Charge	
4 - 8 November	The Triboelectric Effect and Polarisation	
11 - 15 November	Coulomb's Law and Electrostatic Forces	
18 - 22 November	Electric Fields	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	Electrostatics Lab	
9 – 13 December	Electric Current in Parallel and Series Circuits	
16 – 20 December	Potential Difference, Resistance and Ohm's Law	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	Resistivity	
13 – 17 January	Further Characteristics of Electrical Circuits (Internal Resistance, Thermistors, LDR's and more)	
20 - 24 January	The Potential Divider	
27 – 31 January	Electricity: Project	
3 – 7 February	Electrical Work, Power, and Graphical interpretations of components in circuits	
10 – 14 February	Unit Test: Electrostatics and Electricity	
17 - 21 February	***Final Exams***	



# Bangkok Christian College English Immersion Program

## Course Scope for M5 Literature Studies Matthayom 5

Semester 2/2024-2025 Teacher Scott Johnson



Date	Contents	Comments/ Remarks
25 October	Introduction to Rediscovering the Past	
28 October – 1 November	Famous Ancient Civilizations	
4 - 8 November	Project 1: Presentations – rediscovering the Past	
11 - 15 November	Introduction to Green Concerns	
18 - 22 November	Ecosystem Protection Efforts	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	Green Technologies	
9 – 13 December	Project 2: Preparation – Green Concerns	
16 – 20 December	Project 2 Presentations – Green Concerns	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	Reflection on Green Concerns	
13 – 17 January	Project Review and feedback	
20 - 24 January	Revisiting Rediscovering the Past: Secrets of Stonehenge	
27 – 31 January	Green Concerns: Your Water Footprint	
3 – 7 February	Review for the Final	
10 – 14 February	***Final Exams***	



# Bangkok Christian College English Immersion Program



## Course Scope for Physical Education Matthayom 5

Semester 2/2024-2025 Teacher Ben Fishman

Date	Contents	Comments/ Remarks
25 October	Ice Breaker/What is a health goal?	School Starts
28 October – 1 November	Fitness Test <ul style="list-style-type: none"> <li>● Burpees</li> <li>● 40 yard dash</li> <li>● Max jump height</li> </ul>	
4 - 8 November	Supplements 101 <ul style="list-style-type: none"> <li>● Creatine</li> <li>● Caffeine and why it's bad but actually good</li> <li>● Multi-Vitamin</li> </ul>	
11 - 15 November	Football <ul style="list-style-type: none"> <li>● Handling Drills</li> <li>● Defensive Drills</li> <li>● Live Games</li> </ul>	
18 - 22 November	Basketball <ul style="list-style-type: none"> <li>● Handling Drills</li> <li>● Defensive Drills</li> <li>● Live Games</li> </ul>	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	(Western) Boxing <ul style="list-style-type: none"> <li>● Why it's the safest but also the most dangerous</li> <li>● How to wrap your wrists</li> <li>● Other combat sports explained</li> </ul>	
9 – 13 December	Western Boxing Drills <ul style="list-style-type: none"> <li>● Shadowboxing</li> <li>● Footwork</li> </ul>	
16 – 20 December	Western Boxing Drills <ul style="list-style-type: none"> <li>● Padwork</li> </ul>	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	American Football <ul style="list-style-type: none"> <li>● Rules &amp; Strategies</li> <li>● 7 on 7 games</li> </ul>	
13 – 17 January	Football 2.0 <ul style="list-style-type: none"> <li>● Handling Drills</li> <li>● Defensive Drills</li> <li>● Live Games</li> </ul>	
20 - 24 January	Nutrition 101 <ul style="list-style-type: none"> <li>● Calculating Caloric Maintenance</li> <li>● Safe Weight loss/gain</li> <li>● “Gaintaing” and why it literally never works except for you</li> </ul>	
27 – 31 January	Re-do Fitness Test <ul style="list-style-type: none"> <li>● Burpees</li> <li>● 40 yard dash</li> <li>● Max jump height</li> </ul>	Results will be compared to the beginning of the semester
3 – 7 February	Capture the Flag	
10 – 14 February	End of Unit Assessments	
17 - 21 February	***Final Exams***	





