



LEARNING TRAILS AY 2026-27

YEAR: 12

TERM 1_WEEK 4(Sep 21st -25th , 2026)

IT	MATHEMATICS
Topics: Data processing and information: Checking the accuracy of data. Data processing. Learning Objectives: Describe the methods and uses of validation and verification. Differentiate between validation and verification. Explain the need for both validation and verification. Describe the advantages and disadvantages of validation and verification. Describe methods and uses of batch processing. Describe methods and uses of online processing. Describe the methods and uses of real-time processing systems where the output affects the input. Resources needed: Textbook, Computer system, task sheets. Homework/Assignments: Solve past paper questions.	Topics: Functions and Transformations Learning Objectives: Determine whether or not a given function is on-to-one and find the inverse of a one-to-one function in simple cases. Illustrate in graphical terms the relation between a one-to-one function and its inverse. Understand and use the transformations of the graph of $y=f(x)$ given by $y=f(x)+a$, $y=f(x+a)$, $y=af(x)$, $y=f(ax)$ and simple combinations of these. Resources needed: Text book, calculator, electronic device. Homework/Assignments: Daily practice Questions, weekly assignment.



ADVANCED ARABIC	GENERAL ARABIC
Topics: <u>قصيدة مالك بن الربيع</u> Learning Objectives: <u>أن يحلل المتعلم النص ويستنتج الأفكار الرئيسية والأفكار الفرعية من الأبيات</u> <u>أن يفسر المتعلم المفردات الجديدة ويوظفها في جمل من إنشائه</u> <u>أن يشرح المتعلم الأبيات شرحا وافيا</u> <u>أن يميز المتعلم بين الأساليب الخبرية والإنشائية في القصيدة</u> <u>أن يستنتج المتعلم بعض القيم وأفكار التي يعبر عنها النص</u> Resources needed: <u>الكتاب المدرسي - السيرة الذاتية - البور بوينت - دفتر الطالب</u> Homework/Assignments: <u>كتابة موضوع عن أهمية الشجاعة في مواجهة الأزمات</u>	Topics: <u>ابن بطوطة</u> Learning Objectives: <u>أن يتعرف الطالب المفردات الجديدة</u> <u>أن يستخرج معلومات عن ابن بطوطة</u> <u>أن يصمم مخططا لمعلومات الدرس</u> <u>أن يجيب عن الأسئلة</u> Resources needed: <u>الكتاب المدرسي بوربوينت أنشطة صفية تعليمية</u> Homework/Assignments: <u>اكتب عن شخصية تاريخية في العلم أو الأدب</u>
PHYSICS	BIOLOGY
Topics: kinematics Learning Objectives: <u>Solve question related with equations of motion</u> <u>Calculate time of flight, range, vertical velocity and resultant velocity</u> <u>Solve graph related question which is given as task sheet</u> Resources needed: <u>Ppt, simulation, topical sheets</u> Homework/Assignments: <u>J2021-j2025 and November topical papers</u>	Topics: Biological molecules Learning Objectives: <u>Carbohydrates and Lipids.</u> Describe the molecular structure of the polysaccharide cellulose and outline how the arrangement of cellulose molecules contribute to the function of plant cell walls State that triglycerides are non-polar hydrophobic molecules and describe the molecular structure of triglycerides with reference to fatty acids (saturated and unsaturated), glycerol and the formation of ester bonds Relate the molecular structure of triglycerides to their functions in living organisms



	Describe the molecular structure of phospholipids with reference to their hydrophilic (polar) phosphate heads and hydrophobic (non-polar) fatty acid tails <u>Proteins</u> Describe and draw the general structure of an amino acid and the formation and breakage of a peptide bond Explain the meaning of the terms primary structure, secondary structure, tertiary structure and quaternary structure of proteins Describe the types of interaction that hold protein molecules in shape: • hydrophobic interactions • hydrogen bonding • ionic bonding • covalent bonding, including disulfide bonds <u>Resources needed:</u> Text book, Educational websites given, PPT and Videos <u>Homework/Assignments:</u> Topical Questions
ACCOUNTING	CHEMISTRY
<u>Topics:</u> Control Accounts <u>Learning Objectives:</u> To formulate Sales and Purchase ledger control account To amend sales and purchase ledger control account <u>Resources needed:</u> Formats Task sheets	<u>Topics:</u> Chemical Bonding <u>Learning Objectives:</u> (a) describe covalent bonds in terms of orbital overlap giving σ and π bonds: • σ bonds are formed by direct overlap of orbitals between the bonding atoms 3.5 • π bonds are formed by the sideways overlap of adjacent p orbitals above and below the σ bond (b) describe how the σ and π bonds form in molecules including H_2 , C_2H_6 , C_2H_4 , HCN and N_2



