# LEARNING TRAILS AY 2025-26

**GRADE: 12** **TERM 1_WEEK 5 (Sep 22nd -26th 2025)**

| IT | MATHEMATICS |
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| **Topics:**<br>System life cycle:<br>Data flow diagram.<br>System flowchart.<br>Development and testing:<br>Alpha and beta testing.<br>Black box and white box testing.<br>**Learning Objectives:**<br>Design a dataflow diagram for a given scenario.<br>Design a system flowchart for a given scenario.<br>Differentiate between alpha and beta testing.<br>Differentiate between black box and white box testing.<br>Describe the advantages and disadvantages of each testing method.<br>**Resources needed:**<br>Computer system, Task sheet, video tutorials.<br>**Homework/Assignments:**<br>Solve past paper questions. | **Topics: Exponential functions , poisson distribution**<br><br>**Learning Objectives: Understand logarithmic and exponential function as inverse functions , learn to solve equations and inequalities involving exponential and logarithmic functions use formulae to calculate probabilities of poisson distribution, calculate mean and variance**<br><br>**Resources needed: Textbook , calculator , past papers**<br><br>**Homework/Assignments: Topical questions** |
| **ADVANCED ARABIC** | **GENERAL ARABIC** |
| **Topics:**<br>الجملة الاسمية ومكملاتها<br>**Learning Objectives:**<br>أن يعدد المتعلم أشكال المبتدأ<br>أن يحدد المتعلم أركان الجملة الاسمية<br>أن يعرب المتعلم الجمل إعرابا صحيحا<br>**Resources needed:**<br>كتاب النحو - الدفتر - السبورة الذكية<br>**Homework/Assignments:**<br>كتابة الموضوع المخصص لمهارة الكتابة | **Topics:**<br>**حالات الفعل المضارع**<br>**Learning Objectives:**<br>أن يتعرف الطالب على أنواع الفعل<br>أن يستنتج الطالب الأزمنة المختلفة للأفعال<br>أن يكتب الطالب الفعل المضارع في جمل مفيدة<br>أن يميز الطالب بين أدوات النصب وأدوات الجزم<br>**Resources needed:**<br>كتاب الطالب - الدفتر - السبورة الذكية - العرض التقديمي<br>**Homework/Assignments:**<br>كتابة فقرة عن أهمية الانتماء للوطن مستخدما أدوات نصب الفعل المضارع. |

| PHYSICS | BIOLOGY |
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| **Topics:**<br>Ideal gases<br>**Learning Objectives:**<br>Should be able to:<br>1 understand that a gas obeying $pV \propto T$, where T is the thermodynamic temperature, is known as an ideal gas.<br>2 recall and use the equation of state for an ideal gas expressed as $pV = nRT$<br>3 Derive relation between pressure and density of gas. Also derive relation between KE and absolute temperature.<br>**Resources needed:**<br>Sample questions, calculator, copy book<br>**Homework/Assignments:**<br>Topical questions from PMT - Temperature | **Topics:**<br>Homeostasis<br>**Learning Objectives:**<br>-describe the roles of the hypothalamus, posterior pituitary gland, antidiuretic hormone (ADH), aquaporins and collecting ducts in osmoregulation<br>-describe the principles of cell signalling using the example of the control of blood glucose concentration by glucagon<br>- explain how negative feedback control mechanisms<br>- explain the principles of operation of test strips and biosensors<br>**Resources needed:**<br>Topical questions , calculator and stationeries ,note book ,tab<br>**Homework/Assignments:**<br>Solve the activity sheet |
| **CHEMISTRY** | **ACCOUNTING** |
| **Topics: 25**<br>Equilibria<br>**Learning Objectives:**<br>state what is meant by the term partition coefficient, Kpc<br>2 calculate and use a partition coefficient for a system in which the solute is in the same physical state in<br>the two solvents<br>3 understand the factors affecting the numerical value of a partition coefficient in terms of the polarities of<br>the solute and the solvents used<br>**Resources needed:**<br>Sample questions, calculator, copy book<br>**Homework/Assignments:** | **Topics:**<br>Master Budget –Budgeted Income Statement and Statement of Financial Position<br>Investment appraisal<br>**Learning Objectives:**<br>To formulate budgeted income statement and budgeted statement of financial position.<br>To calculate future net cash inflows and outflows arising from the project • how to apply the following capital investment appraisal techniques: – payback – accounting rate of return (ARR = (average profit / average investment) × 100)<br>**Resources needed:**<br>Task Sheet<br>Textbook<br>Topical questions |

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| Topical questions and past papers | **Homework/Assignments:**<br>Topical questions |
| **ISLAMIC ARABIC** | **ISLAMIC EDUCATION** |
| **Topics:**<br>**الفراق بين الزوجين**<br>**Learning Objectives:**<br>**أن يبين أنواع الفراق بين الزوجين**<br>**أن يوضح آداب الاسلام وأحكامه في الطلاق**<br>**أن يعلل مشروعية الخلع والتفريق بأمر القاضي**<br>**أن يستنتج الحكمة من الفراق بين الزوجين**<br>**Resources needed:**<br>• **القرآن الكريم**<br>• **الكتاب المدرسي**<br>• **العرض التقديمي**<br>• **الشبكة العنكبوتية**<br>• **المكتبة المدرسية**<br>**Homework/Assignments:**<br>• **مراجعة العرض التقديمي للدرس**<br>• **حل أنشطة الكتاب المدرسي** | **Topics:**<br>**Marital Dissolution Separation from Spouses**<br>**Learning Objectives:**<br>• Define marital dissolution in Islam (ṭalāq, khulʿ, faskh) and understand the circumstances under which it is permitted.<br>• Explain the Qur'anic guidance and Prophetic traditions related to separation between spouses.<br>**Resources needed:**<br>• Qur'an (verses: Surah Al-Baqarah 2:229-232, Surah At-Talaq 65:1-2).<br>• Hadith collections on divorce, reconciliation, and maintaining family ties.<br>• Whiteboard/Smartboard for discussion and case studies.<br>• PowerPoint or handout summarizing key Islamic rulings on divorce.<br>**Homework/Assignments:**<br>• **Reflection Task:** Write a short essay (200–250 words) on *"Why Islam considers divorce as the last resort despite permitting it."*<br>• **Qur'an Study:** Memorize and explain in your own words one verse from Surah At-Talaq (65:1–2). |
| **BUSINESS** | **ECONOMICS** |
| **Topics:**<br>6.2 Business strategy<br>6.2.1 Developing business strategy | **Topics:**<br>The price system and the micro economy |

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| **Learning Objectives:**<br>To analyze the meaning and purpose of business strategy<br>To analyze the meaning and purpose of strategic management: analysis, choice and implementation<br><br>To apply Approaches to develop business strategy, including:<br>– blue ocean strategy – scenario planning<br>– SWOT analysis – PEST analysis<br>– Porter's five forces – core competence Framework – Ansoff matrix<br>– force field analysis – decision trees<br>**Resources needed:**<br>ISBN:9781108921220<br>https://en.wikipedia.org/wiki/Blue_Ocean_Strategy<br>https://www.moec.gov.ae/en/regulation-of-competition<br>**Homework/Assignments:**<br>Topical case studies | **Learning Objectives:**<br>To calculate total products, average product and marginal product<br>To explain the short run cost function including fixed costs and variable costs, total average and marginal costs, the shape of short run average cost and marginal cost curves<br>To calculate fixed costs and variable costs, and total, average and marginal costs.<br>**Resources needed:**<br>Text book, past paper , task sheet<br>**Homework/Assignments:**<br>Topical questions |