



## LEARNING TRAILS AY 2026-27

YEAR: 13

TERM 1\_WEEK 4( Sep 21<sup>st</sup> -25<sup>th</sup> , 2026 )

| IT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | MATHEMATICS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <p><b>Topics:</b><br/>System life cycle:<br/>Design stage.</p> <p><b>Learning Objectives:</b><br/>Analyze the use of DFD.<br/>Describe the components of a DFD.<br/>Differentiate between level 0 and Level 1 DFD.<br/>Construct a level 0 DFD for the given scenario.<br/>Construct a level 1 DFD for the given scenario.<br/>Construct a system flowchart and a data flow diagram (DFD) using correct symbols.</p> <p><b>Resources needed:</b><br/>Textbook, Computer System, Topical past paper questions, task sheets.</p> <p><b>Homework/Assignments:</b><br/>Solve past paper questions.</p>              | <p><b>Topics:</b><br/>Logarithmic and exponential functions</p> <p><b>Learning Objectives:</b><br/>The students shall be able to:</p> <ul style="list-style-type: none"> <li>understand the relationship between logarithms and indices, and use the laws of logarithms (excluding change of base)</li> <li>understand the definition and properties of <math>e^x</math> and <math>\ln x</math>, including their relationship as inverse functions and their graphs</li> </ul> <p><b>Resources needed:</b><br/>Textbook, Topical past paper questions, Smartboard,</p> <p><b>Homework/Assignments:</b><br/><a href="#">Logarithmic and Exponential Functions   P3   A Level 9709</a><br/><br/><a href="#">Logarithmic and Exponential Functions   P3   A Level 9709</a></p> |
| ADVANCED ARABIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | GENERAL ARABIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>Topics:</b><br/>سيرة غيرية الشيخ سلطان بن سالم</p> <p><b>Learning Objectives:</b><br/><u>أن يعرف المتعلم السيرة الغيرية تعريفا صحيحا</u><br/><u>أن يستنتج المتعلم الهدف من كتابة السيرة الغيرية</u><br/><u>أن يميز المتعلم بين السيرة الغيرية والسيرة الذاتية</u><br/><u>أن يحدد المتعلم العناصر الأساسية التي تضمنتها السيرة الغيرية</u><br/><u>أن يستخرج المتعلم المعلومات الرئيسية المتعلقة بالشخصية</u></p> <p><b>Resources needed:</b><br/><u>الكتاب المدرسي - السيرة الذكية - بوروينت - دفتر الطالب</u></p> <p><b>Homework/Assignments:</b><br/><u>كتابة سيرة غيرية عن الشيخ زايد رحمه الله</u></p> | <p><b>Topics:</b><br/><u>درس الوطن</u></p> <p><b>Learning Objectives:</b><br/>أن يفسر المتعلم معاني المفردات الجديدة<br/>أن يحدد المتعلم الفكرة الرئيسة والفكر الفرعية للدرس<br/>أن يستنتج المتعلم أهمية الانتماء للوطن<br/>أن يتحدث المتعلم عن دولة الإمارات<br/>أن يستخرج المتعلم المهارات اللغوية والنحوية من الدرس</p> <p><b>Resources needed:</b><br/>كتاب الطالب- العرض التقديمي - السيرة الذكية</p> <p><b>Homework/Assignments:</b><br/>كتابة فقرة عن أهمية الانتماء للوطن</p>                                                                                                                                                                                                                                                                                       |



