

Mathematics 2023-2024

Growing minds, successful futures

School







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This document is intended to provide an overview of the Mathematics department. It will detail the journey to date on our way to our end point of all students achieving ambitious numerical qualification outcomes.

Our Vision

Our vision is to create and maintain a strong, positive, encouraging mathematical culture where all students are ambitiously challenged with opportunities to explore, reason, problem solve and experience numerical success both now and in the future.

Expectations of lessons

- Positive inclusive greetings for all students
- Do Now based on an aspect of retrieval practise either for the forthcoming lesson or identified as an area of improvement from previous lessons/assessment
- Books that follow the marking policy and expected standard of presentation
- Routines of school behaviour policy followed
- AFL policy followed including the use of whiteboards, highlighters, diagnostic questions to gain feedback and interventions made
- Culture of high expectations with known learning journey's and current grades
- SEN requirements met to ensure adaptive teaching allowing access to the curriculum for all
- Inclusive blended learning provided for those not in lessons to have access to the learning
- Engaging thinking hard activities used to challenge
- Support and scaffolding for students that require assistance to achieve the main objective
- Key words obvious and in books, referenced when used
- Modelling is used where appropriate to instruct and address misconceptions
- High level questioning to be used to draw out discussion, solutions and misconceptions
- Engaged learners contributing to a positive classroom culture



This document is a brief outline of how the Mathematics department is working in line with the SIP.

A: Great Teaching

Every dimension, every lesson

- Differentiated KS3 SoW including numeracy intervention and mastery
- Differentiated KS4 SoW including further math and level 1 trials
- Clear set of monitored lesson expectations including AHT and scaffolding
- Learning journey's and objectives clear for all every lesson
- AFL strategies in place every lesson including whiteboard use
- Set vision and brand built in to the department
- Clear homework policy and online apps for all students

B: Ordinarily Available Inclusive Practice

Every student, every lesson

- SEND and disadvantaged students profiles adhered to
- Scaffolding and AHT strategies every lesson
- Year 11 intervention groups for 80% on the year group personalised
- Each student PIXL math app and RAG sheets showing areas of improvement
- Consistency lessons every few weeks to maximise learning
- Absentees have access to SoW on blended learning, contacted and caught up
- EAL students provided with paper based and live translations

C: Consistent Applications

Every system, every day

- Behaviour policy adhered to and monitored
- Homework set regularly, 50% or lower contacted and detentions set
- Consistent routines and positive expectations for students
- Rewards: Stars of the lesson, week, HP given, exemplars shown
- Book expectations clear and set with marking guidelines on all books
- Clear and transparent data tracking system for all













Leadership narrative



Date	Situation	Action	Impact
April 22	1 xCDF employed 0.6ptexperiencedteacher due toretire July 23		Loss of stability New starter to train Uncertainty for students
July 22	CDF appointed KS4 lead 0.8pt	KS4 new - SoW & Assessments - Marking & feedback policy - Expectations AFL - KS4 tracker system - QLA analysis - Monitoring process	Consistent way of working SoW to follow New drive in department Robust assessment process Training need high Monitoring pop in and book look structure New learning journey's
Sept 22	KS3 SoW introduced from HIAs	KS3 SoW from HIAS in place	A SoW to follow Confusion over what to teach as not differentiated Gaps exposed in SoW Teachers not following same curriculum
Dec 22	1 x experience teacher retiring 1 x HoD long term absence	2 x new teachers appointed (1 x ECT) Cover in place	Team change – anxiety Loss of stability New starters to train Uncertainty for students
Feb 23	CDF acting head of department	Rebuild a team Create robust assessments for KS3 Report QLA to parents/students Launch PIXL math app all year groups Tracker system Emergency Summer SoW on gap analysis including all assessments/ consistency lessons Monitoring processes	Robust assessments standardised Personalised learning app for all students Positive culture shift in team Transparency in working methods Gaps in knowledge being taught. Structured SoW consistently taught Learning journey's clear Understand CPD needs
W	arblingt	on	1
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Leadership Narrative



