



## LEARNING TRAILS AY 2024-25

GRADE: 12

TERM 2\_WEEK 5 (3<sup>rd</sup> February to 7<sup>th</sup> February 2025)

IT	MATHEMATICS
<p><b><u>Topics:</u></b> Communications technology: Disaster recovery management. Programming for the web.</p> <p><b><u>Learning Objectives:</u></b> Explain types of disaster that cause data loss and business disruption, including: natural disasters ○ equipment and power failures ○ cybercrime ○ malware ○ criminal activity. Strategies to minimize risks.</p> <p>Add interactivity to web pages using java script: Use conditional operators (if, else, else if, switch). Use JavaScript loops for iterative methods, including: for loop ○ for/in loop ○ while loop ○ do/while loop.</p> <p><b><u>Resources needed:</u></b> Computer system, Expression Web 4, Task sheets.</p> <p><b><u>Homework/Assignments:</u></b> Solve the tasks from past paper questions.</p>	<p><b><u>Topics:</u></b> Sampling &amp; Estimation</p> <p><b><u>Learning Objectives:</u></b> Understand the distinction between sample and population , explain in simple terms why a given sampling method may be unsatisfactory Recognise that a sample mean can be regarded as a random variable , mean has a normal distribution, use central limit theorem Calculate unbiased estimate of population mean and variance , determine a confidence interval for population mean , determine from a large sample an approximate confidence interval for a population proportion</p> <p><b><u>Resources needed:</u></b> Text book , past papers , calculator</p> <p><b><u>Homework/Assignments:</u></b> Related past paper questions</p>



ADVANCED ARABIC	GENERAL ARABIC
<p><b>Topics:</b> قصيدة نثر الجو على الأرض برد</p> <p><b>Learning Objectives:</b> أن يبين المتعلم المعنى الإجمالي للنص الشعري أن يتتبع المتعلم تقنية الوصف من خلال استخدام الكاتب للتقنيات البلاغية</p> <p><b>Resources needed:</b> الكتاب المدرسي - الدفتر المدرسي - العرض التقديمي</p> <p><b>Homework/Assignments:</b> حل تمرينات الدرس</p>	<p><b>Topics:</b> <u>الهاتف المحمول</u></p> <p><b>Learning Objectives:</b> <u>أن يتعرف المتعلم المفردات الجديدة</u> <u>أن يحدد المتعلم الفكرة الرئيسية والفكر الفرعية للدرس</u> <u>أن يستنتج المتعلم فوائد الهاتف المحمول</u> <u>أن يقارن المتعلم بين الهاتف قديما وحديثا</u></p> <p><b>Resources needed:</b> <u>الكتاب - الدفتر - السبورة الذكية - أوراق عمل</u></p> <p><b>Homework/Assignments:</b> <u>كتابة فقرة عن مخترع الهاتف ومراحل تطوره حتى وصل إلى ما هو عليه الآن</u></p>
PHYSICS	BIOLOGY
<p><b>Topics:</b> Medical Physics [Flipped class]</p> <p><b>Learning Objectives:</b> Should be able to explain production and use of ultrasound Should be able to explain production and use of X-rays Should be able to explain PET scan</p> <p><b>Resources needed:</b> Calculator, ppt slides, short videos, sample questions, panel board</p> <p><b>Homework/Assignments:</b> Topical past paper questions – Nuclear Physics</p>	<p><b>Topics:</b> Classification ,Biodiversity and Conservation</p> <p><b>Learning Objectives:</b> Explain that biodiversity can be assessed at different levels Explain the importance of random sampling in determining the biodiversity of an area Describe and use suitable methods to assess the distribution and abundance of organisms in an area, limited to frame quadrats, line transects, belt transects and mark-release recapture using the Lincoln index</p> <p><b>Resources needed:</b> Stationaries ,Calculator ,activity sheet ,smart board ,note book &amp; text book</p> <p><b>Homework/Assignments:</b> Solve the statistical calculations given in the activity sheet</p>



CHEMISTRY	ACCOUNTING
<p><b>Topics:</b> 37 Analytical techniques Proton (<math>^1\text{H}</math>) NMR spectroscopy</p> <p><b>Learning Objectives:</b></p> <p>Candidates should be able to:</p> <ol style="list-style-type: none"><li>analyze and interpret a proton (<math>^1\text{H}</math>) NMR spectrum of a simple molecule to deduce:<ol style="list-style-type: none"><li>the different environments of proton present using chemical shift values</li><li>the relative numbers of each type of proton present from relative peak areas</li><li>the number of equivalent protons on the carbon atom adjacent to the one to which the given proton is attached from the splitting pattern, using the <math>n + 1</math> rule (limited to singlet, doublet, triplet, quartet and multiplet)</li><li>the possible structures for the molecule</li></ol></li></ol>	<p><b>Topics:</b> ABC Costing</p> <p><b>Learning Objectives:</b> To analyse-the application of activity based costing (ABC) • the uses and limitations of ABC • what is meant by a cost driver • how to use ABC to: – identify the appropriate cost driver – apportion and allocate overheads – calculate the total cost and selling price of a unit • the effect of different methods of overhead absorption on cost and profit</p> <p><b>Resources needed:</b> Text book Task Sheets Format</p> <p><b>Homework/Assignments:</b> Topical questions</p>
ISLAMIC ARABIC	ISLAMIC EDUCATION
<p><b>Topics:</b> البيوع المحرمة</p> <p><b>Learning Objectives:</b></p> <ul style="list-style-type: none"><li>فهم مفهوم البيوع المحرمة في الإسلام.</li><li>استنتاج الحكمة من تحريم بعض أنواع البيوع</li><li>تحليل الآثار الاجتماعية والاقتصادية للالتزام بأحكام البيوع الشرعية</li></ul> <p><b>Resources needed:</b></p> <ul style="list-style-type: none"><li>الكتاب المدرسي</li><li>الشبكة العنكبوتية</li><li>العرض التقديمي</li><li>أوراق عمل</li><li>السيورة الذكية</li><li><b>Homework/Assignments:</b></li></ul>	<p><b>Topics:</b> Prohibited Transactions in Islam</p> <p><b>Learning Objectives:</b></p> <ul style="list-style-type: none"><li>Understand the concept of prohibited transactions in Islam.</li><li>Deduce the wisdom behind the prohibition of certain types of transactions.</li><li>Analyze the social and economic impacts of adhering to Islamic transaction rules.</li></ul> <p><b>Resources Needed:</b></p> <ul style="list-style-type: none"><li>Textbook</li></ul>



- حل أنشطة الكتاب المدرسي
- مراجعة العرض التقديمي للدرس

- The Internet
- Presentation slides
- Worksheets
- Smartboard

**Homework/Assignments:**

- Complete the textbook activities.
- Review the lesson presentation.

**BUSINESS**

**Topics:**

Investment Appraisal

**Learning Objectives:**

- analyse the meaning, calculation and interpretation of the payback method of investment appraisal
- analyse the meaning, calculation and interpretation of the accounting rate of return (ARR) method of investment appraisal
- analyse the meaning, calculation and interpretation of the net present value (NPV) method of investment appraisal
- evaluate quantitative results and their impact on investment decisions
- evaluate qualitative factors and their impact on investment decisions
- compare investment appraisal methods, including their limitations

**Resources needed:**

E book, Topical case studies

**Homework/Assignments:**

Practice past papers.