



PUTTING THE FUN BACK  
INTO LEARNING!

# Maths' Curriculum Guide

October 2016

Dear Parents and Guardians,

Welcome to the Mathematics Department October Curriculum Guide.

The Maths Team:

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 level and rates. Their 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.

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## **Maths quote for May:**

“Parallel lines have so much in common, it's a shame they will never meet”

## **Curriculum Content for October**

### **Grade 6:**

Topics	Learning Intentions
Numbers and the number system	<ul style="list-style-type: none"> <li>•To know and recall prime numbers</li> <li>•Find LCM and HCF of pairs and sets of numbers</li> <li>•Calculate powers and roots and use appropriate notation</li> <li>•Use and understand scientific notation</li> </ul>
Positive and Negative Integers	<ul style="list-style-type: none"> <li>•Compare and order positive and negative numbers</li> <li>•Carry out basic calculations with positive and negative integers</li> </ul>
Main Operations	<ul style="list-style-type: none"> <li>•Multiply and divide with decimals</li> <li>•Use inverse operations to check answers and solve problems</li> <li>•Use brackets in problem solving</li> </ul>

Properties of Shapes	<ul style="list-style-type: none"> <li>• Interpret geometrical conventions and notation</li> <li>• Draw and label polygons and angles</li> <li>• Use geometry sets</li> </ul>
Basic Algebra	<ul style="list-style-type: none"> <li>• Understand the vocabulary and notation of algebra</li> <li>• Manipulate algebraic expressions</li> <li>• Explore functions</li> <li>• Evaluate algebraic statements</li> </ul>

### **Grade 7:**

<b>Topics</b>	<b>Learning Intentions</b>
Negative Numbers	<ul style="list-style-type: none"> <li>• Carry out calculations with four operations and negative numbers</li> <li>• Order negative numbers</li> <li>• Use the correct order of mathematical operations</li> <li>• Identify improper fractions</li> <li>• Carry out calculations with mixed numbers and improper fractions</li> </ul>
Shape	<ul style="list-style-type: none"> <li>• Enlarge shapes by a positive scale factor</li> <li>• Use bearings and understand their real life functions</li> <li>• Create symmetrical images and identify a line of symmetry</li> </ul>
Probability	<ul style="list-style-type: none"> <li>• Measure the likelihood of an event</li> <li>• Use the Probability Scale (0-1)</li> <li>• Know and use vocabulary of probability</li> <li>• Calculate probability of real life scenarios</li> </ul>

### **Grade 8:**

<b>Topics</b>	<b>Learning Intentions</b>
Polygons	<ul style="list-style-type: none"> <li>• Recognise and name polygons</li> <li>• Find and use the sum of interior and exterior angles of regular and irregular polygons</li> </ul>
Averages and Ranges	<ul style="list-style-type: none"> <li>• Calculate the mean, median, mode and range of a set of data</li> <li>• Draw and read stem and leaf diagrams</li> <li>• Work out averages for large sets of grouped and ungrouped data in tables</li> </ul>
Decimals	<ul style="list-style-type: none"> <li>• Convert decimals to fractions</li> <li>• Multiply and divide decimals by a single digit</li> <li>• Multiply and divide decimals by integers and decimals</li> <li>• Round to a given number of significant figures</li> </ul>

2-D Shapes	<ul style="list-style-type: none"> <li>• Calculate the area of a rectangle, triangle, parallelogram and trapezium</li> <li>• Work out circumference and area of a circle</li> <li>• Find the perimeter and area of compound shapes</li> <li>• Find the length of arcs, perimeter and area of sectors and segments</li> </ul>
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### **Grade 9:**

<b>Topics</b>	<b>Learning Intentions</b>
Algebraic Graphs	<ul style="list-style-type: none"> <li>• Plot and read coordinates</li> <li>• Draw shapes in coordinate axes</li> <li>• Find equations of horizontal and vertical lines</li> <li>• Plot graphs of algebraic functions of form <math>y=f(x)</math></li> </ul>
Measure	<ul style="list-style-type: none"> <li>• Know and convert between metric and imperial units of length, mass, capacity, area and volume</li> <li>• Estimate measures</li> <li>• Interpret and draw distance time graphs</li> <li>• Draw and interpret real life graphs</li> <li>• Calculate rate of change including velocity and acceleration using suvat equations</li> </ul>
Inequalities	<ul style="list-style-type: none"> <li>• Use notation of inequalities</li> <li>• Illustrate inequalities on number lines and graphs</li> <li>• Solve inequalities</li> </ul>

### **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 and easer 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
- Use BBC Bitesize with your child to review the learning Intentions: <http://www.bbc.co.uk/education>
- Use with your child to access further explanation of a topic [www.mathsisfun.com](http://www.mathsisfun.com)

**Maths joke for Fathers and Mothers:**

**Always label your axes**



Thank you for your ongoing support

The Maths Team