



## LEARNING TRAILS AY 2024-25

GRADE: 12

TERM 2\_WEEK 3 (20<sup>th</sup> January to 24<sup>th</sup> January 2025)

IT	MATHEMATICS
<p><b><u>Topics:</u></b> Communications technology: Network protocols. Programming for web.</p> <p><b><u>Learning Objectives:</u></b> Explain the term protocol, as used in networking, and why protocols are necessary.</p> <p>Describe the purposes and uses of protocols in the preparation, addressing, sending and receiving of data across networks, including: Transmission Control Protocol (TCP), Internet Protocol (IP), Internet Control Message Protocol (ICMP), Address Resolution Protocol (ARP) and inverse address, Resolution Protocol (InARP), Dynamic Host Configuration Protocol (DHCP), User Datagram Protocol (UDP), Hypertext Transfer Protocols (HTTP and HTTPS), File Transfer Protocol (FTP)– tunneling protocol, for example, Simple Mail Transfer Protocol (SMTP), Post Office Protocols, for example, POP3, Internet Message Access Protocol (IMAP), Telnet, SSH, Internet Protocol Security (IPsec), TLS/SSL</p> <p><b><u>Resources needed:</u></b> Computer system, activity sheets, past paper</p> <p><b><u>Homework/Assignments:</u></b> Solve past paper questions.</p>	<p><b><u>Topics:</u></b> Numerical solution of equations</p> <p><b><u>Learning Objectives:</u></b></p> <ul style="list-style-type: none"> <li>• Locate approximately a root of an equation, by means of graphical consideration searching for a sign change</li> <li>• Understand the idea of and use the notation for a sequence of approximations that converges to a root of an equation</li> <li>• Understand how iterative formula ,to determine a root to a prescribed degree of accuracy.</li> </ul> <p><b><u>Resources needed:</u></b> Text book , calculator. Past papers</p> <p><b><u>Homework/Assignments:</u></b> Past paper questions</p>



ADVANCED ARABIC	GENERAL ARABIC
<p><b>Topics:</b> الجملة الفعلية ومكملاتها / الفعل</p> <p><b>Learning Objectives:</b> أن يطبق المتعلم ما درسه في أبواب الجملة الفعلية</p> <p><b>Resources needed:</b> كتاب التطبيقات النحوية - الدفتر - السبورة الذكية</p> <p><b>Homework/Assignments:</b> حل تمارين الدرس</p>	<p><b>Topics:</b> عالم التقنيات</p> <p><b>Learning Objectives:</b> أن يتعرف المتعلم على المفردات الجديدة الواردة في الدرس أن يوظف المتعلم المفردات في جمل توضح معناها أن يستنتج المتعلم أهمية التقنيات الحديثة أن يحدد المتعلم استخدامات الانترنت</p> <p><b>Resources needed:</b> كتاب الطالب - السبورة الذكية - العرض التقيمي</p> <p><b>Homework/Assignments:</b> يكتب فقرة عن فوائد الانترنت</p>
PHYSICS	BIOLOGY
<p><b>Topics:</b> Quantum Physics, Nuclear Physics</p> <p><b>Learning Objectives:</b> Should be able to Describe electron diffraction and DE Broglie wavelength Explain difference between line emission and absorption spectrum Solve problems using equations <math>E_2 - E_1 = hf</math> Explain concept of binding energy of a nucleus</p> <p><b>Resources needed:</b> Calculator, copy book, panel board, Wi-Fi and sample questions</p> <p><b>Homework/Assignments:</b> Topical Past paper questions – Quantum physics</p>	<p><b>Topics:</b> Selection and Evolution</p> <p><b>Learning Objectives:</b> describe the principles of selective breeding (artificial selection) Out line inbreeding and hybridisation Outline the theory of evolution as a process leading to the formation of new species from pre-existing species Discuss how DNA sequence data can show evolutionary relationships between species Explain how speciation may occur and the two types of speciation</p> <p><b>Resources needed:</b> Calculator ,stationaries , book ,Activity sheets ,smart board</p> <p><b>Homework/Assignments:</b> Topical questions given</p>



