Mathematics – Year 10 (GCSE Mathematics)

Introduction

In Year 10 we are following the new 9-1 GCSE Syllabus and our scheme of work is broken down into topics. Most topics take between 4-8 hours and problem-solving tasks are integrated into the learning. These tasks provide students with the opportunity to delve deeper into their conceptual understanding of maths and consider the practical, lengthier tasks. We also give students many opportunities to work collaboratively, discussing their learning and to make revisions and changes and notice details (such as units cm to metres). In maths, we also give students plenty of opportunity to overcome frustration through our 'stuck' questions. We try to contextualise learning using real-life examples wherever possible. These functional style questions help to prepare students for the everyday maths they will meet outside college.

Inspiring Learning

The maths department at South Dartmoor use interesting and varied activities and resources to allow students to make discoveries, build knowledge, and practise new skills. We use activities such as mysteries, stuck problems, real life examples (or functional maths) and investigations. We use resources such as interactive white boards, individual mini-white-boards, Tarsia card sort problems and much more!

The department also makes excellent use of groupwork and as a result, students are very good at discussing both their mathematics and their learning and have excellent listening and questioning skills.

Subject Summary:
Year 10 have 7 maths lessons a fortnight

Personnel Information

Classes studying Higher syllabus (grades 4-9)	Classes studying Foundation syllabus (grades 1-5)
10Ma3 – Mr Cowdry	10Ma6 – Mr Jones
10Ma4 – Mr Hayes	10Ma7 – Mrs Turner
10Ma5 – Miss Ackerman	10Ma8 – Mrs Wheeler
	10Ma9 – Mrs Holt

Syllabus Overview / Assessment Criteria	
New 9-1 GCSE (3 year study) EdExcel Board - 1MA1 specification	100% Examination – 3 papers. Please note: No external examination during Year 10
Important Dates	
Coursework / Controlled Assessment	**Examination**
N/A	Autumn Assessment: w/c 9th December 2019 Spring Assessment: w/c 16th March 2020 Summer Assessment: w/c 15th June 2020
Curriculum Map / Areas of Study	
Autumn Term	
Higher Tier 7a: Perimeter, area and circles 7b: 3D forms and volume, cylinders, cones and spheres 7c: Accuracy and bounds 9a: Solving quadratics and simultaneous equations 9b: Inequalities 10: Probability 11: Multiplicative reasoning	Foundation Tier 7a: Statistics and sampling 9a: Real life graphs 9b: Straight line graphs 10a: Transformations 1 – Translate, rotate, reflect 10b: transformations 2 – Enlarge and combinations 11a: Ratio 11b: Proportion
Spring Term	
Higher Tier 12: Similarity and congruence in 2D & 3D 13a: Graphs of trigonometric functions 13b: Further trigonometry 14a: Collecting data 14b: Cumulative frequency, box plots and histograms	Foundation Tier 12: Right angled triangles: Pythagoras and Trigonometry 13a: Probability 1 13b: Probability 2 14: Multiplicative reasoning 15a: Plans and Elevations
Summer Term	
Higher Tier 15: Quadratics, expanding 2+ brackets, sketching graphs, graphs or circles / cubics / quadratics 16a: Circle theorems 16b: Circle geometry	Foundation Tier 15b: Construction, loci and bearings 16a: Quadratic equations: Expanding and factorising 16b: Quadratic equations: Graphs 17: Circles, cylinders, cones and spheres
Try this at home	

- WORKBOOK / REVISION GUIDE **:** Buy the appropriate tier revision guide and workbook from the library. Use this to review your learning or get additional help on a topic. The Progression ladders on Moodle show you which pages match each topic.
- MathsWatch: Use this to review your learning or get additional help on a topic. The Progression ladders on Moodle show you which clip matches each topic.
- MyMaths: Use the GCSE booster packs to boost your maths skills.
- Pinpoint: Use this to review how you did in your mocks and to identify the areas to work on.
- **Make notes, posters and prompt cards.** Anything that helps you to remember!