



PUTTING THE FUN BACK  
INTO LEARNING!

Dear Parents and Guardians,

Welcome to the Mathematics Department September Curriculum Guide.

The Maths Department are thoroughly looking forward to working with, supporting and guiding your children through this academic year. The department is staffed by considerate, friendly and experienced staff whose aim this year is to provide your child with enjoyable and productive academic lessons.

Children are streamed into ability groups for Maths so that the curriculum can be tailored to their needs to support and accelerate their progress. Therefore, different sets will cover the learning intentions at different levels and rates. The homework may therefore be different for different ability groups as it is tailored to their needs. Please feel free to contact your child's Maths teacher should you have any queries.

Head of Maths Department:

Mr. Glen Brien: [glen.b@albasmaschool.ae](mailto:glen.b@albasmaschool.ae)

Team:

Mrs Annelie van der Hoogen: [annelie@albasmaschool.ae](mailto:annelie@albasmaschool.ae)

Ms. Rachael Coulson: [rachael.c@albasmaschool.ae](mailto:rachael.c@albasmaschool.ae)

Mr. Shorif Ahmed: [shorif.a@albasmaschool.ae](mailto:shorif.a@albasmaschool.ae)

### **Curriculum Content for September**

Each grades' curriculum is aligned so that the progression from Grade 6 to Grade 10 is transparent, relevant and evident in all of the pupils' tasks.

#### **Grade 6:**

- Apply the four operations, including formal written methods, to integers, decimals and simple fractions (proper and improper), and mixed numbers.
- Understand and use place value (e.g. when working with very large or very small numbers, and when calculating with decimals)
- Interpret and construct tables, charts and diagrams, including frequency tables, bar charts, pie charts and pictograms for categorical data.
- Vertical line charts for ungrouped discrete numerical data.
- Tables and line graphs for time series data and know their appropriate use.

Keywords:

Mixed number  
bar charts  
amount

improper fraction  
frequency table  
discrete data

integer  
pie chart  
continuous data

### **Grade 7:**

- Apply the four operations, including formal written methods, to integers, decimals and simple fractions (proper and improper), and mixed numbers.
- Understand and use place value (e.g. when working with very large or very small numbers, and when calculating with decimals)
- Recognise and use relationships between operations, including inverse operations.
- Use conventional notation for priority of operations, including brackets, powers and roots.
- Use standard units of measure and related concepts (length, area, volume/capacity, mass, time, money, etc.)
- Measure line segments and angles in geometric figures.
- know and apply formulae to calculate: area of triangles, parallelograms, trapezia; volume of cuboids and other right prisms.

Keywords:

Mixed number  
indices  
squared units

improper fraction  
powers  
cubic units

integer  
roots  
prism

### **Grade 8:**

- Recognise and use relationships between operations.
- Use conventional notation for priority of operations, including brackets, powers, roots and reciprocals
- Use positive integer powers and associated real roots (square, cube and higher), recognise powers of 2, 3, 4, 5; estimate powers and roots of any given positive number
- Calculate with and interpret standard form  $A \times 10^n$ , where  $1 \leq A < 10$  and  $n$  is an integer
- Substitute numerical values into formulae and expressions, including scientific formulae
- Simplify and manipulate algebraic expressions.
- Understand and use standard mathematical formulae; rearrange formulae to change the subject

Keywords:

Integer  
roots  
prism

indices  
squared units  
standard index form

powers  
cubic units  
brackets

## **Grade 9:**

Topics taught for IGCSE have been set specifically for the students taking this course, students will complete a selection of the following depending upon their set.

The Higher and Foundation tier candidates are studying the following:

- Using addition, subtraction, multiplication and division with integers, decimals and fractions.
- To perform reverse calculations using integers, decimals and fractions.
- To understand factors and multiples as well as factorise expressions.
- To use the laws of indices including negative and fractional indices.
- To estimate and approximate using decimal places as well as using Standard Index Form.
- To simplify and manipulate algebraic expressions (including those involving surds and algebraic fractions) by: collecting like terms, multiplying a single term over a bracket, taking out common factors, expanding products of two or more binomials, factorising quadratic expressions of the form  $x^2 + bx + c$ , factorising quadratic expressions of the form  $ax^2 + bx + c$ , simplifying expressions involving sums, products and powers.

It should be noted that the students will be accessing the curriculum at different levels based upon their setting.

Keywords:

Expansion  
negative indices  
sums

factorise  
reciprocals  
product

multiples  
quadratic  
powers

## **Grade 10:**

Similar to Grade 9, topics taught for IGCSE have been set specifically for the students taking this course, students will complete a selection of the following depending upon their set.

As this Grade will be sitting IGCSE examinations at the end of this year topics will be taught in tandem to revision of last year's topics.

- Students will recap the use of number and their operations in terms of integers, decimals, fractions and indices.
- Students will revisit the use of factorisation and expansion for algebraic expressions.
- Students will use these skills to solve for equations.
- Students will graph, solve and apply linear, simultaneous and quadratic equations.
- Students will recap the interpretation and representation of data using frequency diagrams, cumulative frequency diagrams, pie charts, bar charts and cumulative frequency curves.
- Students will be given notice of a week for a class assessment.

Students have been advised to keep all of their homework stored in a plastic wallet / folder. Much of the homework in Grade 10 is based on exam style questions. Therefore their homework folders can be used as a revision portfolio when it comes to revision.

Keywords:

Integers  
equations  
frequency

factorisation  
linear  
cumulative

expansion  
quadratic  
keys

### **How can you help?**

- Make sure your child comes to school prepared.
- Teach them to check and pack their own school bags so that they know exactly what is inside them.
- Make sure their books and stationery are marked with their name.
- Ensure their pencil case is always stocked with stationery which **MUST** include:  
HB pencils, a rubber, a sharpener, a blue or black pen, a red pen, a 30cm-ruler, a Geometry Set, a scientific calculator, a glue stick, a whiteboard pen an eraser and scissors
- Regularly check Bric and guide the children towards the completion of the task given as homework.
- Do not complete homework for your children or we cannot assess their needs and progress accurately.
- Encourage your child to speak to their teacher with regard to interactive websites for further study as well as electronic guides that can help their studies as appropriate to their grade.

Thank you for your ongoing support

The Maths Department