| PHYSICS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BIOLOGY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <p><b><u>Topics: Gravitational field</u></b><br/><b><u>13.1-13.3</u></b><br/><b><u>Learning Objectives:</u></b></p> <p>understand that a gravitational field is an example of a field of force and define gravitational field as force per unit mass</p> <p>2 represent a gravitational field by means of field lines</p> <p>understand that, for a point outside a uniform sphere, the mass of the sphere may be considered to be a point mass at its centre</p> <p>2 recall and use Newton's law of gravitation <math>F = Gm_1m_2/r^2</math> for the force between two point masses</p> <p>3 analyse circular orbits in gravitational fields by relating the gravitational force to the centripetal acceleration it causes</p> <p>4 understand that a satellite in a geostationary orbit remains at the same point above the Earth's surface, with an orbital period of 24 hours, orbiting from west to east, directly above the Equator</p> <p>derive, from Newton's law of gravitation and the definition of gravitational field, the equation <math>g = GM/r^2</math> for the gravitational field strength due to a point mass</p> <p>2 recall and use <math>g = GM/r^2</math></p> <p>3 understand why <math>g</math> is approximately constant for small changes in height near the Earth's surface</p> <p><b><u>Resources needed:</u></b> copy notebook, pictures, topical Question, course Book simulation</p> <p><b><u>Homework/Assignments:</u></b><br/>Topical Question for Gravitational field</p> | <p><b><u>Topics: Photosynthesis-Limiting factors, chromatography</u></b><br/><b><u>Learning Objectives:</u></b></p> <ol style="list-style-type: none"> <li>1. State that light intensity, carbon dioxide concentration and temperature are examples of limiting factors of photosynthesis</li> <li>2. Explain the effects of changes in light intensity, carbon dioxide concentration and temperature on the rate of photosynthesis</li> <li>3. Describe and use chromatography to separate and identify chloroplast pigments.</li> <li>4. Describe and carry out investigations to determine the effects of light intensity, carbon dioxide concentration and temperature on the rate of photosynthesis</li> <li>5. Explain what is meant by homeostasis and the importance of homeostasis in mammals</li> <li>6. explain the principles of homeostasis in terms of internal and external stimuli, receptors, coordination systems and negative feedback</li> </ol> <p><b><u>Resources needed:</u></b> PPT, white board, Text book, laptop, Save my exam website</p> <p><b><u>Homework/Assignments:</u></b><br/>Solve topical past paper questions- A level 9700/42</p> |



| CHEMISTRY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ACCOUNTING                                                                                                                                                                                                                                                                       |
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| <p><b>Topics: 25.2 Partition Coefficient , T24</b></p> <p><b><u>Electrochemistry</u></b></p> <p><b><u>Learning Objectives:</u></b></p> <p><b><u>1 state what is meant by the term partition coefficient, K<sub>pc</sub></u></b></p> <p><b><u>2 calculate and use a partition coefficient for a system in which the solute is in the same physical state in the two solvents</u></b></p> <p><b><u>3 understand the factors affecting the numerical value of a partition coefficient in terms of the polarities of the solute and the solvents used.</u></b></p> <p><b><u>T24</u></b></p> <p><b><u>1 predict the identities of substances liberated during electrolysis from the state of electrolyte (molten or aqueous), position in the redox series (electrode potential) and concentration</u></b></p> <p><b><u>2 state and apply the relationship <math>F = Le</math> between the Faraday constant, F, the Avogadro constant, L, and the charge on the electron, e</u></b></p> <p><b><u>3 calculate:</u></b></p> <p><b><u>(a) the quantity of charge passed during electrolysis, using <math>Q = It</math></u></b></p> <p><b><u>(b) the mass and/or volume of substance liberated during electrolysis</u></b></p> <p><b><u>Resources needed:</u></b></p> <ul style="list-style-type: none"><li>• Cambridge International A Level Chemistry Coursebook</li><li>• Chemistry Data Booklet</li><li>• PowerPoint Presentation</li><li>• Interactive Periodic Table</li><li>• Whiteboard and Markers</li><li>• Smartboard</li></ul> | <p><b>Topics:</b></p> <p><u>Master Budget</u></p> <p><b><u>Learning Objectives:</u></b></p> <p>To formulate master budget</p> <p><b><u>Resources needed:</u></b></p> <p>Formats</p> <p>Topical questions</p> <p><b><u>Homework/Assignments:</u></b></p> <p>Topical questions</p> |



