

## **Subject: Mathematics**

Department Staff – Mr E Addo, Mr E DeSouza, Mr E Gakpo,  
Mr A Hosseinian, Mr P Kelly, Mr S McCann, Mr K Pillay,  
Mr A Sztranyovszky, Ms D Thompson

Year 7 - Autumn Term 2010

### ***Contents: what you will study***

#### **Number & Algebra**

- Sequences and rules
- Finding the general (nth) term
- Functions and mappings
- Use letters to represent functions
- Decimals and place value
- Directed Numbers
- Estimation
- Graphs of Real Life Situations

#### **Shapes, Space & Measure**

- Length, perimeter and area
- 3 D Shapes
- Surface area and volume

#### **Functional Mathematics**

Maths for the real world will be integral to all topics

### ***National Curriculum levels at which you will work***

You will work at levels 4, 5 or 6

### ***Skills which you will develop this term:***

You will

- describe simple number patterns and learn to create sequences and describe them using some basic algebraic techniques.
- revise odd and even numbers and times tables up to 10 x 10.
- work with decimals and whole numbers and use estimation to check your answers.
- solve problems using decimals and whole numbers with and without a calculator.
- revisit how to measure and draw lines and learn to estimate and calculate perimeters and areas of 2D shapes, how to calculate the area of a rectangle and how to draw 3D shapes and calculate the surface area of a cuboid.
- be able to interpret and draw graphs about real life issues.

### ***Assessment: how you will be tested this term***

In addition to homework and classwork assignments, you will sit an end of half term test in October 2009 and an end of term test in December 2009. You will also be given a mental maths test at least once per month. You will also be given homework on the internet. Self-assessment sheets will help you to assess yourself.

### ***Equipment which you will need for this term's work***

Pen, pencil, ruler, compass, protractor, exercise book and calculator.

### ***Key words which you will need to learn for this term's work***

Integer, sequence, term, rule, difference, generalisation, justify, function, input, output, inverse, mapping, expression, variable, decimal, place value, digit, tenth, hundredth, compare, significant, estimate, units, length, width, area, perimeter.

### ***Websites you will find useful***

[www.emaths.co.uk](http://www.emaths.co.uk)

[www.mymaths.co.uk](http://www.mymaths.co.uk)

[www.livemaths.co.uk](http://www.livemaths.co.uk)

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Year 7 - Spring Term 2011

***Contents: what you will study***

### **Number & Algebra**

- Calculations
- Metric Units
- Powers, Roots
- Graphs
- Using letters to represent unknown number
- Fractions, Decimals, Percentages

### **Shape, Space & Measures**

- Measure lines & Angles
- Constructions, using ruler, compass & Protractor

### **Handling Data**

- Design a questionnaire; collect data; draw graphs & tables; interpret results; draw conclusions.

### **Functional Maths**

Apply knowledge of Mathematics to solve 'real-life' problems.

### ***National Curriculum levels at which you will work***

Levels 4 and 5

### ***Skills which you will develop this term:***

You will

- multiply and divide 3 digit numbers by 2 digit numbers
- multiply and divide decimals by whole numbers
- continue to develop mental methods for calculations.
- solve problems in every day contexts.
- design a questionnaire and collect data. Display this data and carry out appropriate calculations.
- draw conclusions.
- learn the equivalent decimals & percentages for common fractions.
- estimate and measure.

### ***Assessment: how you will be tested this term***

In addition to class work and homework assignments, you will have an end of half term test in February 2010 and an end of term test in April 2010 on all of the topics taught this term. You will also be required to do self-assessment and keep a record of your progress. On-line home work will also be assigned.

### ***Equipment which you will need for this term's work***

Pen, pencil, ruler, compass, protractor, exercise book, calculator.

### ***Key words which you will need to learn for this term's work***

digit	power	root	metric units
millimetre	centimetre	metre	kilogram
gram	milligram	questionnaire	data, graphs

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Year 7 - Summer Term 2011

***Contents: what you will study***

### **Shape Space and Measures**

- Measure and draw angles. Reflect, rotate, translate and enlarge shapes. Construct nets 3-D shapes.

### **Handling Data**

- Averages and Range. Pie Charts. Comparison of 2 distributions.

### **Number**

- Multiples, Factors, Fractions, Decimals, Percentages. Multiplying and dividing 3 digit numbers by 2 digit numbers.

### **Algebra**

- Construct and solve equations. Sequences and their general term. Formulae. Solving Problems.

### **Functional Maths**

Apply knowledge of Mathematics to solve 'real-life' problems.

### ***National Curriculum levels at which you will work***

Level 4, 5 or 6.

### ***Skills which you will develop this term:***

You will

- use a protractor to measure and draw angles.
- change shapes by reflecting them in a mirror line, by rotating them about a point and by moving them parallel to the axes.
- enlarge 2-D shapes by a positive scale factor.
- make the nets of cuboids and pyramids.
- work out the mean, median, mode and range of sets of data.
- represent data using line graphs and pie charts.
- compare two distributions using an average and the range.
- multiply and divide whole numbers and decimals by a 2 digit whole number.
- make and solve equations.
- use formulae.
- describe the general term of number sequences.
- draw straight line graphs.

### ***Assessment: how you will be tested this term***

In addition to classwork and homework assignments, you will have an end of half term test and a National Optional Test at the end of the term. The National Test will consist of a calculator paper, a non-calculator paper and a mental maths paper and will test everything that you learnt throughout the year.

### ***Equipment which you will need for this term's work***

Pen, Pencil, ruler, compass, protractor, calculator.

### ***Key words which you will need to learn for this term's work***

Transform. Reflect, Rotate, Enlarge. Cuboid, cube, pyramid, prism, reflect, rotate, translate mean, median, mode, range equations, sequences, formulae.