AL AIN JUNIORS SCHOOL- BRITISH SYSTEM
LEARNING TRAILS
AY 2023-24: Term 1_Week 14 (27th to 1st December 2023)
GRADE 11

MATHEMATICS	IT
Topics: Arithmetic and geometric progression Discrete random variables (drvs) **Learning Objectives:** • recognise arithmetic and geometric progressions • use the formulae for the nth term and for the sum of the first n terms to solve problems involving arithmetic or geometric progressions • use the condition for the convergence of a geometric progression, and the formula for the sum to infinity of a convergent geometric progression. • draw up a probability distribution table relating to a given situation involving a discrete random variable X **Resources needed:** TEXTBOOK, PPTs, PAST PAPERS FROM CAIE Mathematics: Topic-Wise Study Guides, Questions, and Resources | Papers (cambridgepapers.net) **Homework/Assignments:** CAIE Mathematics: Topic-Wise Study Guides, Questions, and Resources | Search Results (cambridgepapers.net) CAIE Mathematics: Topic-Wise Study Guides, Questions, and Resources | Search Results (cambridgepapers.net)	**Topics:** Normalisation to third normal form (3NF) **Learning Objectives:** • Describe the process of normalization. • Describe and analyze the characteristics of data in unnormalised form (UNF), first normal form (1NF), second normal form (2NF) and third normal form (3NF). • Describe the advantages and disadvantages of normalisation. • Normalise a database to first normal form (1NF), second normal form (2NF) and third normal form (3NF). **Resources needed:** Text book, Past papers, Activity sheets Sample database to be normalised. **Homework/Assignments:** Solve past paper questions.

ADVANCED ARABIC	GENERAL ARABIC
Topics: مراجعة **Learning Objectives;** - أن يحدد الفكرة الرئيسة والفكر الفرعية في قصيدة مالك بن الريب - أن يستنتج الدلالات الإيحائية والمجازية في النص - أن يفسر معاني المفردات ويوظفها في جمل من إنشائه **Resources needed:** - الكتاب المدرسي - منصة ألف - العرض التقديمي - اختبار الكتروني **Homework/Assignments:** - حل أسئلة منصة ألف - حل أوراق العمل	**Topics:** مراجعة **Learning Objectives;** أن يتعرف أنواع الهوايات أن يستنتج أهمية المعارض أن يذكر أنواع الهجن **Resources needed:** الكتاب المدرسي العرض التقديمي الإنترنت **Homework/Assignments:** حل أوراق العمل أختبار إلكتروني
PHYSICS	BIOLOGY
Topics: Deformation of solids **Learning Objectives;** 1. Stress and strain 1 understand that deformation is caused by tensile or compressive forces (forces and deformations will be assumed to be in one dimension only) 2 understand and use the terms load, extension, compression and limit of proportionality 3 recall and use Hooke's law 4 recall and use the formula for the spring constant $k = F / x$ **Resources needed:** https://phet.colorado.edu www.physicsclassroom.com www.physicslab.co.uk https://sciencing.com https://spark.iop.org www.stem.org.uk https://studynova.com/lecture/physics/	**Topics:** UNIT:5 The Mitotic cell cycle **Learning Objectives;** Outline the mitotic cell cycle. Outline the role of telomeres in preventing the loss of genes from the ends of chromosomes during DNA replication. Outline the role of stem cells in cell replacement and tissue repair by mitosis. **Resources needed:** www.hhmi.org/biointeractive/dna-packaging www.dnalc.org/resources/3d/07-how-dna-is-packaged-basic.html **Homework/Assignments:** Sketch the different stages of the mitotic cell cycle and identify the main stages of mitosis. To research the control of the cell cycle, including checkpoint protein kinases and the process of

	phosphorylation.
www.s-cool.co.uk/a-level/physics Cambridge AS level Course Book. **Homework/Assignments:** *Practice booklt[2016-20 both MCQ and SQ*	

ISLAMIC ARABIC	ISLAMIC EDUCATION
Topics: مصادر التشريع الإسلامي **Learning Objectives;** أن يبين المقصود بمصادر التشريع الإسلامي * أن يذكر خصائص القرآن الكريم* أن يوضح حجية السنة النبوية الشريفة * أن يستنتج أهمية الاجتهاد في استنباط الأحكام الشرعية * أن يحدد بعض مصادر التشريع الاجتهادية * **Resources needed:** الكتاب المدرسي بوربوينت أنشطة تعليمية منصة ألف **Homework/Assignments:** • حل أنشطة الطالب • حل أسئلة منصة ألف	**Topics:** Manners of Dialogue **Learning Objectives;** a. Understand the importance of respectful and effective dialogue in Islam. b. Identify and practice key manners of dialogue in Islamic teachings. **Resources needed:** a. Books: Islamic etiquette books, such as "Islamic Manners" by Abdul Fattah Abu Ghudwah. b. Online resources: Islamic educational websites, such as Islamic Finder and Islami city, for additional reading materials and interactive content. c. Mobile apps: Islamic etiquette apps, such as "Islamic Manners & Etiquettes" and "Islamic Manners for Children. **Homework/Assignments:** Solve students' activities in the textbook. Revise PPT

CHEMISTRY	ACCOUNTING
Topics: Equilibria **Learning Objectives;** • Explain the Dynamic nature for reversible reactions • Deduce expressions for equilibrium constants • Calculate the values of Equilibrium constants.	**Topics:** Costing –Materials and labour **Learning Objectives;** Candidates analyse • accounting for material and labour costs • how to identify and calculate fixed costs, variable costs, semi-variable costs and stepped costs • how to calculate the value of closing inventory using the first in first out (FIFO) and weighted average cost (AVCO) methods

Resources needed:
Microsoft Teams, AS Chemistry Collins Textbook.

Homework/Assignments:
End of the chapter Questions
Daily Questions from Microsoft Teams.
Topical Questions.

(perpetual and periodic) • the principles of just in time (JIT) management of inventory

Resources needed:
AS and A level text book by Harold Randall and David Hopkins
Formats

Homework/Assignments:
   Topical questions

BUSINESS

Topics:
Theories of Motivation

Learning Objectives;
To analyze various theories of motivation.
To apply these theories of motivation I business organizations to improve the efficiency of core and peripheral workers.

Resources needed:
Textbook
Past papers

Homework/Assignments:
Practice End of Unit questions given in the textbook