CHEMISTRY	ACCOUNTING
<p><b>Topics: 34.1 Primary and secondary amines</b></p> <p><b>Learning Objectives:</b></p> <p>1. recall the reactions (reagents and conditions) by which primary and secondary amines are produced: [a] reaction of halogenoalkanes with <math>\text{NH}_3</math> in ethanol heated under pressure [b] reaction of halogenoalkanes with primary amines in ethanol, heated in a sealed tube / under pressure [c] the reduction of amides with <math>\text{LiAlH}_4</math> [d] the reduction of nitriles with <math>\text{LiAlH}_4</math> or <math>\text{H}_2 / \text{Ni}</math> 2. describe the condensation reaction of ammonia or an amine with an acyl chloride at room temperature to give an amide</p> <p><b>Resources needed:</b></p> <p>copy book, panel board, Wi-Fi and sample questions</p> <p><b>Homework/Assignments:</b></p> <p>Topical Past paper questions</p>	<p><b>Topics:</b></p> <p>Standard Costing</p> <p><b>Learning Objectives:</b></p> <p>To understand the meaning of a system of standard costing in an organisation • the advantages and disadvantages of a standard costing system • how standard costing can be used as an aid to improve the performance of a business • how to calculate the following variances: – direct material price and usage – direct labour rate and efficiency – fixed overhead expenditure and volume – fixed overhead capacity and efficiency sub-variances – sales price and volume</p> <p><b>Resources needed:</b></p> <p>Text book, Task sheets</p> <p><b>Homework/Assignments:</b></p> <p>Topical questions</p>
ISLAMIC ARABIC	ISLAMIC EDUCATION
<p><b>Topics:</b></p> <p>المنهج النبوي في الرعاية الصحية</p> <p><b>Learning Objectives:</b></p> <p>أن يوضح مفهوم الصحة ورعايتها أن يبين أهمية الصحة في حياة الفرد والمجتمع أن يحدد مقومات الصحة في السنة النبوية أن يستنتج أسباب انتشار الأمراض رغم تقدم علوم الطب</p> <p><b>Resources needed:</b></p> <p>الكتاب المدرسي السبورة الذكية الشبكة العنكبوتية العرض التقديمي أوراق عمل</p> <p><b>Homework/Assignments:</b></p> <p>حل أنشطة الكتاب المدرسي</p>	<p><b>Topics:</b></p> <p>Creative Thinking in Islam</p> <p><b>Learning Objectives:</b></p> <ul style="list-style-type: none"><li>Understand the concept of creativity from an Islamic perspective and its significance in daily life.</li><li>Identify examples of creative thinking in the Quran, Hadith, and Islamic history.</li><li>Apply creative thinking principles to solve everyday problems ethically and effectively.</li></ul> <p><b>Resources needed:</b></p> <ul style="list-style-type: none"><li><b>Quran and Tafsir:</b> For references and insights into creativity in Islam.</li></ul>



عمل مخطط ذهني عن المنهج النبوي في الرعاية الصحية  
مراجعة العرض التقديمي للدرس

- **Visual Aids:** Images or videos of significant Islamic inventions or historical contributions.

**Homework/Assignments:**

Research one example of a Muslim innovator or thinker and summarize their contribution to society in 100 words.

**BUSINESS**

**Topics:**

Financial statements

**Learning Objectives:**

- analyse the need for businesses to keep accounts
- analyze the main components of a statement of profit or loss (income statement)
- analyze the main components of a statement of financial position
- evaluate the importance of inventory valuation
- evaluate the importance of depreciation.

**Resources needed:**

**Text book**

Topical case studies uploaded in teams

**Homework/Assignments:**

Practice past papers.