Date	Situation	Action	Impact
Feb 23	Long term absence 1 x ECT	High levels of cover and work to be set	Uncertainty again for students Extra workload for staff
May 23	Need more mathematics teaching time	Appointed 1 x Mathematics teacher starting January 24	Help drive the vision of the department
May 23	SoW KS3 to be created	SoW created for KS3 in a mastery spiralling manner Scaffolded SoW created	Positive outlook for next year - TLRs created to help to achieve the assessment and consistency lesson creation
June 23	Year 10 analysis – poor attainment	Create an emergency SoW and a KS4 scaffolded SoW Trialling OCR Grade 1 – 3 entry level qualification	Personalised retrieval practise based GCSE build up in Year 11 – success last year Year 10 access for all Qualification for all
June 23	CDF to be HoD until September 24 1.0ft No second HoD	Maintain team culture shift, drive actions forward	Longer term stability in department High work load to achieve vision
January 24	JTR starts	Timetable shared out Year 10 Stats group started TLR given to assist HoD	Workload eased Options to increase subjects offered and improve culture capital of students





The aim of the Mathematics marking and feedback policy is to ensure that every student receives timely, focused and useful intervention on the work they are producing. This will vary depending on the lesson structure, topic content and purpose of the work being completed. Good practise will include a mixture of AFL strategies including whiteboards, diagnostic questions, modelling and self marking.

Although strategies will vary there should be consistency in the following elements; (Seen on front of books to promote consistency)

- Correct work is marked by students using a green highlighter (preferably boxed)
- Incorrect work is marked by students using a pink highlighter (preferably boxed)
- Incorrect work is annotated as to how to improve it (preferably in green pen)
- Any teacher contributions will be in red pen to identify intervention
- Learning Journey's should be stuck in books for each module and highlighted once completed to show next steps
- Current working, predicted and target grades should be on all books and known to students
- Consistency assessments and summative assessment feedback should be clear in books with correct highlighting, www and ebi statements from both teachers and students clearly identifying topics/skills to revisit
- Shadow assessments to be undertaken after the reteaching of topics identified from consistency and summative assessments to allow improvements to be made by all
- Students identified at PP or as below target should aim to have been spoken to every lesson
- Books should be collected in and scanned through to ensure the above and reply to any communication on an approximate 3 weekly cycle as a department using google forms



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KS3: Learning Journey







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KS4: Learning Journey









S.C.	LO: TBAT calculate and use summary statistics
7F	(Foundation): I can/have
3	Substitute positive numbers to find the subject
3	Substitute numbers to formula that involve roots and algebraic fractions
3	Use the new Kinematic formula
3	Interpret simple expressions as function machines with inputs and outputs
3	Work with x & y coordinates in all 4 quadrants
3	Use a table of values to plot linear
4	Find and interpret the gradient & intercept of straight lines graphically and from y = mx + c
5	Find the equation of a straight line through <u>2_points</u> or through one point and a gradient
5	Identify and find equations of parallel lines

<u>Unit</u>	<u>Title</u>	Levels:	Learning Statements:
		E/D	To translate, rotate and reflect congruent 2D shapes including $x =$, $y =$ and $y = x$
		E/D	Understand the word congruency and its links to transformations
		E/D	To combine the reflection, rotation and translation of 2D shapes
G & Tra M rma 2.2	Transfo	S	To draw the enlargement of 2D shapes using the same a scale factor (multiplier) on each length with and without a centre point, where the scale factor is a positive integer
	rmation s	S	To describe the enlargement of 2D shapes using the same a scale factor (multiplier) on each length with and without a centre point, where the scale factor is a positive integer
		S	Link to N = O x M from percentage increase and decrease
		М	Know what a similar shape is and the links to enlargement
		М	Be able to solve combined questions on all 4 transformations
			Consistency Lesson - G & M 2.2 - Transformations

Scaffolded KS3 journey's have EDS with additional numeracy





The SoW has been built based on the OCR Exam Board syllabus, adapted to the needs of the students at Warblington. Every strand is identified with clear objectives set, misconceptions, key words and interleaving opportunities provided. The sequencing has been considered carefully to ensure that a strong knowledge foundation is created on which to build more complex concepts such as flow charts and multiplicative reasoning. Retrieval of this knowledge should be tested before assumed through relevant Do Now starters to the topic involved as well as weekly '5 a day' revision homework.

Overlearning and retrieval practice is structured throughout in the assessments. Regular consistency lessons allow all students to be exposed to the same benchmarks, exam techniques and opportunities to explore the subject area. Clear regular mini assessments during these consistency lessons ensure a transparent overview of all students in the year group as well as a class by class breakdown leading to Do Now opportunities for intervention as well as independent student study. Built in reteaching and mastery time gives an importance to these misconceptions and extension challenge interventions.