| <p><b><u>Homework/Assignments:</u></b><br/>Textbook questions/past paper questions</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| ISLAMIC ARABIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ISLAMIC EDUCATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p><b><u>Topics:</u></b><br/>مناهج التفسير</p> <p><b><u>Learning Objectives:</u></b></p> <ul style="list-style-type: none"> <li>• أن يعرف الطالب علم التفسير ويوضح أهميته.</li> <li>• أن يحدد الطالب أهم مناهج تفسير القرآن الكريم.</li> <li>• أن يميز الطالب بين التفسير بالمأثور والتفسير بالرأي.</li> <li>• أن يدرك الطالب أهمية الرجوع إلى المصادر الموثوقة والعلماء المختصين عند تفسير القرآن الكريم.</li> </ul> <p><b><u>Resources needed:</u></b></p> <ul style="list-style-type: none"> <li>• الكتاب المدرسي.</li> <li>• المصحف الشريف.</li> <li>• نماذج مختارة من تفسير القرآن الكريم.</li> <li>• السبورة والعرض التقديمي.</li> <li>• بطاقات تعليمية توضح مناهج التفسير المختلفة.</li> <li>• أوراق عمل وأنشطة تطبيقية.</li> </ul> <p><b><u>Homework/Assignments:</u></b></p> <ul style="list-style-type: none"> <li>• حل أنشطة الكتاب المدرسي الخاصة بالدرس.</li> <li>• كتابة مقارنة قصيرة بين التفسير بالمأثور والتفسير بالرأي.</li> <li>• استخراج مثال لآية قرآنية فُسرَت بآية أخرى أو بحديث نبوي شريف</li> </ul> | <p><b><u>Topics:</u></b><br/>Methods of Qur'anic Exegesis (Tafsir)</p> <p><b><u>Learning Objectives:</u></b></p> <ul style="list-style-type: none"> <li>• Students will be able to <b>define Qur'anic exegesis (Tafsir) and explain its importance.</b></li> <li>• Students will be able to <b>identify the main methods of Qur'anic exegesis.</b></li> <li>• Students will be able to <b>differentiate between Tafsir by transmitted sources (Tafsir bil-Ma'thur) and Tafsir by reasoned interpretation (Tafsir bil-Ra'y).</b></li> <li>• Students will be able to <b>recognize the importance of following reliable sources and qualified scholars when interpreting the Qur'an.</b></li> </ul> <p><b><u>Resources needed:</u></b></p> <ul style="list-style-type: none"> <li>• Islamic Studies textbook.</li> <li>• The Holy Qur'an.</li> <li>• Selected examples of Qur'anic Tafsir.</li> <li>• Whiteboard and presentation.</li> <li>• Educational cards showing the <b>different methods of Tafsir.</b></li> <li>• Worksheet and application-based activities.</li> </ul> <p><b><u>Homework/Assignments:</u></b></p> <ul style="list-style-type: none"> <li>• Write a <b>short comparison between Tafsir bil-Ma'thur and Tafsir bil-Ra'y.</b></li> <li>• Complete the <b>textbook activities</b> related to the lesson.</li> </ul> |



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| BUSINESS                                                                                                                                                                                                                                                                                                                                                                                       | ECONOMICS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b><u>Topics:</u></b><br/><b>External Economic influences on Business activity</b></p> <p><b><u>Learning Objectives:</u></b><br/>To evaluate the impact of fiscal, monetary, and SupplySide policies of government.</p> <p><b><u>Resources needed:</u></b><br/>Textbook, Case studies with mark scheme</p> <p><b><u>Homework/Assignments:</u></b><br/>Practice end of chapter questions</p> | <p><b><u>Topics:</u></b><br/>Private costs , benefits , externalities and social costs<br/>Types of cost , revenue and profit</p> <p><b><u>Learning Objectives:</u></b><br/>To explain the negative consumption externalities<br/>To explain the asymmetric information and moral hazard<br/>To analyse the cost and benefits analysis<br/>To explain the short run production function, including fixed and variable factors of production</p> <p><b><u>Resources needed:</u></b><br/>Textbook, ppt, task sheet</p> <p><b><u>Homework/Assignments:</u></b><br/>Topical questions and MCQ</p> |