Mathematics Faculty – 2009-2010

Vision

At Caludon we believe all students should achieve their individual goals and appreciate the wonder and power of Mathematics in an exciting and encouraging environment.

To enable this, we believe that we should all work together to provide high quality and wide ranging learning experiences, and to provide and use quality resources.

To assist parents in participating in the learning experiences and home learning, we have set out the following Mathematics curriculum and possible resources as a guide.

Year 7 Mathematics

Year 7 students are taught in two bands in each half year. Each band is split into six groups based on the student's ability and individual needs. The students will follow an accelerated curriculum building upon the knowledge and skills developed in primary school. They will be working towards completing the Key Stage 3 curriculum by the end of Year 8.

Students will develop their mathematical skills in five key areas:

- Number
- Algebra
- Shape, space and measures
- Data handling
- Using and applying Mathematics

The programme of study for Year 7 includes the following topics:

Autumn Term:
George's Marvellous Mathematics Transition Project
Sequences; Properties of Number; Angles; Fractions.

Spring Term:
Probability; Graphs; Perimeter, Area and Volume;
Numbers Skills; Algebra; Transformations of Shapes.

Summer Term:
Symmetry; Ratio and Proportion; Data Handling; Algebra Skills.

Students work using the Heinemann Level Up textbooks, along with a range of other resources. Extensive use is made of our interactive whiteboards and ICT. All students will use an ICT room for Mathematics at least once every half-term. Students are able to use www.MyMaths.co.uk at home using their unique Caludon login for home learning and individual study.

Students are expected to come to lessons with their full equipment, including their exercise book, pens, pencils, a ruler and a calculator.

Students will be formally assessed in the autumn and summer terms. APP (Assessing Pupil Progress) tasks involving self-assessment, peer-assessment and teacher-assessment take place throughout the year. The progress of all students is constantly monitored and students will have the opportunity to move between the different ability groups depending on their performance.

Year 8 Mathematics

Year 8 students are taught in two bands in each half year, each split into six groups based on the student's ability and individual needs. The students will continue along an accelerated curriculum using the Heinemann Level Up textbooks.

Students will continue to develop their mathematical skills in five key areas:

- Number
- Algebra
- Shape, space and measures
- Data handling
- Using and applying Mathematics

The specific topics covered during the autumn and spring terms depend on the student's individual teaching group, but will build on and extend the work covered in Year 7.

The programme of study for Year 8 includes the following topics:

Autumn Term:
Graphs and Equations; Logic and Problem Solving; 3D Shapes; Constructions, Bearings and Loci; Collecting and interpreting data; Algebra Skills.

Spring Term:
Angle Rules; Pythagoras' theorem; Compound Measures; Circles; Indices and Standard Form; Scattergraphs and Probability.

Summer Term:
Revision of previous work in preparation for end of KS3 assessment; Problem Solving & Mathematical Activities;
Begin the GCSE Mathematics Course.

All students will use an ICT room for Mathematics at least once every half-term. Students are able to use www.MyMaths.co.uk at home using their unique Caludon login for home learning and individual study.

The results of the final KS3 assessment, along with teacher assessments, will be used to inform the groupings for the GCSE sets and students will begin their GCSE course in the summer term.

Year 9 and into Year 10

GCSE…

The course students now undertake follows on from the Mathematics already done and will involve a variety of tasks including investigational and problem solving work, practical work and the chance to practise and consolidate new skills.

Year 9 students will be studying the new two tier Mathematics course.

The new assessment model allows all students to gain a Grade C in GCSE Mathematics if their work proves to be deserving.

The curriculum is designed to enable students to use and apply mathematics to practical tasks, real life situations and within the context of the course itself.

The two tiers of entry are Higher and Foundation. We will decide on the one most suitable to you based on your Year 9 performance.

Tiers of entry:-

Higher **Grades A* - D**
Foundation **Grades C – G**

Students will take a modular course.

Candidates sit three examinations:-

Two modular examinations accounting for 50% and a terminal examination accounting for 50% of the final marks.
The table below shows how the exams and modules are worked.

	Unit 1	Unit 2	Unit 3
% of course	20%	30%	50%
Content	Handling Data	Number, algebra, shape and space 1	Number, algebra, shape and space 2
Higher Tier	1 paper 40 min	30 min multiple-choice 30 min written paper	2 papers 70 min each
Foundation Tier	1 paper 40 min	30 min multiple-choice 30 min written paper	2 papers 60 min each

In GCSE Mathematics you will continue to build upon your achievements in the following areas: Number, Algebra, Shape and Space, Measures, Data Handling and Using and Applying Mathematics.

Students will be grouped according to their ability and previous experience in Mathematics, so that the speed at which a group works will be right for the understanding of every student within it.

Yr 11

Some students will be entered for the GCSE Statistics examination.

It offers a course of study which compliments the GCSE in Mathematics.
It emphasises the theoretical, practical and applied nature of Statistics.

Some students may wish to resit or enhance their GCSE. The resit students will be in smaller groupings and be supported towards successfully achieving their required grades. Some students will be given the opportunity to take BTEC or numeracy qualifications to enhance what they have gained already.

There are also students who may wish to further their understanding of Mathematics at a higher level and undertake to complete free standing Mathematics qualifications.

At Caludon Mathematics Faculty we are fully supportive of all students achieving their very best potential. We will guide students through courses which will provide them with a more challenging course that extends their skills and abilities yet also supports them working towards participating in A level Mathematics.

To assist all students with their learning and revision in GCSE work the following web links may help. At the very end are links that parents/carers may find useful to have a look at and then assist in their child's learning

Website Links

Hopefully you'll find some of these links useful. Some will help with school work or preparation for exams while others are just plain fun and ideal for enrichment.

www.tenticks.co.uk
A good site with homework help and a huge library of java games.

www.mymaths.co.uk
Excellent website ideal for revision. Includes online lessons and questions to practise.

http://nrich.maths.org
An ever growing site of Maths problems and games at different skill levels. Ideal for stretching that able Mathematician.

www.censusatschool.ntu.ac.uk
A useful site which contains data from pupils at schools from around the world which you can use in your Data Handling Coursework.

www.bbc.co.uk/schools/gcsebitesize/maths/
A easy-to-use revision service for GCSE Mathematics.

To assist parents in helping their child with learning Mathematics we have listed several web sites and sources that will develop skills and support understanding of Mathematics topics.

www.mymaths.co.uk
www.bbc.co.uk/education
www.samelearning.com/sample/gcse/gcsemenu
http://ukonline.co.uk/cvhsmaths/revision.html
http://klbschool.org.uk.psupport/y11revision/htm
http://www.gcse.com
http://revision-notes.co.uk/GCSE
http://mathsnet.net/gcse
www.learn.co.uk
www.gcsemaths.fsnet.co.uk
www.bbc.co.uk/schools/gcsebitesize/maths
www.tenticks.co.uk