For those students identified as emerging in the curriculum we are offering a scaffolded grade 4 SoW that allows more time built in to focus on numeracy and exam questions. We are also in the OCR exam board pilot for the Level 1 Math qualification to support pupils to achieve a Grade 1 - 3. From June 25 we will offer the Pearson Award in Number and Measure as well as Entry Level.

For those that require stretch and challenge we offer the Further Math GCSE from the start of Year 11 in addition to the regular Mathematics GCSE. If of interest we have also offered the Additional Mathematics GCSE alongside.

Due to the changing nature of the SoW Year 11 follow a bespoke program to allow for full topic coverage as well as plenty of retrieval and revision time to ensure all gaps are identified and filled in a structured manner specific to the class involved. Summer PPE's in Year 10 and the forthcoming SoW for future Year 11 allowed for bespoke plans to be created for each class. GCSE summative assessments are undertaken, question level analysed and misconceptions retaught at the start of Autumn 2 and the end of Spring 1.





The SoW has been written to ensure that the national curriculum is covered in a mastered spiral manner allow for misconceptions and gaps to be found and addressed at all points. The SoW builds up in modules based on 14 main areas of study, the modules are linked as they are revisited through the learning journey. Each section has EDSM categories to allow for clearly defined links, misconceptions and gaps to be identified. All data stored follows the child through their journey year on year, teacher on teacher through SIMS as well as the PIXL math app.

The mastery SoW is being created with key words, prior knowledge, misconceptions, interleaving, mastery puzzle solving at each stage based on the September 2021 DFE guidelines, a puzzle site called 'resourceaholic' and the new HIAS guidelines for inspiration.

There is a scaffolded SoW available that follows the same learning journey using the EDS objectives and building in more retrieval and numeracy practice. Each student has their own numeracy booklet that they work through at their own pace one/two lessons a week allowing confidence and vital knowledge to be built.

Regular consistency lessons are built in following the same process as KS4 with the addition of shadow questions for quick reparation of missing knowledge. Assessments are completed on a termly basis containing 30% retrieval practice, question lesson analysis is entered into the PIXL math app for home learning and areas of improvement are planned in for reteaching. Shadow assessments follow these to help bridge the gap before the students move on to new content. Homework is built on a similar premise with 30% on average containing built in retrieval.

Build in end of year projects, external visits and planned excursions allow for interest to be built in math careers and real-life application.

There is a blended learning provision online for all absent to the lessons.



PIXL Math APP



Question	Skill	RAG	Score	Total
1	Find a simple percentage change	R	0	3
2	Find the nth term rule	A	2	3
3ai	Find the y-intercept	R	0	1
3aii	Finding positive gradient	G	1	1
3b	Finding y=mx+c from a graph	Α	1	2
4a	Calculate the mode	G	1	1
4b	Calculate the median (even number of values)	R	0	1
4c	Calculate the mean	G	2	2
4d	1 step finding the range	G	1	1
4e	Which average gives best/worst result?	R	0	2
4f	Write 4 numbers with a given mean, mode and median	R	0	3
5	Integer rounding to 1 significant figure	R	0	2
<u>6a</u>	Calculate the area given the radius	R	0	2
6b	Calculate the circumference given the radius	R	0	2
7a	Simple direct proportion	R	0	1
7b	Simple direct proportion	R	0	1
7c	Direct proportion linear model	R	0	3
8	Removing a circle from a square	R	1	5
9a	Find the frequency of a category or total frequency	G	3	3
9b	Draw a bar chart	G	3	3
9c	Calculate the mode	R	0	3
9d	State advantages or disadvantages of a specific type of average	R	0	1
10	Find a missing angle	R	0	4