# Bangkok Christian College English Immersion Program

## Course Scope for Science and Technology (Projects) Matthayom 5

Semester 2/2024-2025 Teacher Steven Fournier



Date	Contents	Comments/ Remarks
25 October	IGSCE: Unit 7: Radioactivity and Particles. Chapter 1 Atoms and Radioactivity. History/units/ pg 657-668	
28 October – 1 November	IGSCE: Unit 7: Radioactivity and Particles. Chapter 2. Radiation and Half-Life. 669-677	
4 - 8 November	Worksheets on Alpha, Beta and Gamma decay (2 worksheets) + halflife worksheets (1). Prepare for Test.	
11 - 15 November	Test 1. Radioactivity and Particles: decay, halflife, and atomic structure.	
18 - 22 November	IGSCE: Unit 7: Applications of Radioactivity. Look at a cyclotron used for making radioactive tracers. Pg 677-686	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	IGSCE: Unit 7: Fission and Fusion. Review of all chapters	
9 – 13 December	Test 2 on all chapters, plus research time for debate: Is Thailand ready for Nuclear Power? Why or Why not... Build evidence and avoid bias.	
16 – 20 December	Debate: Is Thailand ready for Nuclear Power? Why or why not? Forum discussion. (Speaking Assessment) Project 1.	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	Unit 8: IGSCE Astrophysics. Talk about how old cultures looked at the sky. Project 2 Create a poster of a space story/catastrophe. Pg 259-265	
13 – 17 January	Unit 8: IGSCE Astrophysics: Gravity, calculations and 4 fundamental forces. Stellar evolution. Pg 265-271	
20 - 24 January	Review of topics and worksheets on gravity.	
27 – 31 January	Project 2 due, Test 3 + feedback on scores	
3 – 7 February	IGCSE: Unit 8: Cosmology, 271-274. Big bang.	
10 – 14 February	Mock Final Exam(Test 2): Feedback on scores, wait for missing work/worksheets.	
17 - 21 February	***Final Exams***	



# Bangkok Christian College English Immersion Program

## Course Scope for General Science Matthayom 5

Semester 2/2024-2025 Teacher Steven Fournier



Date	Contents	Comments/ Remarks
25 October	Physics Unit 7: Radioactivity and Particles: (pg 657-669) Atoms and Radioactivity._	
28 October – 1 November	Physics Unit 7: Radioactivity and Particles (pg 669-677) Radiation and Half-life. Worksheet 1: Half life.	
4 - 8 November	Physics Unit 7: Radioactivity and Particles: (pg 677-694) Applications of Radioactivity and Fission/Fusion Quiz 1: Online. (657-694)	
11 - 15 November	One period for research, then Lab: Debate: Should Thailand invest in Nuclear energy. Points for and against with 4 teams: (For (current tech), Against (current tech), For (future tech [fusion, microfission...], Against (future tech [fusion, microfission])	
18 - 22 November	Debate continued if needed, Review + Test 1 (Radioactivity and Particles).	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	<b>Biology Review: Units 1-4. Animal Physiology, Plant Physiology, Ecology</b>	
9 – 13 December	Biology Review: Units 5/6 DNA and Microorganisms. Lab: Making Sauerkraut/Kimchi.	
16 – 20 December	Testing Sauerkraut/Kimchi Test 2: Biology Test Optional Activity: Planting seeds.	
23 – 27 December	<b>Finish up work, present Lab results, review Term 2 part 1</b>	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	Chemistry Unit 2: Alkali Metals, Halogens, and Gases in the Atmosphere (345-358). Acids and Bases. (386-398)	
13 – 17 January	Chemistry Lab: Red Cabbage indicator. Quiz 2: Online Quiz on Chemistry.	
20 - 24 January	Test 2: Demonstration Test. Testing for pH. Worksheet 2 on chemical changes of acids and bases. Test 3	
27 – 31 January	Physics 8: Astrophysics. Introduction, looking at orbits, debating the need for space. Worksheet: Opinion on the future of space.	
3 – 7 February	Physics 8: Astrophysics: Motion of the Universe. Pg 695-701. Calculating orbits, looking at satalites.	
10 – 14 February	<b>Physics Unit 8: Astrophysics: Stellar formation. Look at stages of a star, planets, stars, galaxies, and universe Test 4 + Review for exam.</b>	
17 - 21 February	***Final Exams***	



# Bangkok Christian College English Immersion Program

## Course Scope for Business English M514

Semester 2/2024-2025 Teacher Scott Johnson



Date	Contents	Comments/ Remarks
25 October	Unit 1: Communication Introduction	
28 October – 1 November	Unit 1: Communication Cross-cultural Communication	
4 - 8 November	Unit 1: Communication Email Writing	
11 - 15 November	Unit 1: Communication Project 1: Effective Business Communication	
18 - 22 November	Unit 2: International Marketing Introduction	
25 – 29 November	***Pearson Exams Week***	
2 – 6 December	Unit 2: International Marketing Global Branding and Adaptation Project 1: Presentations	
9 – 13 December	Unit 2: International Marketing Advertising and Promotions	
16 – 20 December	Unit 3: Building Relationships Networking and Professional Relationships	
23 – 27 December	***Christmas ceremonies, followed by the beginning of Christmas holiday on the 24 <sup>th</sup> ***	
30 December – 3 January	***Christmas Holiday***	
6 – 10 January	Unit 3: Building Relationships Partnerships and Collaborations	
13 – 17 January	Unit 3: Building Relationships Trust and Loyalty in Business	
20 - 24 January	Review and Final Project 2 Preparation	
27 – 31 January	Project 2: Mock Business Negotiation “Building a Successful Partnership”	
3 – 7 February	In-class Final Exam	
10 – 14 February	***Final Exams***	