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Year 8

Department of Mathematics

OVERVIEW

Skills Developed

- Applications of Geometry, shape, measure and construction; algebra; handling data; number rules.
- Accuracy in calculations and constructions.
- Problem-solving involving a logical, independent thought process.
- Knowledge, intrigue and understanding in Mathematics in the world around us.
- Using and reading statistics and understanding when they are misleading.
- Citizenship through Mathematics.
- Interest in and knowledge about famous Mathematicians past and present.

Topics covered

KS3 Maths covers Years 7, 8 & 9 and has an emphasis on problem-solving. Many of the topics met during these years form the groundwork for their GCSE studies. The focus will be on building beyond year 7 through problem solving and collaborative work within lessons.

Pupils will further develop their knowledge of topics introduced in Y7, such as

- algebraic manipulation,
- equations of graphs,
- methods of analysing and displaying data
- calculating probabilities
- angle rules
- ratios and equation equivalence

They will also cover new topics such as

- Standard Form and Indices
- Compound measures
- accurate construction in geometrical problem-solving
- basic trigonometry.

They will also revise and build upon number work involving fractions, decimals, percentages, place value and rounding, negative number rules and order of operations.

How we assess your daughter's progress

During Year 8, the focus is on topics as described in the topics covered and skills developed sections. Across the year we have two class tests during the year and a final end-of-year exam. Your daughter will be given one week's notice and be provided with a revision list. One lesson will be set aside for revision before the test and appropriate homework will be set to support your daughter's revision. These tests are marked by the teacher after which a lesson will be devoted to reviewing the test.

There are several Interleaved Skills Checks that are completed during the year.

Students will be given a weekly task on Sparx Maths.

How we support and develop your daughter

Support Material:

Topic lists are available on SharePoint and all material relating to assessments and competitions is also added to this site during the year.

Every pupil has a full subscription to **Sparx Maths**; an online homework resource.

The Library has a large and varied section of mathematics related books for reading beyond the curriculum, if students wish.

At various points during the year maths help clubs are run. These will be advertised to the students within lessons.

How you can help your daughter

Mathematics revision must involve a significant amount of “doing”, as opposed to reading through notes. There are facts and formulae to be learnt, but methods are best learned through practice. After looking through each topic, take examples from a text book, exercise book, or revision guide and cover over the solution. If your daughter can work through to the correct answer, she and you will feel confident that she has understood.

Ensure that she learns by heart all the formulae she has met, for example for finding areas and trigonometry and understands how to apply them.

On the day of a test, please help your daughter to ensure she has all of the correct equipment, including protractor, compasses, ruler, pencil, rubber, pen and a scientific calculator.

There is a wealth of resources available online; a search for any topic will quickly return many suitable resources. Some suggested websites:

- Mr Barton Maths
- Teachit Maths
- Corbett Maths

A number of educational publishers, such as CGP, Pearsons and Collins also produce workbooks and revision guides.