We implemented many changes for the cohort 22 - 23

- PIXL math app introduced
- Exam board changed to OCR
- Personalised breakdown of areas to work on RAG: parents, PIXL and student
- Extra Mock in December so had all information before Christmas
- Personalised adapted SoW based on areas not covered and areas of improvements from mocks in Year 10
- Fridays given over to exam practise and retrieval, modelling exam papers
- New alternative papers completed every Tuesday
- Walking Talking mocks in the hall
- Period 6 revision mats every Monday
- Tutoring on a Tuesday with external tutor for grade 4/5 boundaries
- Saturday workshop in May half term for 6 hours with external agency based on predictions
- Easter revision sessions over 2 days with all teachers in
- May revision for those not invited to the Saturday workshop
- Daily revision given from May half term with answers
- Tuesday extra math help club
- Star of the week in math praise phone calls home
- Build up breakfast energisers with music, banners, food and drink to help prepare students in the morning of the exams
- Homework chased and home contacted for concerns
- Set changes to enter F/H after the PPEs in January
- New teachers starting and change of teachers to sets
- Streamlining top 17 to aim for the higher grades from January 23
- Structured revision set up for whole department coordinated by HOD
- Positive culture of self-belief, star of the week and welcoming greetings
- War board analysis





We have maintained all the initiatives from last year as well as implemented a few more

- Launch of new SoW for KS3 included scaffolded for ED students
- Tracking document for students allowing ease of set changes KS3 and KS4
- Blended learning for all to follow SoW
- Level 1 Qualification Trials for Year 10 into Year 11
- Pearson Award in Number and Measure/Entry Level SoW created
- Rewards policy update: 3 HP per lesson, Reward stickers, Star of the Week KS3 and KS4 with certificate presentation in front of peers and in newsletter
- New logo for math launched: badges, stickers, vinyl, cakes
- 5 a day extra booklet homework to improve long term memory and recall for years 9 – 11
- Decimalised reporting system on grades achieved for Year 11 to allow a greater analysis and progress tracking
- Personalised letters to Year 11 after both PPEs
- Book expectations clear and on the front of all books
- Monitoring of students to include student voice
- Whole department book standardisation meetings
- Increased capacity with a new member of staff
- Tutoring for targeted Grade 4 students: During Star, lunchtimes and Tuesdays with an external tutor
- Tutoring offered for long term absentees online
- Year 10 Statistics offered to help improve foundation math
- KS4 shadow consistency assessments created to match KS3
- Year 9 beginning KS4 curriculum a term earlier to maximise time
- Homework being monitored and regulated in house, new push on 50% and under students
- Discussions with Geography on cross over questions



Actual June 23 - I	Math GCSE Data Ar	alysis Snapshot of 1	11 students			
Dec 2022 Exams	Number students	% based 111	Based	on 111 stud	ents on rol	
9	3	2.7	% Gra	de 4 and abo	ove = 74.8%	5
8	4	3.6	%Grad	le 5 and abo	ve = 53%	
7	16	14.4	%Grad	le 7 and abo	ve = 20.7%	
6	15	13.5				
5	22	19.8	No 'U	Grades		
4	23	20.7				
3	7	6.3	Based	Based on 108 students on rol		I
2	9	8.1	% Gra	% Grade 4 and above = 74%		
1	9	8.1	%Grad	le 5 and abo	ve = 54%	
U	0	0.0	%Grad	le 7 and abo	ve = 21.2%	
X	1	CW Did not sit				
3 students did no	t attend Warblingt	on though on roll				
2 x Grade	3 at IGCSE					
1 x L1 Fund	ctional Skills					

GCSE Results 2023 Yr 11



15% above national average

Bucked national trends:

- Boys achieved higher
- Non Calculator paper higher grades

In line with school aspirational targets.

Just above Hampshire's results of 71.8%



Year 11 results: May 23



Year 10 May PPE 23 - Math GCSE Data Analysis Snapshot of 120 students who took the exam