Topical questions <u>Homework/Assignments:</u> Topical questions	(c) use the concept of hybridisation to describe sp, sp² and sp³ orbitals <u>Resources needed:</u> Molecular model kit Build CH₄, C₂H₆, C₂H₄ and C₂H₂ and compare shapes Orbital diagrams Show formation of sp³, sp² and sp hybrid orbitals <u>Homework/Assignments:</u> Textual Questions
ISLAMIC ARABIC	ISLAMIC EDUCATION
<u>Topics:</u> (العقل والنقل (الوحي والعقل والنقل (الوحي) <u>Learning Objectives:</u> • أن يعرف الطالب العقل والنقل (الوحي). • أن يوضح الطالب أهمية العقل والوحي في الإسلام. • أن يبين الطالب العلاقة والتوازن بين العقل والنقل. • أن يطبق الطالب التفكير العقلي والتوجيهات الإسلامية عند اتخاذ القرارات في مواقف الحياة الواقعية. <u>Resources needed:</u> • كتاب التربية الإسلامية. • القرآن الكريم والأحاديث النبوية ذات الصلة. • السبورة والعرض التقديمي. • آيات قرآنية وأمثلة متعلقة بـ التفكير والتدبر والوحي. • مواقف من الحياة الواقعية للمناقشة وتنمية التفكير الناقد. • أوراق عمل وأنشطة صفية. <u>Homework/Assignments:</u> حل أنشطة الكتاب المدرسي الخاصة بالدرس. • كتابة شرح مختصر للعلاقة بين العقل والنقل. • ذكر مثال واحد من الحياة الواقعية يوضح كيف يستخدم المسلم عقله مع الالتزام بتوجيهات القرآن الكريم والسنة النبوية.	<u>Topics:</u> Aql and Naql (Reason & Revelation) <u>Learning Objectives:</u> • Students will be able to define Aql (reason/intellect) and Naql (revelation). • Students will be able to explain the importance of both reason and revelation in Islam. • Students will be able to describe the relationship and balance between Aql and Naql. • Students will be able to apply reason and Islamic guidance when making decisions in real-life situations. <u>Resources Needed:</u> • Islamic Studies textbook. • The Holy Qur'an and relevant Hadith. • Whiteboard and presentation. • Qur'anic verses and examples related to reasoning, reflection, and revelation.



	• Real-life scenarios for discussion and critical thinking. • Worksheet and classroom activities. <u>Homework / Assignments:</u> • Complete the textbook activities related to the lesson. • Write a short explanation of the relationship between Aql and Naql. • Give one real-life example showing how a Muslim can use reason while following the guidance of the Qur'an and Sunnah.
ECONOMICS	BUSINESS
<u>Topics:</u> PPC, Classification of goods and services <u>Learning Objectives:</u> To explain the meaning and purpose of a production possibility curve To explain the shape of the ppc , including the constant and increasing opportunity costs To analyse the causes and consequences of shifts in a ppc To discuss the significance of a position within a ppc To explain the meaning and importance of free goods and private goods <u>Resources needed:</u> Text book , ppt, past paper questions, task sheet <u>Homework/Assignments:</u> Topical questions , Four part questions and mcq	<u>Topics:</u> 1.4 Business objectives 1.4.1 Business objectives in the private sector and public sector <u>Learning Objectives:</u> To analyse the relationship between mission statement, aims, objectives, strategy and tactics To analyse how objectives might change overtime To analyse the translation of objectives into targets and budgets To evaluate how ethics may influence business objectives and activities <u>Resources needed:</u> Text book, case studies, concept sheets <u>Homework/Assignments:</u> Practice topical case studies.