المادة الدراسية للاختبارات STUDY LIST

الصف العاشر GRADE 10	اختبارات نهاية الفصل الأول 2026 2027 End of Term 1 Exams 2026 2027

المادة Subject	الوحدات/الدروس Lessons /Units	الصفحات في الكتاب Pages in the book
الرياضيات MATH	Unit 11, 11-1 Adding and Subtracting Polynomials 11-2 Multiplying Polynomials by Monomials 11-3 Multiplying Polynomials 11-4 Special Products 11-5 Using Distributive Property 11-6 Factoring Quadratic Trinomials 11-7 Factoring Special Products Unit 12, 12-1 Graphing Quadratic Functions 12-2 Transformations of Quadratic Functions 12-3 Solving Quadratic Equations by Graphing 12-4 Solving Quadratic Equations by Factoring 12-5 Solving Quadratic Equations by Completing the Square 12-6 Solving Quadratic Equations by Using the Quadratic Formula 12-7 Solving Systems of Linear and Quadratic Equations Unit 3, 3-2 Similar Polygons3-3 Similar Triangles: AA Similarity 3-4 Similar Triangles: SSS and SAS Similarity 3-5 Triangle Proportionality 3-6 Parts of Similar Triangles	Integrated Math Book 2 + Aleks
التربية الإسلامية Islamic Studies	توحيد الله وبر الوالدين رقي الإسلام في التعامل مع الخادم والأجير الكفر (معناه وأنواعه وصوره) الحوار في السيرة النبوية	100-110ص ص 112-123 ص 124-131 ص 142
STEM-Chem	**Unit 2: Elements, Compounds and Mixtures** **1. Formation of Ions** • Cations (+): Formed by losing electrons. ○ Example: $Na \rightarrow Na^+ + e^-$ • Anions (−): Formed by gaining electrons. ○ Example: $Cl + e^- \rightarrow Cl^-$	Student workbook: Pages: 40-43

Student workbook:

Pages: 44-55

- Ionic charge depends on the number of electrons lost or gained.

2. Common Ion Formulae

Know the names, symbols and charges of these ions.

- Positive ions: Na^+, K^+, Mg^{2+}, Ca^{2+}, Al^{3+}.
- Negative ions: Cl^-, O^{2-}, N^{3-}, SO_4^{2-}, NO_3^-, CO_3^{2-}.

Unit 3: Trends and Patterns in the Periodic Table

3. Group I – Alkali Metals

- Soft, shiny metals; stored under oil.
- Trends down the group:
  - Reactivity increases.
  - Density generally increases.
  - Melting point decreases.
  - Metals become softer.
- Reactions:
  - With water: produces a metal hydroxide and hydrogen.
  - With oxygen: produces metal oxides.
- Know how to write balanced equations.

4. Group VII – Halogens

- Non-metals that exist as diatomic molecules (X_2).
- Physical appearance at r.t.p.:
  - Chlorine: pale yellow-green gas.
  - Bromine: red-brown liquid.
  - Iodine: grey-black solid.
- Trends down the group:
  - Reactivity decreases.
  - Density increases.
  - Colour becomes darker.
  - Melting and boiling points increase.

5. Halogen Displacement Reactions

- A more reactive halogen displaces a less reactive halogen from its compound.
- Reactivity decreases down Group VII.
- Be able to predict displacement reactions and write balanced equations.

Example: $Cl_2 + 2KBr \rightarrow 2KCl + Br_2$

6. Periodicity

Definition: Repeating patterns in the properties of elements across periods.

Trends across a period (left to right):

- Atomic radius decreases.
- Ionisation energy increases.
- Electronegativity increases.
- Metallic character decreases.