Number May-23students % based 120 Based on 120 students Missing 8 9 1 0.8 \$4.1% DY - Non attender 8 1 0.8 30.8% AL - Non attender 7 7 5.8 % Grade 7 and above = 7.4% LQ - Non attender 6 5 4.2 KM - Low Attender KM - Low Attender 7 7 5.8 % Grade 4 and above = 7.4% LQ - Non attender 6 5 4.2 KM - Low Attender KM - Low Attender 8 16 13.3 50.8% OC - Managed Move 7 7 4.2 10.0 % Grade 5 and above = 30% FC - Managed move 1 12 10.0 % Grade 7 and above = 5.8% OC - Managed move 0 5 4.2 Formation of the second formation of the secon					
9 1 0.8 \$4.1% DY - Non attender 8 1 0.8 30.8% AL - Non attender 7 7 5.8 %Grade 5 and above = 7.4% LQ - Non attender 6 5 4.2 KM - Low Attender 7 7.8 %Grade 4 and above = 7.4% LQ - Non attender 6 5 4.2 KM - Low Attender 4 28 23.3 roll LP - Low Attender 8 16 13.3 50.8% OC - Managed Move = 2 22 18.3 %Grade 5 and above = 30% FC - Managed move 1 12 10.0 %Grade 7 and above = 5.8% OC - Managed move 0 5 4.2 OC - Managed move OC - Managed move 1 12 10.0 %Grade 7 and above = 5.8% OC - Managed move 0 5 4.2 OC - Managed move OC - Managed move 1 12 10.0 %Grade 7 and above = 5.8% OC - Managed move 0 OC - Managed move OC - Managed move OC - Managed move 0 OC	May-23	Number students	% based 120	Based on 120 students	Missing 8
8 1 0.8 30.8% AL - Non attender 7 7 5.8 %Grade 7 and above = 7.4% LQ - Non attender 6 5 4.2 KM - Low Attender 8 16 13.3 50.8% CC - Low Attender 4 28 23.3 roll LP - Low Attender 3 16 13.3 50.8% OC - Managed Move 2 22 18.3 %Grade 5 and above = 30% FC - Managed move 1 12 10.0 %Grade 7 and above = 5.8% OC - Managed move 0 5 4.2 FC - Managed move FC - Managed move 1 12 10.0 %Grade 7 and above = 5.8% FC - Managed move 0 5 4.2 FC - Managed move FC - Managed move 1 12 10.0 %Grade 7 and above = 5.8% FC - Managed move Not included 8 FC - Managed move FC - Managed move FC - Managed move 1 FC - Managed move FC - Managed move FC - Managed move FC - Managed move 1 FC - Managed move FC - Ma	9	1	0.8	% Grade 4 and above = 54.1%	DY - Non attender
7 7 5.8 %Grade 7 and above = 7.4% LQ - Non attender 6 5 4.2 KM - Low Attender 3 19.2 Based on 128 on roll IP - Low Attender 3 16 13.3 50.8% OC - Managed Move 2 22 18.3 %Grade 5 and above = 30% FC - Managed Move 1 12 10.0 %Grade 7 and above = 5.8% OC - Managed move 0 5 4.2 Solar Imaged move 1 12 10.0 %Grade 7 and above = 5.8% Imaged move 0 5 4.2 Imaged move Imaged move Not included 8 Imaged move Imaged move Imaged move 1 12 10.0 %Grade 7 and above = 5.8% Imaged move Imaged move 1 10 Imaged move Imaged move 1 12 10.0 Imaged move Imaged move 1 10 Imaged move Imaged move Imaged move 10 Imaged move Imaged move Imaged move Imaged move <t< td=""><td>8</td><td>1</td><td>0.8</td><td>%Grade 5 and above = 30.8%</td><td>AL - Non attender</td></t<>	8	1	0.8	%Grade 5 and above = 30.8%	AL - Non attender
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3 16 13.3 50.8% OC - Managed Move 2 22 18.3 %Grade 5 and above = 30% FC - Managed move 1 12 10.0 %Grade 7 and above = 5.8% Imaged move U 5 4.2 Imaged move Imaged move Not included 8 Imaged move Imaged move Year 10 May 23 PPE Results Imaged move Imaged move Imaged move Imaged move Imaged move Imaged move	4	28	23.3	Based on 128 on roll	LP - Low Attender
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1 12 10.0 %Grade 7 and above = 5.8% Not included 8	2	22	18.3	%Grade 5 and above = 30%	FC - Managed move
U 5 4.2 Not included 8 Year 10 May 23 PPE Results	1	12	10.0	%Grade 7 and above = 5.8%	
Not included 8 Year 10 May 23 PPE Results	U	5	4.2		
Not included 8 Year 10 May 23 PPE Results					
Year 10 May 23 PPE Results	Not included	8			
Year 10 May 23 PPE Results					
Year 10 May 23 PPE Results					
Year 10 May 23 PPE Results					
Year 10 May 23 PPE Results					
Year 10 May 23 PPE Results					
				Year 10 May 23 PPE Results	

These results are similar to how Year 11 were achieving in January of their last year.





