

## **Vision Statement**

"To provide learning of Mathematics that is challenging, engaging and enthuses both students and staff so that all achieve to their full potential".

## Year 9 Mathematics at TDA

- Stage 9 Mathematicians Class Names Angelou and Boyle (3 lessons per week)
- Stage 8 Mathematicians Class Names Curie and Dahl (3 lessons per week)
- Stage 7 Mathematicians Class Names Euclid and Fermat (3 or 4 lessons per week)
- Stage 6 Mathematicians Class Name Golding (4 lessons per week)

Class	Stage Teacher				Class	Stage	Teachers								
95Angelou	9	CVS	1	DXL	2	2		9N Boyle	9	TMA	2	NJW	1		
95 Boyle	9	CVS	3					9N Curie	8	AYB	3				
95Curie	8	RXS	2	LZT	1		Π	9N Dahl	8	DXL	3				
95 Dahl	8	TMA	1	RXB	2			9N Euclid	7	DXL	1	LZT	1	EGM	1
95 Euclid	7	NFW	1	EGM	2			9N Fermat	7	RXB	3	DXP	1		
95 Fermat	7	BXN	1	CAM	2	LZT	1	9N Golding	6	BXN	3	JNH	1		

### Can I See What My Young Mathematician Will Be Studying?



Mathematics Curriculum map Year 9 Extension

Term Topic Term 1 Calculating Visualising and constructing		Skills addressed	Literacy skills addressed	Key assessment tasks Progress test 1		
		Calculate with powers and roots. Explore the use of standard form. Explore the effects of rounding.     Know standard mathematical constructions. Apply standard mathematical constructions. Explore ways of representing 3D shapes.	Speaking and listening - LK3, SK5 Reading - RK2 Writing - WS2			
Term 2	Algebraic proficiency: tinkering Proportional reasoning	<ul> <li>Understand equations and identifies. Manipulate algebraic expressions. Construct algebraic statements.</li> <li>Solve problems involving different types of proportion. Investigate ways of representing proportion. Understand and solve problems involving similarity. Know and use compound units in a range of situations.</li> </ul>	Speaking and listening - LK3, SK5 Reading - RK2 Writing - WS2	Progress test 2		
Term 3	Pattern sniffing Solving equations and inequalities I	Investigate Fibonacci numbers. Investigate Fibonacci type sequences. Explore quadratic sequences:     Explore the meaning of an inequality. Solve linear inequalities.	Speaking and listening - LK3, SK5 Reading - RK2 Writing - WS2	Progress test 3		
Term 4	Calculating space	<ul> <li>Solve problems involving arcs and sectors. Solve problems involving prisms. Investigate right-angled triangles. Solve problems involving Pythagoras' theorem.</li> </ul>	Speaking and listening - LK3, SK5 Reading - RK2 Writing - WS2			
Term 5	Conjecturing Algebraic proficiency: visualising Solving equations and inequalities II	<ul> <li>Explore the congruence of triangles. Investigate geometrical situations. Form conjectures. Create a mathematical proof.</li> <li>Investigate features of traight line graphs. Explore graphs of quadratic functions. Explore graphs of other standard non- linear functions. Create and use graphs of non-standard functions. Solve kinematic problems.</li> </ul>	Speaking and listening - LK3, SK5 Reading - RK2 Writing - WS2	Yr9 Examination		
Term 6	Solving equations and inequalities II Understanding risk Presentation of data	<ul> <li>Solve simultaneous equations. Use graphs to solve equations. Solve problems involving simultaneous equations.</li> <li>Understand and use tree dargarms. Develop understanding of probability in situations involving combined events. Use probability to make predictions.</li> <li>Construct and interpret graphs of time series. Interpret a range of charts and graphs. Interpret scatter diagrams. Explore correlation.</li> </ul>	Reading - RK3 Writing - WK4 Comparing data sets	Progress test 4		

You can find all SoW on the TDA webpage in the curriculum area.

# **Tools For Mathematicians**

- 🗸 A pen
- 🗸 A pencil
- ✓ A ruler
- A compass
- ✓ A protractor
- ✓ A Scientific calculator



#### Encourage your child to be neat. Why?

- It saves time since things don't get lost on the page.
- It leads to self-discipline and planning.
- It leads to greater self-confidence and pride.

In Maths neatness makes a huge difference. If your child does not lay work out neatly, there is every chance that mistakes will be made. Encourage them to present their homework neatly and to take pride in all of their work.

### **Tests and Exams**

 Students will complete 4 progress tests and 1 main mock exam throughout the year.

 Main mock exams for the year are in Term 5. They will sit 2 exam papers, one non-calculator and one calculator.

 Please ensure students have the correct equipment. They need a calculator, ruler, protractor, a pair of compasses for drawing circles, pens, pencils and a rubber.

# **GCSE Mathematics**

### AQA Mathematics GCSE specification 8300

#### Assessment structure

Paper 1 33.3%	Paper 2 33.3%	Paper 3 33.3%					
Non-calculator	Calculator	Calculator					
80 marks	80 marks	80 marks					
1 hr 30 mins	1 hr 30 mins	1 hr 30 mins					

All papers may assess any content domains and all assessment objectives in roughly same proportions across all three papers.

#### **Foundation Tier**

Grades 1-5. Half the marks on each paper targeting grades 1 to 3 and the other half at 3 to 5.

#### **Higher Tier**

Grades 4-9. Half the marks on each paper targeting grades 4-6 and other half at 7-9.

#### Why does my child need to be good at Mental Maths?

As your child progresses through Secondary School, the maths' problems they will attempt to solve will become more complex. They need to be focussed on thinking about which formula to use and which strategy to apply – they do not want to be slowed down by the basics. Ultimately, they will be taking their GCSE examination – any time lost by having to spend a disproportionate amount of time thinking about the basics is time that they could be using to complete the paper or to check questions for any errors.

Name	Stage 9 - Term 2	
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		ek 1	ek 2	ek 3	ek 4	ek 5	ek 6	ek 7		•••
		We	$\overline{\mathbf{v}}$	6						
1	Expanding a double bracket									
2	Multiplying and dividing by powers of 10									
3	Calculating speed									
4	Multiplying mixed numbers									
5	Expressing as a product of prime factors									
6	Solving linear equations									
7	Generating a GP given 1st term and common ratio									
8	Dividing in a given ratio									
9	Increase and decreasing by a given percentage									
10	Simplifying indices									

### Target / Question

Date Achieved

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# <u>Websites</u>

The best way to prepare for Maths exams is by doing practice questions, the following resources provide support for doing this:

• <u>www.mymaths.co.uk</u>

Login: deacon



Password: circle

- <u>www.online.justmaths.co.uk/</u> Login: DeaconStudent Password: Deacon JustMoths
- www.mathedup.co.uk/classes/10n2/gcse-maths-

takeaway/ no password required



#### Supporting your Child's Maths

- ✓ Lots of praise
- ✓ Plenty of encouragement
- ✓ Support them with their homework
- ✓ Encourage them to present their work neatly
- ✓ Encourage your child to practise their times tables
- ✓ Speak to them about any worries they have
- ✓ Talk to their Maths Teacher
- ✓ Keep practicing