	Trends down a group: • Atomic radius increases. • Ionisation energy decreases. • Electronegativity decreases. Understand the reasons behind these trends, particularly nuclear charge, electron shells and shielding. **7. Ionisation Energy** • Definition: Energy required to remove one electron from a gaseous atom. • Example: $Na(g) \rightarrow Na^+(g) + e^-$ • Across a period: generally increases. • Down a group: generally decreases. • Understand the effects of nuclear charge, atomic radius and electron shielding. **8. Successive Ionisation Energies** • Each successive electron requires more energy to remove. • A large sudden increase indicates removal of an electron from an inner shell. • Use the position of the large jump to determine the number of outer-shell electrons and identify the element's group.	
Cells **:Chapter 19** and Energy 476-487	**Unit 19: Cells and Growth** **Photosynthesis** • **Describe the structure of a chloroplast.** • **Explain the light-dependent reactions of photosynthesis.** • **Explain the Calvin cycle (light-independent reactions).** **Limiting Factors and Investigation Skills** • **Define limiting factors.** • **Identify limiting factors affecting the rate of photosynthesis.** • **Identify independent, dependent, and control variables in an investigation.** • **Justify the use of specific equipment in an investigation.** • **Analyze experimental data and draw valid conclusions.**	**STEM BIO**

Chapter 20 Growth and Development 490-507	**Respiration** • **Describe the structure of a mitochondrion.** • **Explain the stages of aerobic and anaerobic respiration.** • **Compare ATP production in aerobic and anaerobic respiration.** • **Compare anaerobic respiration in humans and yeast.** **<u>Unit 20: Cell Division</u>** **Cell Cycle and Division** • **Explain the stages of the cell cycle.** • **Describe the stages of mitosis and meiosis.** • **Explain how crossing over and independent assortment increase genetic variation.** **Analysis and Application** • **Analyze the stages of mitosis and meiosis using diagrams and data.** • **Analyze cell images or microscope slides and justify the type and stage of cell division observed.**	

Pages : 178 – 188 210 – 231 : Pages PowerPoints on LMS İn-Class Workbook Lab Work Unit Tests	**7.2 & 7.3 Lenses:** - Real and virtual images - Properties of real and virtual images - Convex and concave lenses - Image properties of convex and concave lenses - Ray tracing for convex lenses - Image formation at different object positions - Calculating image distance using the lens equation - Calculating image magnification using the magnification equation **8.1 Magnetic Field:** - Describe the basic properties of magnetic force. - Identify everyday examples of magnetic force. - Draw a magnetic field diagram around a bar magnet. **8.2 Electric Force and Field:** - Describe the basic properties of electric force. - Identify everyday examples of electric force. - Calculate the electric force between two charges. - Describe electrostatic induction. - Describe how an electroscope works. - Draw an electric field diagram around point charge. - Explain how electrical shielding works. - List examples of electric shielding. **8.3 Electric Potential and Capacitors:** - Calculate electric potential. - Calculate electric potential energy. - Infer the properties of an electric field based on equipotential lines. - Define capacitors. - Calculate the stored charge in a capacitor. - Calculate the stored energy in a capacitor.	**STEM-Physics**
136 133	**الحفظ:** الأبيات 1-8 من نص الغبطة فكرة. **القضايا الأدبية:** عناصر العمل الأدبي.	**اللغة العربية** **Arabic**

	القراءة:	
95	-النار سر الطاقة.	
136	-الغبطة فكرة- الشخصية السعيدة.	
	الكتابة:	
106	كتابة مقال تفسيري.	
	القواعد النحوية:	
87	-إسناد الفعل الماضي الصحيح إلى ضمائر الرفع المتصلة.	
102	-إسناد الفعل الماضي المعتل إلى ضمائر الرفع المتصلة.	
121	-أسلوب القسم.	
143	كم الاستفهامية وكم الخبرية.	
	الاستماع:	
127	حكاية الأرض.	
	البلاغة:	
85	-الاستعارة المكنية.	
119	-الاستعارة التصريحية.	
All PPTs and Materials on LMS	**Print functions and arguments** **2.1.2** print() function **2.1.3** Function arguments **2.1.8** Python escape and newline characters **2.1.9** Using multiple arguments **2.1.10** Positional arguments **Literals and data types** **2.2.1** Literals **2.2.1–5** Data types: Integer, Floats, Strings, Boolean values **2.2.6** LAB — Python literals — strings **Arithmetic and operators** **2.3.1** Python as a calculator **2.3.2** Basic operators **2.3.3** Operators and their priorities **Variables and comments** **2.4.1** Variables — data-shaped boxes **2.4.2** Variable names **2.4.3** How to create a variable **2.4.4** How to use a variable **2.4.5** How to assign a new value to an already existing variable	**علم الحاسوب** **Computer Science** **Practical and theory exams**