Dec 2022 Exams	Number students	% based 127	% based 112	Based on 127 students (15 did no take)			
9	3	2.4	2.7	% Grade 4 an	nd above = 4	4.8%	
8	7	5.5	6.3	%Grade 5 an	d above = 29	9.1%	
7	5	3.9	4.5	%Grade 7 an	d above = 1	1.8%	
6	10	7.9	8.9				
5	12	9.4	10.7				
4	20	15.7	17.9	9 Based on 112 who took the paper			
3	15	11.8	13.4	% Grade 4 an	nd above = 5	0.9%	
2	24	18.9	21.4	%Grade 5 an	d above = 33	3%	
1	15	11.8	13.4	%Grade 7 an	d above = 13	3.4%	
U	1	0.8	0.9				
	112						
Not taken	15						
	127 accounted f	or					

Nov PPE 2023 - Math GCSE Data Analysis Snapshot

Grade % from Nov Exams Yr 11



Compared to May 23

-The Grade 4+ is down by 6% - this is a massive concern and has triggered extra tuition and revision being put in place.

- -The Grade 5+ has stayed the same
- -The Grade 7+ has doubled



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Jan PPE 2024 - Math GCSE Data Analysis Snapshot		napshot		
	Number	% based		
Jan 24 Exams	students	127	% based 121	1 Based on 127 students (6 not take)
9	4	3.1	3.3	3 % Grade 4 and above = 55.8%
8	6	4.7	5.0	0 % Grade 5 and above = 33%
7	6	4.7	5.0	0 % Grade 7 and above = 12.5%
6	8	6.3	6.6	6
5	18	14.2	14.9	9 Based on 121 students who we are in contact with
4	29	22.8	24.0	0 % Grade 4 and above = 58.8%
3	23	18.1	19.0	0 % Grade 5 and above = 34.8%
2	14	11.0	11.6	6 % Grade 7 and above = 13.3%
1	10	7.9	8.3	3
U	3	2.4	2.5	5
	121			

Grade % from Nov Exams Yr 11



Based on 127 - change since Nov 23					
Grade 4 + increase of 11%					
Grade 5 + increase of 3.9%					
Grade 7 + increase of 0.7%					

Comparing to Jan 23 PPE results entire cohort on role	
Grade 4 + increase of 2.8%	
Grade 5 + increase of 6.2%	
Grade 7 + increase of 5.4%	

We are pleased with the results and improvements seen.

We need to ensure a drive to maximise Grade 4 and 5 results – we are doing this through new lunchtime and online tuition and the 5 a day booklets





Jan PPE 2024 - Math GCSE predicted Data Analysis Snapshot										
	Number	% based	% based							
Jan 24 Exams	students	127	121		Based on 12	27 students				
9	4	3.1	3.3		% Grade 4 a	nd above =	68.3%			
8	6	4.7	5.0		% Grade 5 and above = 43.1%					
7	12	9.4	9.9		% Grade 7 and above = 17.2%					
6	13	10.2	10.7							
5	20	15.7	16.5		Based on 121 students in contact					
4	32	25.2	26.4		% Grade 4 a	nd above =	71.8%			
3	19	15.0	15.7		% Grade 5 and above = 45.4%					
2	10	7.9	8.3		% Grade 7 and above = 18.2%					
1	5	3.9	4.1							
U	0	0.0	0.0							
	121									

These are conservative estimates and we hope to improve them on the actual results day.

Though lower than last years they are still very good results and above the overall trend of Warblington School itself and the national averages in all areas.

We will need to work on ensuring that the Grade 4 students are aiming for Grade 5 the whole time to improve these figures.





We have asked for feedback on student voice in November 23.



Difficulty of work set in lessons



Challenge of homework set

Very positive student engagement in math lessons



The difficulty level of the work in lesson is on average of 3/5, as is the challenge of homework. This suggests that students can access the work set and on average we pitching the level correctly. We must ensure that we maintain our scaffolded scheme of work and the extension AHT strategies in lessons (85% of students recognise their use in lessons).

Positive comments

'I think Miss is really helpful in my math lessons'

'she helps you solve the question and pushes you to your best'

'Reinforces and links many ideas from other topics'

'My teacher gets so involved and really cares about her students'

'Learning things that I didn't even know existed before'



'Thank you for making maths more enjoyable'

'I think I have progressed in the last couple of years being at Warblington school having different teachers and now I think I'm totally understanding and getting on with all the work'

'Thank you for being reasonable and nice!!!'