2.4.6 Solving simple mathematical problems
2.4.8 Shortcut operators
2.5.1 Comments — why, when, and how?
2.5.2 Marking fragments of code

Input and type conversions

2.6.1 The input() function
2.6.2 The input() function with an argument
2.6.3 The result of the input() function
2.6.4 The input() function — prohibited operations
2.6.5 Type casting (type conversions)
2.6.7 String operators
2.6.8 Type conversions once again

Comparisons and conditional execution

3.1.2 Comparison: equality operator
3.1.4 Operators
3.1.7 Conditions and conditional execution
3.1.8 Analyzing code samples
3.1.10 LAB — Comparison operators and conditional execution
3.1.11 LAB — Essentials of the if-else statement
3.1.12 LAB — Essentials of the if-elif-else statement

Loops and loop control

3.2.1 Looping your code with while
3.2.2 An infinite loop
3.2.3 The while loop: more examples
3.2.5 Looping your code with for
3.2.6 More about the for loop and the range() function with three arguments
3.2.8 The break and continue statements

Artificial Intelligence learning objectives

1. To analyze the development, applications, ethical issues, bias, fairness, transparency, societal impact, and regulation of Artificial Intelligence systems in order to evaluate their responsible use in real-life contexts.
2. To analyze key AI ethics issues, including bias, fairness, transparency, explainability, societal impact, and regulation, in order to evaluate the responsible use of AI systems.

IXL **Reading Comprehension** TRH – Determine the main idea of a passage 7UX – Determine multiple main ideas of a passage 8CC – Choose the topic sentence that best captures the main idea G9G – Use context to identify the meaning of a word **Grammar** PVY – Identify and correct inappropriate shifts in verb tense FRP – Form the perfect verb tenses **Writing** 54G – Identify thesis statements WYT – Transition logically between claims, evidence, analysis, and counterclaims	**Reading Comprehension** Students will complete two reading passages. Each passage has multiple-choice questions and short written-response questions. They should practise identifying the main idea, supporting details, inferences, and vocabulary in context. **Vocabulary** Study the 20 vocabulary words from Unit 3. In the exam you complete sentences using words from a box , so focus on meanings and using the words in context rather than spelling. • **Unit 3 words:** aspect, barrier, canal, concentration, construction, dense, fierce, growth, income, lower, occasional, partially, productive, resident, separate, spread out, suburbs, temporarily, tend to, urban **Grammar** • **Simple past:** verbs for finished actions in the past. Regular verbs end in -ed (walked); irregular verbs change form (go becomes went). Example: We went to London last summer. • **Present perfect:** have/has + past participle, for actions that started in the past and continue now, or past actions with a result now. Example: I have seen that movie many times. **Writing** Students will be given one of two essay types: a **cause-and-effect essay** or a **problem-solution essay**. They should be prepared to write either type using the following structure: **1. Introduction:** Include a clear background statement and a thesis statement introducing the main causes and effects or the problem and proposed solution. **2. Body paragraphs:** • **Cause-and-effect essay:** a. **Body Paragraph 1:** Explain the main causes of the topic, supporting ideas with relevant details and examples. b. **Body Paragraph 2:** Explain the effects or consequences, supporting ideas with relevant details and examples. • **Problem-solution essay:**	اللغة الإنجليزية English

	a. **Body Paragraph 1:** Explain the problem, supporting ideas with relevant details and examples. b. **Body Paragraph 2:** Describe possible solutions and explain how they can address the problem, using relevant details and examples. **3. Conclusion:** Summarise the main points and end with a final thought.	