'I'm really enjoying maths this year'

'I think maths is really helping me in my life'



Spring Term 23, the behaviour ratio was 96.5% which is in-line with the whole school average. Every child in KS3 and KS4 option groups had received a range of house points, explanations of actions explained in notes sections when effort points set.



Behaviour score breakdown

Star of the week is given to a child in every KS4 & KS3 class every teacher has and there are key stage overall winners in the department who are mentioned in the weekly newsletter and whom are presented in front of their tutor on a Friday with a certificate and badge. Over 400 praise phone calls/contacts have been made from September 23. We have a strong rewards system with raffle tickets, reward treats, stickers, praise and house points.



The Spring 50% and under homework statement has moved the achievement mark on average on mathswatch from 45.2% to 57.6% correct completion and from 85% of students completing their work on time to 94%.





Summary of discussion / observations

The Maths department is "buzzing" in the very best sense of that word. There is a very clear focus on the students both collectively and individually. I looked at some of the students note books and was impressed to see a summary of the key road map steps applicable to their stage of learning and how the students are encouraged to keep track of what they have done and how this leads into the next step. I was very impressed to see how the teaching is adapted to the range of abilities within the class so that all are challenged throughout the lesson. The note books also had a lot of photocopied work sheets glued within them with completed exercises highlighted in green or pink – and evidence that problems highlighted in pink were corrected. The Head of Maths was grateful for the admin support received in keeping all the photo-copied resources available. It was also brilliant to see how the students were totally engaged and required to identify answers rather than being told everything. There is clearly a major effort in building relationships between Teacher and Student and that has major benefits. I also saw different levels of ability across the classes but noted that all students were engaged and being challenged. We discussed how progress is monitored, how that feeds into the App that the students use to correct any weak areas and how that is monitored by the teachers.

In discussion, it was apparent that the structures now in place (road maps, statements of work, the Maths App etc.) are relatively new and still evolving and that "emergency" statements of work have had to be developed and used to allow the more senior years to catch up with topics they had missed prior to the current systems. All of this has required tremendous efforts by the whole Maths department to ensure those students that had been underserved in the past were given every opportunity to attain their best results. The current year 9 will be the first cohort that will not need "emergency statements of work".



Warblington School Growing minds, successful futures



What did you learn in undertaking this visit (Relate back to the purpose of the visit)

I was both impressed and relieved to see how Maths is planned, sequenced and taught. I was also impressed by the way progress is monitored both individually and collectively and how those results are used to guide follow on teaching. The focus on the students, and the departmental ethos of making every student welcome but also challenged has had tremendous positive benefits (witness the last set of GCSE results) but has been achieved by each teacher putting in tremendous extra work in a very short period. There is still plenty to do to refine the teaching practices and improve results still further but the pace is thankfully beginning to ease at least a little.

Strengths

The head of department leadership (and management) skills are the catalyst that has brought these positive and much needed changes to the department.

The Maths department is somewhere the students like to learn in and feel safe and welcome.

Assessment, progress monitoring and reinforcement are key to helping the students attain their best results.

I am not an expert but the curriculum (linked to the exam board), roadmaps and statements of work are excellent management tools for ensuring the subject is taught in a logical sequence and these tools are being used effectively by all the teachers.





Improvements / areas for development

Maths has clearly become an example of best practice within the school but given the volume of work necessary to bring about these positive changes, it has happened in isolation. There is still more to do to refine, adapt and improve the steps taken albeit not quite so urgently as the initial wave of change. There also needs to be an attempt to align the sequence of teaching with other departments, particularly science and IT and I gather a new Maths teacher, Josh, will be focusing on this from approximately September.

Claire also raised the need for a Maths focused visit (or 2) during the summer term. I suggested contacting HMS Collingwood as the students could be shown practical applications of some of the Maths they have been learning. It would also be a good opportunity to cover Maths, Science and IT in a single visit and see how those subjects interact on a practical level.

From a governor's perspective, it would be fantastic to see the Maths department ethos being spread across the other subject departments. However, the current Head of Maths should be allowed to consolidate all that has happened in the past 18 months.

Aspects you would like to be clarified or have questions on, following your visit.

None for the Maths department at this stage other than to thank Claire for an enjoyable, informative and refreshing visit.

David James, Math Governor Link, Nov 23

